

Current Studies in Social Sciences 2021

EDITORS

Ágnes Csiszárík-Kocsir

Philipp Rosenberger



Current Studies in Social Sciences 2021

EDITORS

Ágnes Csiszárík-Kocsir

Philipp Rosenberger

Current Studies in Social Sciences 2021

Editors

Ágnes Csiszárík-Kocsir
Philipp Rosenberger

Cover Design and Layout

Davut ALAN

This book was typeset in 10/12 pt. Calibri, Italic, Bold and Bold Italic.

Copyright © 2021 by ISRES Publishing

All rights reserved. No part of this book may be reproduced in any form, by photostat, microfilm, retrieval system, or any other means, without prior written permission of the publisher.

Current Studies in Social Sciences 2021

Published by ISRES Publishing, International Society for Research in Education and Science (ISRES)

Includes bibliographical references and index.

ISBN

978-605-73797-1-9

Date of Issue

December, 2021

Address

Istanbul C. Cengaver S. No 2 Karatay/Konya/TURKEY

E-mail

isresoffice@gmail.com

www.isres.org

SECTION 1: POLITICS & SOCIAL SCIENCES

2 - 26

Disparities in Attaining Tertiary Education between the Children of Native-Born Parents and the Second Generation of Migrants: A Comparative Analysis for 6 Western European Countries
Erhan OZDEMIR

27- 47

Cultural and Political Systems in the Arab World: An overview
Youcef HDOUCH

48 - 60

The Work of Municipalities As Local Administration in Turkey and The Expectations of the People
Fikret ALINCAK, Hüseyin ÖZTÜRK

SECTION 2: LAW & ETHICS

62 - 69

Scientific Theft
Noora Adnan JAHAD

70- 85

Towards European Union Standards: The Albanian Legal Development and Protection of Author's Rights
Ergysa IKONOMI

86 - 95

An Overview of the Italian Judicial System
Xhemile SALIU

SECTION 3: SUSTAINABILITY

97- 123

Sustainable Products, Processes and Systems: An Overview
B.H.S. THIMMAPPA

124- 133

Environmental Problems As A Threat To Sustainable Urban Development in Kano Metropolitan - A Review
Nura Isyaku BELLO

SECTION 4: EDUCATION

135- 150

Implementing Innovations in Student-Centered Teaching
Albana TAHIRI

151- 159

The Importance of Teachers' Wellbeing and Resilience in Challenging Circumstances
Lali TAVADZE, Ivdit DIASAMIDZE, Natia KATAMADZE

160- 173

Contextual Learning and Teaching Approach in 21st Century Science Education
Sema AYDIN-CERAN

174- 194

Gamification in Education: An Overview of the Literature
Mustafa Tevfik HEBEBCI, Selahattin ALAN

Preface

Current Studies in Social Sciences 2021 is published annually from the selected papers invited by the editors. This edition includes 4 sections and 12 papers from the field of Politics & Social Sciences, Law & Ethics, Sustainability and Education. All submissions are reviewed by at least two international reviewers. The purpose of the book is to provide the readers with the opportunity of a scholarly refereed publication in the field of social sciences and education. *Current Studies in Social Sciences 2021* is published by ISRES Publishing.

This book addresses different aspects of social sciences such as education, politics, law, ethics and sustainability. This book addresses different aspects of social sciences such as education, politics, law, ethics and sustainability. We hope the book will be useful to new scientists, social science readers, and anyone interested in law, politics, education, and ethics.

December 2021

Assoc. Prof. Dr. Ágnes Csiszárík-Kocsir

Óbuda University, Keleti Károly Faculty of Business and Management, Hungary

Email: kocsir.agnes@uni-obuda.hu

FH-Prof. DI. Philipp Rosenberger

University of Applied Science, FH Campus Wien, Austria.

Email: philipp.rosenberger@fh-campuswien.ac.at

Disparities in Attaining Tertiary Education between the Children of Native-Born Parents and the Second Generation of Migrants: A Comparative Analysis for 6 Western European Countries

Erhan OZDEMIR

Ghent University

Introduction

As it influences the person's intellectual and professional capacities, education may be regarded as to be amongst the most important factors in an individual's life. In addition, it provides the resources for building up the social and cultural networks to be used in the future. Furthermore, in the contemporary societies, school emerges as a competitive ground like labour market or other social domains like politics. It can be argued that the school performance of the students as well as the ultimate educational attainment level of the individual are not merely based on individual-level factors, but also they are related to the one's socio-cultural environment, parents' educational and occupational characteristics as well as socio-economic level of the student's family. Last but not least, particularly, the individuals, who reside in relatively more advanced countries, are exposed to further socio-economic and cultural segregations and political issues. These may be determined by the size of and variations within their migrant populations. In sum, the issues related to the disparities in education outcomes between the children of the native population and the descendants of the migrants those countries may be complex.

The purpose of the analyses in this study is to examine the differences in the tertiary level educational attainment between the children of native-born parents and the descendants of the migrants in Belgium, Germany, France, the Netherlands, Sweden and the United Kingdom (UK). The literature review and empirical analysis results to be presented in this chapter are complimentary to the study of the author's analysis on the effects of immigration background on the secondary school performance in these six countries (see Özdemir, 2019)¹. These two sets of analysis are expected to highlight the factors influencing the differences all throughout the secondary and later levels of education. In this regard, the empirical evidence presented in this study is assumed to help us exploring individual-level and/or intergenerational factors resulting in descendants of migrants to have education-related disadvantages in the selected countries. Therefore, the main objective of this chapter is analysing the impact of the socio-economic inequalities across native-born and migrant adults, which are likely to appear in other domains of social life, on their children's education-related outcomes rather than the success or failure of

¹ The analysis on the disparities in the secondary school performance of the children of the native-born parents and the second generation of the migrants was firstly presented in In International Conference on Research in Education and Social Sciences (ICRESS), February 3-7, 2019, Lisbon, Portugal; then it was published as a chapter in "Research Highlights in Education and Science 2019" book. For this, please see Özdemir E. (2019) How does Immigration Background Affect Secondary School Performance: The Analysis of OECD-PISA Data in 6 EU Countries. In Wu, W., and Alan, S. (eds.) Research Highlights in Education and Science 2019, Ames: ISRES Publishing, pp. 140-148.

individual migrant communities in schooling. In other words, the overall analysis results of this research are likely to demonstrate to the extent to which the education systems of the selected countries are inclusive for all groups of students.

The hypothesis to be tested in the study is “*The gaps in the tertiary education attainment are mainly determined by the differences in the parental education and occupation characteristics*”. The dependent variable to be tested this hypothesis is the dichotomous variable indicating whether the individual has completed tertiary education. The previous literature provides clear evidence for the link between the transfer of social advantages across generations and social mobility (e.g. see Goldthorpe, 1992; Saunders, 1995; Coleman, 2003; Corak, 2013; Bridge & Wilson, 2015). In this respect, regardless of the parents’ migration background, the individual’s parental education and occupational skill levels are assumed to be influential on the one’s final level of educational attainment. On the other hand, any statistically significant analysis result on differences across migrant groups in this study is likely to indicate further intergenerational socio-cultural differentiation related to parents’ country of origin. It should be noted that the expected disparities in having tertiary education between the children of foreign-born and native-born individuals are likely to be linked to migrants’ disadvantages in earlier levels of schooling. As mentioned above, this latter topic was examined previously by the author (Özdemir, 2019).

The variation in having university degrees across countries may emerge as a result of the differences in both national secondary school and higher education systems of the countries. These variations may be related to the compulsory fees paid during tertiary education, amounts of these fees, and the available financial support during the tertiary education. For example, in Sweden and Germany, either there are no compulsory fees or such fees are very low; and in Belgium, France, the students are obliged to pay some low amounts of fees. On the other hand, there are higher fees for tertiary education in the Netherlands are higher than two latter countries, while the most expensive tertiary education costs among six selected countries are found in the UK (except for Scotland). The grants systems are also different across these countries. There is a universal grant system for tertiary education only in Sweden. in Belgium, France, the Netherlands, and the UK, the grants are determined according to needs-based criteria. A set of mixed criteria (including needs and merit requirements) is applied in Germany for such higher education support. Moreover, students can have different types of financial support in all of these countries. In Sweden, the Netherlands and the UK, the student loans are available ; in Belgium and France, students can have supports in the forms of family allowances and tax benefits; and in Germany, the students can benefit all these three types of support (EURYDICE, 2015). In addition, the differences in this issue may be particularly correlated with the labour market segregation, which includes the

differentiations in occupations, skills and the other needs of country's labour market. In this regard, the statistics indicate that, in Germany, there was no remarkable change in the proportion of the employed people aged 25-64 with tertiary education level between 2004 and 2016 (around 30%). On the other hand, this proportion substantially increased in all other five countries over the same period; in these countries, more than two fifths of employed individuals in this age group had a university degree by 2016 (Eurostat).

The target population in the analysis is all individuals aged 25 to 34 years old, who were born in the host country or, who immigrated before age 14, and who completed at least 8th grade. The European Social Survey (ESS) data are selected for the analysis to examine the differentiation in the likelihood of completing tertiary level of education across migration background categories. All the ESS waves from 2 to 8 are included in the analysis². Logistic regression model is selected for the multivariate analysis. The reason is that, the dependent variable is the dichotomous variable showing whether the individual have attained tertiary education level. Other details related to the data and statistical method used in the analyses can be seen in the Data and Methodology section below.

Apart from the methodology and the findings sections, the study includes a literature review. The selected literature presented here is expected to provide insight about the relevance of the variables used in the analysis of the study. Moreover, it is beneficial for the comprehension of the complexity of the topic in terms of cross-country differences and other intra and inter communal factors shaping the variations in the educational behaviour across different groups within individual countries.

Literature Review

Theoretical Approaches

Previous research on the differentiations in the education outcomes between the children of the native-born parents and the descendants of the migrants underlines three main sets of influences, which are namely institutional, socio-economic and cultural factors, respectively. The cross-country variations and the disparities across groups within a single country are both linked to the interaction of these three factors.

In this regard, Ogbu's "Cultural-ecological theory of minority school performance" provides a remarkable theoretical insight in exploring this interaction for the school success of the second generation of migrants. Initially, this approach examines the manner, in which the minorities are treated or mistreated in education in relation with educational policies, pedagogy, and returns for their investment or school credentials; this component is called "system" (Ogbu & Simons, 1998). The second part is about

² The ESS data sets are accessible at <https://www.europeansocialsurvey.org>. References of the ESS data used in this study are given in the "References" section of this chapter.

minorities' perceptions and responses to schooling as a consequence of how they are treated in the host country. This includes the barriers faced by minorities qua minorities, which are composed of instrumental discrimination, relational discrimination, and symbolic discrimination. Moreover, the theory explores the impact of the white treatment of the minorities, which is expressed in the minorities' responses, or their "collective solutions," to the collective problems against these types of discrimination (Ogbu, 1995a; 1995b, in Ogbu & Simons, 1998). The categorisation of voluntary and involuntary minorities is not based on race, and the dominant patterns of belief and behaviour is the focus of the analysis. In this respect, the theory assumes that beliefs and behaviours of voluntary and involuntary minority groups represent ends of a continuum, and there may be variations within each of voluntary and involuntary minorities as the same treatment may cause diverse interpretations by different groups (Ogbu & Simons 1998). The authors argue that this theory is likely to assist the educators by providing criteria for assessing the success potentials of educational strategies together with some instructional strategies, to address the issues of mistrust, oppositional identity, and peer pressure not to "act white" (Ogbu & Simons, 1998).

In her study, van Zanten examines the impact of the Republican model of integration on the schooling performance of the children of migrants in France (van Zanten, 1997). Based on her study results, the author concludes that the analysis of the link between migrant groups and educational systems ought to include exploring dynamic interaction between national ideologies. The reason is that, they are embodied in education laws, school structures, curriculum, and teachers' attitudes and practices. The effects of ideologies can also be observed in specific economic, social, and cultural determinants for the group perceptions and responses to these ideologies (van Zanten, 1997).

In their research, Levels and his colleagues (Levels et al., 2008) focus on the variation in school performance of students with migrant background from the policy-making point of view. The authors assume that origin, destination and community effects are theoretically distinguished in their study. According to their assumption, those three aspects have certain characteristics affecting the educational outcomes of the children of the migrants. The level of prejudice and discrimination and the variation between traditional and non-traditional immigration countries are the factors determining the destination effect. On the other hand, community effects on immigrant student's educational achievements may include the socio-economic capital level and the size of the given immigrant community in the host countries. The findings of the analysis demonstrate that the relative size of the immigration community has a positive impact on the school success of the migrant's children as they may be more likely to access positive ethnic social capital. (Levels et al., 2008).

As mentioned in the study of Suarez-Orozco, having much more barriers and segregation

over generations, “involuntary/disparaged” minorities produce alternative strategies for social mobility (Ogbu, 1981 in Suarez-Orozco, 1991). In this regard, Suarez-Orozco assert that, the characteristics of involuntary minority responses can be identified by language, mannerism, dress and sphere of economic activity. Moreover, there exists a job ceiling for the non-European immigrants, which may indicate the limits in their careers that they could not rise regardless of talent, motivation, or achievement. As a result, higher drop-out rates and other measures of educational failure might be a response of those immigrant groups to such the job ceiling. This phenomenon can be interpreted as countercultural resistance to the perceived alien ways of the dominant majority (Suarez-Orozco, 1991).

Institutional Factors

Borgna (2016) argues that her analysis results for European countries point out the notion of institutional complementarities. Early tracking is related to severe migrant penalties when it takes place with immigrant marginalisation linked to lack of standardization in the allocation of resources across schools like in the post-war immigration countries. Moreover, late entry is likely to exacerbate disadvantages in case of linguistic distance between the native population and the migrants. In addition, the author states that immigration history of the host country is another influential factor. In more recent receiving countries, a single factor in the educational system may be sufficient to explain differences between the descendants of the migrants and the children of the native population (e.g. tracking in Italy). On the other hand, the combination of institutional features may affect the emergence of such differences in countries with a longer history of immigration, (like tracking and marginalization for Germany) (Borgna, 2016).

As shown in the study of Buchmann and Parrado (2006), despite the fact that the differences between the children of the migrants and the natives are likely to reduce after controlling linguistic and socio-economic characteristics of the household, the relative disadvantages of the migrants’ children is likely to sustain in Northern European countries. Thus, the authors argue that the institutional aspects in the host societies are important. According to the authors, the governmental policies and public animosity toward immigrants in destination countries may refer to higher levels of segregation at school between the migrants and the natives, where the descendants of migrants may be exposed to discrimination, lack of access to quality educational resources, or denial of parent’s citizenship rights.

The research results of Crul and Vermeulen (2003) indicate that, French and Belgian education systems enable the students to attend higher education levels, when they are compared to the Austrian and German systems. In the latter two countries, children start the primary education in later ages. Therefore, the elimination in the education

system occur earlier than France and Belgium (at age 10). This results in the fact that less successful children are likely to end up in vocational education and apprenticeship.

According to their analysis results, Ağırdağ and his colleagues argue that teachers' negative attitudes and students' lack of attachment to school are both related to the monolingualist policies of Flemish education system in Belgium. In this respect, multilingualism may be suggested as an alternative to augment the sense of belonging of the students with various ethnic background (Ağırdağ et al., 2014).

Dronkers and de Heus assert that, in the macro level, cultural and socio-economic characteristics of origin and destination countries influence in the differences in the school performance between the descendants of the migrants and the natives (Dronkers & de Heus, 2012). Nevertheless, the impacts of parental education and occupation are more important in countries with lowest level of differentiation. On the other hand, children of migrants have worse school performance in strongly differentiated educational systems irrespective of parents' occupation status. Furthermore, standardisation of the school system and the length of compulsory education in the origin country, the available education resources in destination countries, living in a host country with longer immigration history, and dominant religion in the origin country can be listed as other macro level factors influencing the variation between the groups (Dronkers & de Heus, 2012).

Socio-Cultural and Socio-economic Factors

The studies on differences in education outcomes also investigate the effects of cultural factors such as language, acculturation and community effect. However, as argued in Ogbu's theoretical approach, the negative impacts of such socio-cultural factors on the disparities between the descendants of migrants and the native population may be linked to what extent the migrants react in different socio-political and socio-economic environments (Ogbu & Simons, 1998). In this regard, examining the cultural aspects in the literature involves the analysis of the interrelation between these aspects and other socio-economic and institutional features in determining the disparities in educational outcomes between groups.

Ruhose and Schwerdt (2015) focus on the impact of early education tracking on the gap between the children of migrants and of natives based on the PISA, TIMMS and PIRLS data. The results of cross-sectional regression models highlight that the effect of early tracking before age 15 on migrant-native test score gaps of tracking is substantially positive. Nonetheless, further analysis of the same data indicate a remarkable effect of heterogeneity with respect to the frequency of speaking the test language at home. The analysis results suggest that speaking languages other than the test language at home has a strong early tracking impact on relative achievement of the migrant students in reading.

In a policy brief, Siarova and Essomba point out the importance of the language proficiency of the students for the language at school in preventing behavioural problems and school failure, which may emerge because of stress, anxiety and boredom linked to lack of comprehension (Siarova & Essomba, 2014). On the other hand, the authors underline the results from the previous studies demonstrating the lack of good practices in teachers' training, effective language support and native language courses across European countries.

Studies exploring the differences in the education outcomes between the children of the migrants and the native-born parents also examine the impact of the socio-economic inequalities between groups and intergenerational disadvantages. This particular research in this field supports the analyses of the variation in parents' socio-economic conditions and human capital transferred to their children.

Brinbaum and Kieffer argue that, despite the high educational aspirations of their parents, the children of migrants are likely to begin their secondary education with difficulties. This is related to lower educational and occupational levels as well as poor French skills of their parents (Brinbaum & Kieffer, 2009). In this respect, the authors state that their analysis results support the theories of school reproduction suggesting that the inequalities of school performance are mainly related to social factors.

The research of Bourne and others (2018) demonstrate that, in spite of the fact that cognitive ability is regarded to be highly heritable, the intergenerational reproduction of inequalities in educational attainment does not emerge because of this. In addition, environmental factors related to individuals' social origins are likely to influence in the formation of their cognitive ability. In this respect, the authors emphasize the significance of their findings for the weakening relationship between children's cognitive ability and their parents' class over time while the relation with child's cognitive ability and their parents' status and education is strengthening (Bourne et al., 2018). Their analysis findings show that cognitive ability mediates a minor part of the relation between social origins and educational attainment. Thus, the authors argue that it is necessary to examine how social origin actually operates other than through cognitive ability.

The empirical evidence presented in the previous literature indicates that in spite of the disadvantages that children of migrants face in the beginning of their education may be overcome in the long run (Boado, 2008), the socio-economic differences widen the education-related gaps between the second generation of the migrants and the children of the parents with native origins. Therefore, parents' human capital (Brinbaum & Kieffer 2009; Bourne et al., 2018) and other unfavourable socio-economic conditions (Park & Kyei, 2010; Worbs, 2003) are essential components in testing the hypothesis of the study.

Entorf (2015) argues that, the educational achievement gaps between migrant and

native-born students can be explained mainly by the variation in the socio-economic status of the parents, language and level of acculturation. However, it is a complex process, which requires detailed analysis of composition of migrants and concentration of migrant students. The latter aspect may result in further segregation and early tracking for the migrants' children in disadvantaged schools. Nevertheless, the author states that the results of such policies cannot be observed for several years. Rapid instruction in the local language is necessary for the migrants with language vulnerability together with personal orientation to the education system to ensure catching up with their native-born counterparts (Entorf, 2015).

The research findings of Crul and Vermeulen suggest that, despite the similarities in background characteristics of the first generation for both Turkish and Moroccan communities in Europe as having low level of education and working in low skilled jobs, the segmented assimilation, in which the assimilation is supposed to be neither linear nor homogenous, applies to the second generations of those immigrant groups differently (Crul & Vermeulen, 2003). The findings point out that looser ties among the Moroccan migrants have led the second generation to have more individualistic behaviour and seeking the success in higher educational levels, while the entrepreneurship drew on the tight family relations and the cohesion within the Turkish community. Turkish second generation young people generally are likely to follow shorter and more vocationally oriented educational tracks; school dropout rates of the Turkish female students are higher as a result of early-age marriages (Crul & Vermeulen, 2003). In the light of their analysis results, Crul and Vermeulen conclude that, although children of Turkish migrants profited from its closure and stronger social cohesion, they are likely to perform worse than the Moroccan second generation in education. In the first look, it seems as if the Turkish immigrants have experienced a smooth transition to the labour market. However, their lower proportion in higher educational attainment might be the price that Turks have to pay (Crul & Vermeulen, 2003).

The longitudinal study results of Smith and his colleagues (2019) on the migrants' intergenerational integration in Sweden indicate that the advantages transmitted to the migrants' children in improving their school performance is positively correlated with the duration that the parents have lived in the host country. This pattern is visible for most of the groups included in the analysis. Nevertheless, the findings also show that the effects on 2.0 and 2.5 generations may vary across different migrant groups (either downwards or upwards) because of intermarriages, the socio-economic and human capital level of parents at the time of immigration, cultural differences and the alteration in Swedish language proficiency over time (Smith et al., 2019).

Longitudinal data analysis results of another research on the variation in school success across children from different migrant communities and racial groups in the USA show

that, the inequality in educational outcome of the young children across racial/ethnic groups remains even after controlling the effects of family characteristics and language proficiency (Glick & Hohmann-Marriott, 2007). The results suggest that socio-economic well-being of the household or other family characteristics are not sufficient to explain the variation. In addition, clustering the students by cultural origins is not always consistent. According to the empirical evidence of their research, the authors state that parents' behaviours and involvement are other important factors in achieving better academic outcomes (Glick & Hohmann-Marriott, 2007).

According to his analysis results, Jerrim argues that the age at the time of migration and the concentration of children of migrants at school are two significant factors determining school success of the migrant students in England. Furthermore, the neighbourhood deprivation and region of residence are two macro-level socio-economic factors affecting their school performance in this country (Jerrim, 2018).

Having Tertiary Education

In their study on the effects of socioeconomic inequality on the access to high status post-secondary institutions in Australia, the USA and the UK, Jerrim and colleagues have found that, the significant direct impacts of family background on the enrolment at elite colleges are evident. These impacts are together with the effects of the SES on the academic achievement in high school, which also influence enrolment in tertiary education institutions (Jerrim et al., 2015). Their findings suggest that, despite the substantial variations in the organisation of post-secondary education, small cross-country differences are observed in the impact of SES on stratification in higher education across Australia, the UK and the USA. In the light of the results of the same analysis, the authors argue that although they face different institutional challenges in each country, the families with high SES level are able to use their resources to the greatest possible effect to ensure that educational inequalities are maintained (Jerrim et al., 2015).

The study of Hällsten and Thaning (2018) on the horizontal mobility and education outcomes in Sweden shows the existence of an influential horizontal segregation by parental SES at the upper secondary and the tertiary level in this country. This segregation is likely to emerge in particular dimensions of socio-economic background, especially among males. Thus, some portion of such segregation is not transformed into subsequent inequality in expected labour market outcomes. The reason is that, this segregation has a heterogeneous nature. However, the analysis results suggest a substantial level of inequality in the average level of tertiary graduation rates for upper secondary tracks, and average earnings for tertiary fields. After exploring the effects of parents' education, occupation, income and wealth, the authors assert that the wealth is the most influential factor determining the segregation across educational fields in tertiary education level.

Individuals with parents having higher levels of education are likely to attend high prestige education irrespective of academic field such as arts, humanities, law and health professions. Individuals having more disadvantaged socio-economic background tend to attend tertiary programmes like teaching, short health and social services. These empirical results indicate that, reducing social background to a uniform dimension may cause misleading outcomes in the analysis of intergenerational educational disparities. The reason is that, each dimension involves its unique and specific patterns for segregation and inequality (Hällsten & Thaning, 2018).

The findings of a cohort analysis conducted by Tolsma and colleagues on the educational attainment differences across migrant groups in the Netherlands suggest that, the inequalities between the native population and the ethnic minorities have reduced in the lowest levels of education over time, and they have become less likely to occur within vocational tracks of secondary education. However, disparities in attaining tertiary level education between the descendants of the natives and the other groups have remained during the same period (Tolsma et al., 2007). The authors argue that, the university track is more exclusively the domain of native Dutch. The analysis results point out that other groups are cumulated more in the vocational track. These two analysis results are likely to indicate the formation of ethnic educational inequality in those transitions. Despite the fact that the social origin indicators may explain the ethnic educational differentials to a certain extent, ethnic educational inequality persists even after controlling socio-economic characteristics. Last but not least, the authors state that, even under a condition of saturation as suggested in maximally maintained inequality (MMI) proposition (Raftery & Hout 1993, in Tolsma et al. 2007), in the earlier stages of education, the patterns of ethnic inequality outcomes in education sustain between higher secondary education and tertiary education. This implies that the inequality is founded qualitatively within tertiary education in the Netherlands. The latter finding corresponds to the effective maintained inequality (EMI) proposition (Tolsma et al., 2007).

The research outcomes of Kristen and colleagues (2008) on the probability of attending university in Germany confirms that variables like belonging to a higher social class, having better educated parents, and displaying a stronger motivation for status are likely to increase the chance of enrolling a university rather than a vocational path. The analysis results demonstrate that, even after controlling all these variables together with the final grade for secondary education and familiarity with the dual character of German vocational training, the descendants of the migrants, particularly the children of the ones with Turkish origin, are more likely to attend the university compared to the children of native Germans. Based on these findings, the authors argue that, this pattern may be related to the strategy of the migrant communities to avoid employer discrimination during apprenticeship training position, which may arise due to their social distance

disadvantages in Germany (Kristen et al., 2008). On the other hand, the authors assert that, attending the university does not necessarily lead to attaining the degree. This fact is more relevant for the children of the migrants since they have relatively lower final upper secondary school grades than the children of the native-born people. This may be interpreted as they are academically less well prepared for tertiary education, and they are more likely to drop out (Kristen et al., 2008).

The analysis results of Feliciano and Lanuza (2017) on the intergenerational mobility within migrants in the USA demonstrate the differentiation in advantage in educational attainment across the generations within the immigrant communities on the basis of the years of schooling. In addition, the migrants' children have relatively lower educational attainment levels (12 years of schooling) when they are compared to the ones with native-born parents (14 years of schooling) before controlling the standard measures of family SES including household income, parental occupational attainment, and parental years of schooling (Feliciano & Lanuza, 2017). On the contrary, when these socio-economic and parental factors are included in the multivariate models, 11 out of 13 immigrant groups analysed in the study have significantly more years of schooling than the 3rd (or later) generation Whites. The authors assert that, the majority of the differences in intergenerational educational mobility is likely to be explained by the class background of immigrant parents. Moreover, there is a contextual dimension, which should be considered in the analysis. This should cover in what country (geographical) and when (historical) the parents completed their highest educational attainment (Feliciano & Lanuza, 2017).

In sum, the literature provides the evidence not only for the effect of SES in general, and parents' human capital in particular, on the access to tertiary education (Triventi, 2013; Feliciano & Lanuza, 2017), but also for the segregation in the fields of study in post-secondary and tertiary education institutions (Jerrim et al., 2015; Hällsten & Thaning, 2018). These results are also consistent with the research findings related to the effect of socio-economic disparities on the secondary school success, which are discussed above. Although the socio-economic characteristics of the families and parents may cause similar result in different countries, the effect of migration background may differ across countries (Tolsma et al., 2007; Kristen et al., 2008; Feliciano & Lanuza, 2017) in relation with the cross-country variations in labour market, education system, or other contextual patterns in the host country. In this regard, it can be asserted that, empirical evidence derived from previous literature supports the assumptions of this study's hypothesis related to the impact of parental human capital characteristics on the probability of attaining tertiary education. Therefore, any differentiation in attaining university (or higher) degree between the descendants of the migrants and the native-born population after controlling these factors may suggest a certain level of discrimination in access to

tertiary education.

To conclude, the recent literature demonstrates that, in general, the education outcomes depend upon the interaction among the, socio-economic conditions, in which the student lives, the transfer of inter-generational (dis)advantages, cultural environment and education system of the country. Particularly, the lower socio-economic well-being of the families and lower educational and occupational characteristics of the parents are the primary factors, which lead to lower education attainment levels for the children of the migrants. In the following stages, the penalisation of low school performance by the current education system (via drop outs as in case of France or via shifting to vocational education as in case of Germany) is likely to increase the disparities between students with migration background and the ones with the native origins. The literature also indicates the importance of language spoken at home and other community-level cultural differences. In this regard, the analysis examining the final level of education attainment should take account of the factors from all these domains, where the data are available.

Data and Methodology

As mentioned in the “Introduction” above, in the analysis of this study, European Social Survey (ESS) data sets of rounds between 2004 and 2016 are selected to examine the disparities in attaining tertiary education level.

There is a limited number of cross-national comparative survey data allowing the analysis of the socio-economic conditions of the second-generation over a long period of time. For instance, despite their relatively big sample sizes, the complete socio-economic data allowing the analysis for second generation in cross-country survey datasets such as European Union Labour Force Survey (EU-LFS) and European Union Statistics on Income and Living Conditions (EU-SILC) are available only for few years. Unlike the ESS, the data about parents’ educational, occupational and migration background are not collected in core questionnaires, but in ad hoc modules in particular waves of these surveys (for the list of the EU-SILC and EU-LFS core data variables, see <https://www.gesis.org/en/missy/>).

In this respect, the ESS data are used to examine the likelihood of the descendants of the first generation migrants in having tertiary education. There are both advantages and limitations of using ESS data in this study. Fortunately, the ESS collects detailed country of birth data of the respondents and their parents. In addition, the highest educational level attained by the parents and the occupation that both parents had when the respondent was 14 years old are among the data collected by the core ESS questionnaire. Nevertheless, the biggest disadvantage of the ESS in the analysis of second generation of the migrants is the small number of observations in individual waves. Besides, despite

the implementation of the same migration and occupation modules in all rounds, the questions have been modified over time. By considering both positive and negative aspects of this data source, some standardisations are applied to ESS data in order to obtain maximum level of consistency in the analysis results of this study.

The target population of the analysis for the likelihood of having tertiary education attainment is all the individuals in 25-34 age group, who were not in education at the time of the survey, and who were born in the study countries (i.e. the native population) or who migrated to the selected countries before age 15, and who completed 8th grade in the current country of residence. There are two assumptions of selecting this group of individuals for the analysis. First of all, these individuals are assumed to be in the country during their ages of secondary education. Secondly, they are expected to have completed their highest level of education in the country of residence. Therefore, it is expected to be composed of the same group of individuals, who attended the secondary education in the host country, and who were exposed to similar education disparities that are shown in the PISA analysis (see Özdemiş, 2019). There are also other reasons of choosing the individuals in 25-34 age group. Initially, the individuals in this age group are assumed to have completed their formal education. Moreover, selecting this 10-year age interval is likely to provide bigger number of cases in ESS data to acquire statistically more reliable findings. For the same reason, despite the use of detailed country of birth data of the parents to distinguish second generation of EU and non-EU born migrants, country of birth of the individual is grouped in two broad categories, which are namely “Native” and “Foreign-born” respectively. The rationale lying behind this categorisation is that all the descendants of the immigrants are assumed to be the dependant migrants of the first generation irrespective of the country of birth of these children. Last but not least, small number of observations in ESS requires the grouping of individuals in such broader categories to obtain statistically consistent results.

For the multivariate analysis of the study, logistic regression model is selected. It is conducted by using pooled ESS data to examine the factors influencing the odds for having tertiary education level. Using the pooled data is expected to overcome the statistical hazards that may emerge because of small number of observations, especially for the individuals with migration background.

The equation for simple logistic regression model is

$$P(Y_i = 1) = \frac{\exp(B_0 + B_i * X_i)}{1 + \exp(B_0 + B_i * X_i)}$$

where $P(Y_i = 1)$ indicates the conditional probability of the outcome variable (Sommet and Morselli 2017). As defined by Eboli and Mazzula (2009), the regression coefficients are estimated by the maximum likelihood method, where the dependent variable is of a qualitative nature. In this respect, such modelling estimates the parameter values

maximising the probability of observing the experimental data set. The Wald test is used in verifying the significance of the outcomes, and model's goodness of fit is shown by Nagelkerke R^2 and/or Cox's R^2 .

The pooled data set used in the multivariate analysis covers the available data of all seven ESS rounds in 2004-2016 period. It should be noted that some part of the relevant information, which is necessary to determine the target population, is not available in the 2nd round (conducted in 2004) of ESS in France and Sweden. Therefore, the analysis for these two countries covers 2006-2016 period. It should be noted that the logistic regression models in this study are implemented for each selected country separately.

The dichotomous variable indicating whether the individual has completed tertiary education is the dependent variable of the logistic regression analysis. Five independent variables for the individual and parental characteristics are included in these models, which are namely i.) the sex of the individual; ii.) 5-year age groups; iii.) the highest parental educational attainment; iv.) the highest parental occupational status when the individual was 14 years old; and v.) the migration status of the individual as the combination of the country of birth of both parents and the individual. In addition, the year of the ESS round is also involved as a categorical independent variable in the models. Unfortunately, no language-related variable is involved in the analysis. The reason is that, the ESS does not collect data on the language proficiency of the individual and/or parents at the time of the respondent's schooling years.

The categorisation of the variable for the parents' occupation when the individual was 14 years old is different across ESS rounds. In addition, the categories given in this variable do not correspond to the conventional ISCO codes (ILO). In this regard, in the analysis of this study, broad groups for occupations are used. This grouping identifies high-skill white collar, semi-skill or low skill white collar, and blue-collar occupations. On the other hand, as mentioned above, the detailed data for country of birth of parents are grouped as "EU-born" and "non-EU" born to explore the variation between the descendants of the migrants from these two categories of origin countries.

Descriptive Findings

Descriptive findings demonstrate that, there is significant level of variation in having parents with low education attainment level (ISCED 0, 1 or 2) between the descendants of the migrants and the children of native-born parents in all selected countries. The figures are relatively low for the individuals with at least one native parent (Figure 1). Less than one tenth of children of native-born couples had parents with basic schooling in Germany all throughout 2006-2016 period. The proportions for individuals with two native-born parents were bigger than the figures found for the individuals with only one migrant parent in France and the Netherlands, and in some particular sub-periods in

Belgium, Sweden and the UK. On the contrary, the children of the parents, who were both born abroad, had substantially bigger shares of low parental education attainment level in all six study countries. The figures were 60% or higher over the period in Belgium; and three out of four descendants of foreign-born couples had parents, who had low education attainment during 2006-2008 period in France and the UK. Despite the fact that the findings for the individuals in this category in Sweden and Germany were relatively lower than the other four countries, they were much bigger than the share for the individuals with at least one native-born parent.

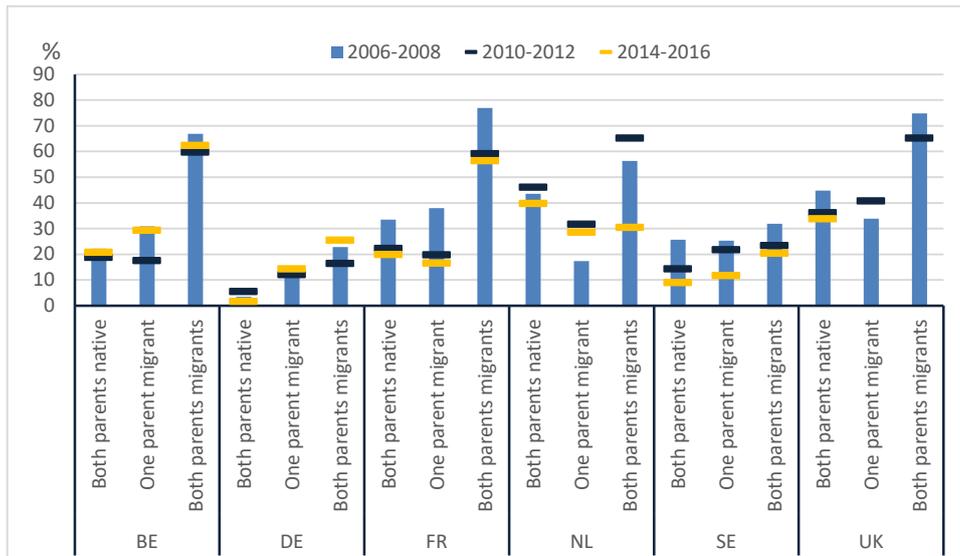


Figure 1. Proportion of Individuals Aged 25-34 Whose Parental Education Level is Basic Schooling by Migration Background of Parents, 2006-2016 (%)

Note: The consecutive ESS waves are grouped in order to obtain sufficient number of observations for consistent findings. The figures for the individuals with one migrant parent and two migrant parents categories in the UK for 2014-2016 are not presented because of statistically unreliable findings due to insufficient number of observations.

Source: ESS microdata, own calculation.

A similar pattern is found for the variation in having parents with low occupational skills across migration groups. The proportion of the individuals, whose parents had been working in low skilled jobs when the individual had been 14 years old, was significantly higher among the ones with two foreign-born parents, when they are compared to their counterparts with at least one native-born parent in all selected countries, though some fluctuations are observed across sub-periods (Figure 2).

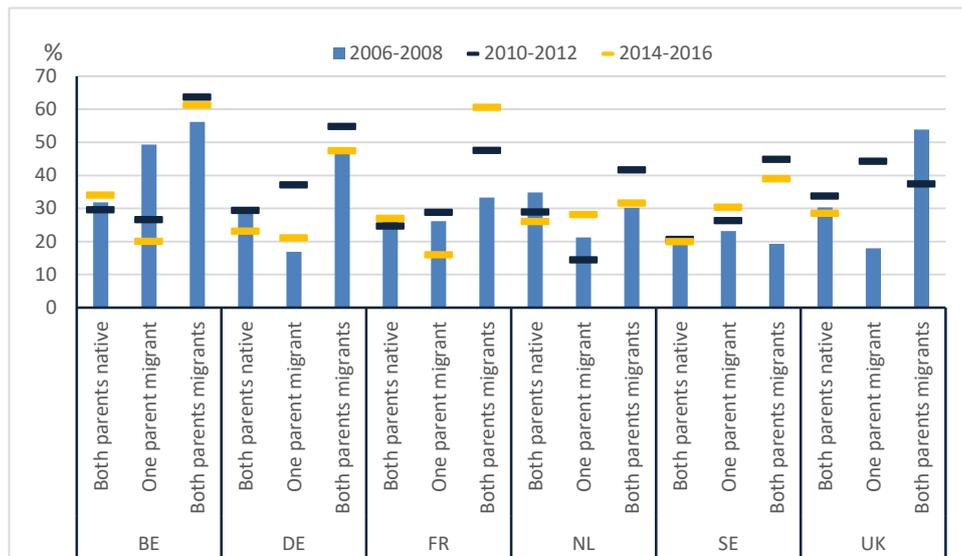


Figure 2. Proportion of Individuals Aged 25-34 Whose Parental Occupational Level is Low Skilled Jobs by Migration Background of Parents, 2006-2016 (%)

Note: The consecutive ESS waves are grouped in order to obtain sufficient number of observations for consistent findings. The figures for the individuals with one migrant parent and two migrant parents categories in the UK for 2014-2016 are not presented because of statistically unreliable findings due to insufficient number of observations.

Source: ESS microdata, own calculation.

Descriptive analysis results suggest that there are disparities in attaining tertiary education in some study countries between broad categories for the parents' country of birth. In Belgium, more than two fifths of the individuals aged 25-34 with at least one native parent had tertiary education level over 2006-2016 period. This figure did not exceed 20% of the descendants of overall migrant couples between the same years (Figure 3). Despite a smaller variation between these two groups than the gap observed in Belgium, the proportion of the individuals, who completed tertiary education, among the children of foreign-born couples was significantly smaller than the ones with two native parents in Germany, France, the Netherlands all throughout the period, and in Sweden between 2010 and 2016. The proportion for the ones with only one migrant parent are similar to the figures estimated for the individuals with two native-born parents in these countries. The findings indicate even bigger shares for the former group of individuals in particular years in France, the Netherlands and Sweden. On the contrary, in the UK, the lowest figures are found for the descendants of the native-born couples. In 2010-2012 period, only 36% of the individuals in this category had tertiary education level, whereas the majority of the ones with at least one migrant parent had a university degree.

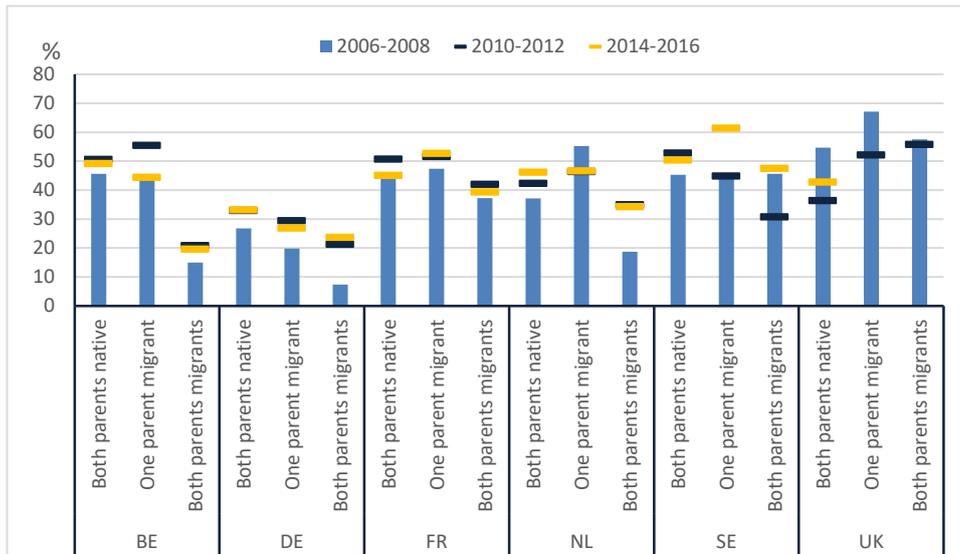


Figure 3. Proportion of Individuals Aged 25-34 Who had Tertiary Education by Migration Background of Parents, 2006-2016 (%)

Note: The consecutive ESS waves are grouped in order to obtain sufficient number of observations for consistent findings. The figures for the individuals with one migrant parent and two migrant parents categories in the UK for 2014-2016 are not presented because of statistically unreliable findings due to insufficient number of observations.

Source: ESS microdata, own calculation.

Multivariate Analysis Results

The model summary indicators of the logistic regressions show that, the model for Germany has relatively lower level of variance explained for the likelihood of having completed tertiary education for the age group in concern when it is compared with the models for other countries. On the other hand, regression conducted for Belgium has the highest explanatory power (Table 1).

Table 1. Pseudo R² Values for the Logistic Regression Models for having Tertiary Education Level

	Cox & Snell R Square	Nagelkerke R Square	N
BE	0.230	0.307	1365
DE	0.112	0.158	2116
FR	0.153	0.204	1359
NL	0.151	0.204	1460
SE	0.168	0.225	1251
UK	0.150	0.201	1414

Source: ESS microdata, own calculations

The findings of logistic regression models do not demonstrate a statistically significant variation in attaining tertiary education level across migration background categories in Germany and France for the ones, who were living in these countries at age 14 and completed at least 8th grade (Table 2). On the contrary, in other four selected countries,

individuals in particular migration background categories are observed to be less advantaged. In Belgium and the Netherlands, the foreign-born individuals, who started residing in the host country at age 14 or younger, and whose both parents were born outside the EU, have much lower odds of attaining tertiary education than the children of native-born couples after controlling other individual and parental characteristics. In the Netherlands, the odds ratio for the former group of individuals is as low as 0.26, and it is just above 0.1 in Belgium. Likewise, in Sweden, native-born individuals, whose both parents were born in the EU, are much less likely to finish a university when they are compared to their counterparts in the reference category. On the other hand, in Sweden and the UK, native-born individuals with two non-EU-born parents have higher likelihood to attain tertiary education level relative to the individuals in all other categories. Moreover, in the UK, unlike Belgium and the Netherlands, the children of non-EU-born couples, who were born abroad, are almost 11 times more likely to have university degree than the individuals with two native-born parents.

Table 2. Odds Ratios of the Independent Variables in the Logistic Regressions for Having Tertiary

	Education Level					
	BE	DE	FR	NL	SE	UK
Female	1.601***	1.014	1.559***	1.381**	2.145***	1.388**
Male (ref.)						
25-29	1.175	0.684***	0.755*	0.603***	0.540***	0.772*
30-34 (ref.)						
Low	0.127***	0.314***	0.164***	0.221***	0.304***	0.455***
Medium	0.238***	0.493***	0.315***	0.452***	0.423***	0.627**
High (ref.)						
ISCO 4+5	0.685*	0.471***	0.611**	0.894	0.527***	0.550***
ISCO 6+7+8+9	0.476***	0.277***	0.399***	0.587**	0.398***	0.284***
ISCO 1+2+3 (ref.)						
Native/both parents EU	0.699	0.852	0.423	1.994	0.318*	0.485
Native/both parents non-EU	0.482	0.670	1.647	1.127	2.991*	2.548***
Migrant/both parents EU	0.653	0.757	1.656	0.366	2.009	0.348
Migrant/both parents non-EU	0.123**	0.601	1.578	0.255***	1.111	10.640***
Native/parents mixed	1.054	0.996	0.962	1.213	1.145	1.431
Migrant/parents mixed	0.654	0.358	1.234	2.325	1.672	0.837
Both parents native (ref.)						
2004	0.670	0.765		0.862		0.511**
2006	0.723	0.558**	1.023	0.870	0.724	1.804**
2008	0.768	0.710	1.109	1.158	1.022	1.603*
2010	1.015	1.000	1.427	1.045	0.821	0.971
2012	0.875	1.059	0.903	1.215	1.373	0.943
2014	0.707	0.920	0.838	1.365	1.117	1.172
2016 (ref.)						
Constant	0.507**	0.261***	1.134	0.669	0.925	1.018
N	1365	2116	1359	1460	1251	1414

*Note: Significant at *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$*

No data in France and Sweden prior to 2006.

The order of independent variables: Sex; 5-year age groups; highest parental education level; highest parental occupation when the individual was 14 years old; migration background; year of ESS round.

Source: ESS microdata, own calculation.

The findings for other independent variables included in the models suggest similar patterns in the selected countries in general. Women in the target population of the analysis are more likely to attain tertiary education level relative to men in all selected countries, but Germany (Table2). The results indicate that the individuals in 25-29 age group have lower odds of having tertiary education attainment than the ones aged 30-34 in all countries except for Belgium. This finding may suggest that the individuals continue their formal tertiary education activities during later ages in the other five countries. In addition, the results show that the lower the parental education level, the lower the chance of having a university degree. In addition, the individuals having parents, who had less skilled jobs during the individuals' teenage years, have lower odds of attain tertiary education. According to the findings, it can be argued that there is further segregation between the children of the parents with higher ranks of white-collar jobs and the ones with lower parental occupational skills. This is not the case in the Netherlands, where the variation between skilled and less skilled white-collar occupations is statistically insignificant. The logistic regression results for the effects of parents' education and occupational levels on the likelihood of attaining tertiary education correspond to the PISA analysis results for the secondary school success (Özdemir, 2019). In this regard, it can be argued that the relative human capital disadvantages of the parents are continuously influential on the education outcomes for the individuals in secondary and tertiary education stages.

Conclusion and Discussion

The results of both descriptive and multivariate analyses highlight the educational and socio-economic disparities across the ones with different individual-level and parental migration experiences.

In addition, the ESS analysis findings in this study suggest that there is a strong link between the socio-economic well-being of the households and the education outcomes for the children. This fact confirms the assumption of the hypothesis tested in the study. The effect of migration background of the parents becomes statistically marginal for most of the categories after including the parents' education level and occupations in the analysis. However, the negative effect of migration background on attaining tertiary education remains particularly for migrants having two non-EU born parents in Belgium and the Netherlands. As mentioned in "Data and Methodology" section above, there are some other variables, which could not be included in the empirical analysis of this study as they are not available in ESS data. For example, the information for the language

spoken at home when the individual was in school is not collected in this survey. In addition, very small number of cases- particularly for the second-generation of the migrants- in the ESS data sets does not allow further detailed analysis.

According to the findings of the study, it can be argued that the results for the likelihood of attaining tertiary education based on ESS data are consistent with the results of PISA analysis (Özdemir, 2019). For instance, the PISA analysis findings also demonstrate that the socio-economic well-being of the student's family is among the most influential factors affecting the secondary school success in all selected countries in this study. Specifically, in Belgium, the children of foreign-born couples are likely to have the lowest plausible values in all academic fields. On the other hand, results from PISA do not indicate any statistically significant variation between the students in this category and the children of the native couples in the UK. In this respect, it may be argued that the disadvantages faced by the children of non-EU-born parents persist after the secondary school in some countries, while more egalitarian education systems as in the case of the UK enable the descendants of migrants with non-EU origins to complete higher educational levels.

The empirical findings of this study point out that the socio-economic differences tend to sustain across generations. Education can be regarded as one of the most influential agents in transferring the advantages from the parents to their descendants. On the contrary, the children of the families having disadvantageous socio-economic characteristics are exposed to risks and hardships not only because of the financial shortcomings of the households, but also insufficient human capital background of the parents. Therefore, it can be asserted that the gap between the native population and immigrants is likely to remain in the future just because of the disparities in education outcomes across groups.

References

- Ağırdağ, O., Jordens, K., & Van Houtte, M. (2014) Speaking Turkish in Belgian primary schools: Teacher beliefs versus effective consequences. *Bilig, Summer 2014, Number 70*, 7-28.
- Boado, H. C. (2008) Do immigrant-origin students progress faster at school? The case of France. *Population (English Edition, 2002-), Vol. 63, No. 4 (Oct. - Dec., 2008)*, 651-667.
- Borgna, C. (2016) Multiple paths to inequality. How institutional contexts shape the educational opportunities of second-generation immigrants in Europe. *European Societies, Vol 18:2*, 180-199.
- Bourne, M., Bukodi, E., Betthäuser, B., & Goldthorpe, J. H. (2018) 'Persistence of the

social': The role of cognitive ability in mediating the effects of social origins on educational attainment in Britain. *Research in Social Stratification and Mobility*, 58 (2018), 11-21.

Bridge, G., & Wilson, D. (2015) Towards an interactive sociological rational choice approach to theorising class dimensions of school choice. *Policy & Politics*, 43(4), 493-507. <https://doi.org/10.1332/030557314X13923920087710>

Brinbaum, Y., & Kieffer, A. (2009) Trajectories of immigrants' children in secondary education in France: Differentiation and polarization. *Population* (English Edition, 2002-), Vol. 64, No. 3 (2009 July-September), 507-554.

Buchmann, C., & Parrado, E. A. (2006) The impact of comparative education research on institutional theory. *International Perspectives on Education and Society, Volume 7*, 345-377.

Coleman, J. S. (2003) Social capital in the creation of human capital. In R Cross, A Parker and L Sasson (eds.) *Networks in the Knowledge Economy*, New York: Oxford University Press, pp. 57-81.

Corak, M. (2013) *Income inequality, equality of opportunity, and intergenerational mobility*. IZA Discussion Paper No. 7520, July 2013.

Crul, M. & Vermeulen, H. (2003) The second generation in Europe. *International Migration Review*, Vol. 37, No. 4, The Future of the Second Generation: The Integration of Migrant Youth in Six European Countries (Winter, 2003), 965-986.

Dronkers, J., & de Heus, M. (2012) *The educational performance of children of immigrants in sixteen OECD countries*. CreAM Discussion Paper Series, No:10/12, Centre for Research and Analysis of Migration Department of Economics, University College London.

Eboli, A., & Mazzula, B. (2009) An ordinal logistic regression model for analysing airport passenger satisfaction. *EuroMed Journal of Business*, Vol. 4 No. 1, 2009, 40-57.

Entorf, H. (2015) Migrants and educational achievement gaps: Avoiding segregation and compensating for parental disadvantage can reduce migrants' educational achievement gaps. *IZA World of Labor*, 2015: 146 doi: 10.15185/izawol.146

ESS Round 2: European Social Survey Round 2 Data (2004). Data file edition 3.6. NSD - Norwegian Centre for Research Data, Norway – Data Archive and distributor of ESS data for ESS ERIC. doi:10.21338/NSD-ESS2-2004.

- ESS Round 3: European Social Survey Round 3 Data (2006). Data file edition 3.7. NSD - Norwegian Centre for Research Data, Norway – Data Archive and distributor of ESS data for ESS ERIC. doi:10.21338/NSD-ESS3-2006.
- ESS Round 4: European Social Survey Round 4 Data (2008). Data file edition 4.5. NSD - Norwegian Centre for Research Data, Norway – Data Archive and distributor of ESS data for ESS ERIC. doi:10.21338/NSD-ESS4-2008.
- ESS Round 5: European Social Survey Round 5 Data (2010). Data file edition 3.4. NSD - Norwegian Centre for Research Data, Norway – Data Archive and distributor of ESS data for ESS ERIC. doi:10.21338/NSD-ESS5-2010.
- ESS Round 6: European Social Survey Round 6 Data (2012). Data file edition 2.4. NSD - Norwegian Centre for Research Data, Norway – Data Archive and distributor of ESS data for ESS ERIC. doi:10.21338/NSD-ESS6-2012.
- ESS Round 7: European Social Survey Round 7 Data (2014). Data file edition 2.2. NSD - Norwegian Centre for Research Data, Norway – Data Archive and distributor of ESS data for ESS ERIC. doi:10.21338/NSD-ESS7-2014.
- ESS Round 8: European Social Survey Round 8 Data (2016). Data file edition 2.2. NSD - Norwegian Centre for Research Data, Norway – Data Archive and distributor of ESS data for ESS ERIC. doi:10.21338/NSD-ESS8-2016.
- European Social Survey (ESS) ESS Themes <https://www.europeansocialsurvey.org/data/module-index.html> Accessed on 02/03/2021.
- Eurostat database <http://ec.europa.eu/eurostat/data/database> . Accessed on 15/12/2019.
- EURYDICE (2015). *National student fee and support systems in European higher education – 2015/16. Eurydice Facts and Figures*. European Commission/EACEA/Eurydice, 2015 Luxembourg: Publications Office of the European Union.
- Feliciano, C., & Lanuza, Y. R. (2017) An immigrant paradox? Contextual attainment and intergenerational educational mobility. *American Sociological Review*, 2017, Vol. 82(1), 211-241.
- GESIS MISSY <https://www.gesis.org/en/missy/> . Accessed on 19/09/2021.
- Glick, J. E., & Hohmann-Marriott, B. (2007) Academic performance of young children in immigrant families: The significance of race, ethnicity, and national origins. *The International Migration Review*, Vol. 41, No. 2 (Summer, 2007), 371-402.
- Goldthorpe, J. H. (1992) Employment, class, and mobility: A critique of liberal and

- marxist theories of long-term change. In Haferkamp, H., and Smelser, N. J. (eds.) *Social Change and Modernity*, Berkeley: University of California Press, pp. 123-147.
- Hällsten, M., & Thaning, M. (2018) Multiple dimensions of social background and horizontal educational attainment in Sweden. *Research in Social Stratification and Mobility*, 56 (2018), 40-52.
- ILO a International standard classification of occupations <https://www.ilo.org/public/english/bureau/stat/isco/> Accessed on 02/08/2020.
- Jerrim, J. (2018) Immigrant Student Achievement & Educational Policy in England. In Volante, L., Klinger, D., and Bilgili, O. (eds.) *Immigrant Student Achievement and Education Policy: Cross-Cultural Approaches*, Cham: Springer, pp. 19-33.
- Jerrim, J., Chmielewski, A. B., & Parker, P. (2015) Socioeconomic inequality in access to high-status colleges: A cross-country comparison. *Research in Social Stratification and Mobility*, 42 (2015), 20-32.
- Kristen, C., Reimer, D., & Kogan, I. (2008) Higher education entry of Turkish immigrant youth in Germany. *International Journal of Comparative Sociology*, Vol 49 (2–3), 127-151 DOI:10.1177/0020715208088909
- Levels, M., Dronkers, J., & Kraaykamp, G. (2008) Immigrant children's educational achievement in western countries: origin, destination, and community effects on mathematical performance. *American Sociological Review*, Vol. 73, No. 5 (Oct., 2008), 835-853.
- Ogbu, J. U. (1981) Origins of human competence: A cultural ecological perspective. *Child Development* 52, 413-429.
- Ogbu, J. U. (1995a) Cultural problems in minority education: Their interpretations and consequences—Part one: Theoretical background. *The Urban Review* 27(3), 189-205.
- Ogbu, J. U. (1995b) Cultural problems in minority education: Their interpretations and consequences—Part one: Case studies. *The Urban Review* 27(4), 271-297.
- Ogbu, J. U., & Simons, H. D. (1998) Voluntary and involuntary minorities: A cultural-ecological theory of school performance with some implications for education. *Anthropology & Education Quarterly* 29(2), 155-188.
- Özdemir E. (2019) How does immigration background affect secondary school performance: The analysis of OECD-PISA data in 6 EU countries. In Wu, W., and

- Alan, S. (eds.) *Research Highlights in Education and Science 2019*, Ames: ISRES Publishing, pp. 140-148.
- Park, H., & Kyei, P. (2010) School segregation and the achievement gap between immigrant and native Students: A comparative study of 18 countries. *Sociological Theory and Methods*, Vol.25, No.2, 207-228.
- Raftery, A. E., & Hout, M. (1993) Maximally maintained inequality: expansion, reform, and opportunity in Irish education, 1921–75. *Sociology of Education*, 66, 41-62.
- Ruhose, J., & Schwerdt, G. (2015) *Does early educational tracking increase migrant-native achievement gaps? Differences-in-differences evidence across countries*. IZA Discussion Paper Series, No. 8903 March 2015.
- Saunders, P. (1995) Might Britain be a meritocracy?. *Sociology*, Vol 29, No:1, February 1995, 23-41.
- Siarova, H., & Essomba, M. A. (2014) *Language support for youth with migration background: Policies that effectively promote inclusion*. Brussels: Migration Policy Institute Europe and SIRIUS Policy Network on Education of Children and Youngsters with Migration Background.
- Sommet, N., & Morselli, D. (2017) Keep calm and learn multilevel logistic modeling: A simplified three-step procedure using Stata, R, Mplus, and SPSS. *International Review of Social Psychology* 30(1), 203–218. doi: <http://doi.org/10.5334/irsp.90>
- Suarez-Orozco M. (1991) Migration, minority status, and education: European dilemmas and responses in the 1990s. *Anthropology & Education Quarterly*, Vol. 22, No. 2, Migration, Minority Status, and Education: European Dilemmas and Responses in the 1990s (Jun., 1991), 99-120.
- Tolsma, J., Coenders M., & Lubbers, M. (2007) Trends in ethnic educational inequalities in the Netherlands: A cohort design. *European Sociological Review*, Volume 23, Number 3 (2007), 325-339, DOI:10.1093/esr/jcm007
- Van Zanten, A. (1997) Schooling immigrants in France in the 1990s: Success or failure of the republican model of integration. *Anthropology & Education Quarterly*, Vol. 28, No. 3, Ethnicity and School Performance: Complicating the Immigrant/Involuntary Minority Typology (Sep., 1997), 351-374.
- Worbs, S. (2003) The second generation in Germany: Between school and labor market. *International Migration Review*, Vol. 37, No. 4, The Future of the Second Generation: The Integration of Migrant Youth in Six European Countries (Winter, 2003), 1011-1038.

About Author

Erhan OZDEMIR is a social researcher and demographer. He has academic and professional experience in the analysis of income inequality, living conditions, migration and other demographic processes. He has worked in the EU-wide projects such as “Social Situation Monitor” and “Study on the Adequacy and Sustainability of Social Protection Systems: Attitudes in the EU”. He is currently a PhD candidate in Ghent University, Faculty of Political and Social Sciences Department of Sociology. ORCID ID: <https://orcid.org/0000-0003-4926-7577>

To Cite This Chapter:

Ozdemir, E., (2021). Disparities in attaining tertiary education between the children of native-born parents and the second generation of migrants: A comparative analysis for 6 western european countries. In A. Csiszárík-Kocsir & P. Rosenberger (Eds .), *Current Studies in Social Sciences 2021*(pp. 1–26). ISRES Publishing.

Cultural and Political Systems in the Arab World: An Overview

Youcef HDOUCH

Ibn Tofail University

Introduction

The present chapter aims to explore the notion of change in the Arab World. In particular, it will focus on the process of social change in an attempt to understand the driving force behind it, investigating inside and outside factors, exploring the cultural specificities of the political systems of that region of the world, pointing out the role of mass media, analyzing the current state of affairs in many Arab countries and forecasting the future of the social/political movements. Light will be shed on the phenomenon of the post-regime change and the threats the region and the rest of the world will have to face.

At the outset, the issue of change in the Arab World seems to be an enigma. Many a government and expert have been surprised by the speed of change in the Arab World. For this reason, the issue of change is a principal research objective.

Preliminaries

The purpose of this section is to provide the unfamiliar reader with background information on some key concepts that we will need in our analysis of the notion of change. Concepts like social change, political culture and social organization will be scrutinized. Relevant theoretical research on the topic (premises, predictions and applicability) will be covered.

Social Change: Definition

The notion of change has been a thorny issue in social sciences. Many schools have proposed different explanations of this concept. Given this situation, the unfamiliar reader is puzzled by the variety of connotations associated with this term.

For Kunczik (1991), social change refers to a change in the social order of a society. It can refer to the notion of social progress or sociocultural evolution. In other words, it is the process of transition/alteration of a traditional society (i.e., social structure) into a modern one. Social structure simply refers to the distinctive, stable arrangement of institutions whereby human beings in a society interact and live together.

In sociology, social change refers to the significant alteration of mechanisms within the social structure. This process is characterized by changes in cultural symbols, rules of behavior, political regime, social organizations, or value systems. By “significant” alteration, we mean changes resulting in *profound* social consequences. Significant

social changes may have long-term effects: the industrial revolution, the abolition of slavery, and the feminist movement.

The rationale for social change is that it considers

community-based expectations that address underlying social problems on a personal, institutional, group, national and/or international level. Social change leads to a change in attitudes, behavior patterns, laws, policies and institutions to better mirror values of integration, justice, diversity and opportunity.

Baker (2006,1).

It involves an action of individuals who are affected by the social problems relating to the development solutions that address these social issues.

Now that we have provided a definition of social change, we move to pinning down the different theoretical frameworks that have attempted to explain it.

Theories of Social Change

In general, three main views may be distinguished. These are: a) the Evolutionary Theory, b) the Functionalist Theory and c) the Conflict Theory.

Evolutionary Theory

The main idea on which Evolutionary theory is built is that society moves in specific directions. Therefore, early social evolutionists (Comte, 1856; Durkheim, 1893; Spencer, 1884) maintained that society is progressing to higher and higher levels to the point that cultural attitudes and behaviors are ahead of those of earlier societies.

Identified as the “father of sociology,” Comte advocated social evolution. He saw human societies as progressing into using scientific methods. Likewise, Durkheim, one of the founders of functionalism, saw societies as moving from simple to complex social structures. Spencer compared society to a living organism with interrelated parts moving toward a common end. In short, Comte, Durkheim, and Spencer advocated ‘monodirectional’ evolutionary theories, “which maintain that all societies pass through the same sequence of stages of evolution” (Leat, 2005).

Functionalist Theory

Functionalist sociologists emphasize what maintains society, not what alters it. In this regard, Parsons (1902–1979) considers society in its natural state as being stable and balanced. That is, society naturally gears toward a state of *homeostasis*. To Parsons, significant social problems such as union strikes are simply a scratch in the social

order. According to his **equilibrium theory**, changes in one aspect of society require adjustments in other areas. When these adjustments do not take place, equilibrium vanishes, jeopardizing social order. Although Parsons' equilibrium theory is based on the evolutionary concept of continuing progress, the controlling idea is stability and balance.

Critics (Marx, 1867) argue that functionalists minimize the effects of change because all aspects of society contribute to society's overall subsistence. They also argue that functionalists ignore the conflict between a society's powerful and weak to maintain an illusion of stability and inclusion. The powerful use force to maintain their interests and status quo.

Conflict Theory

Because a society's wealthy and powerful ensure the status quo in which social practices and institutions favorable to them continue, the advocates of conflict theory maintain that change plays a vital role in remedying social inequalities and injustices.

Although Marx was of the opinion that the evolutionary argument that societies develop along a specific direction, he did not accept that each successive stage presents an improvement over the previous stage. Marx pointed out that history proceeds in stages in which the rich always exploit the poor and weak as a class of people. Marx claims that socialist revolution led by the proletariat (working class) will take any society into its final stage of development: a class-free and communist society.

Marx's view of social change is proactive; people should not remain passive. Instead, individuals intending to take control and regain their freedom ought to struggle for their rights. Therefore, under the conflict theory, conflict is desirable and needed to initiate social change and set society free of inequality.

At this stage we should note that conflict theorists do not always realize that social upheaval does not inevitably lead to positive or expected outcomes. The situation in the Arab world (Libya, Syria, Yemen, etc.) is a case in point.

Now that we have depicted theoretical explanations of social change, we move to pinning down theories of individual and group change as well as theories of social movements.

Individual and Group Change

Exploring social change calls for an investigation of individual and group change. In other words, as organizational change affects a whole society, this change cannot be achieved if individuals or groups of individuals do not change themselves.

Before scrutinizing the theories of individual change, it is necessary to consider variables

that are commonly present in many behavior change models. The figure below presents a summary of these;

Variable	Definition
Threat	A danger or a harmful event of which people may or may not be aware
Fear	Emotional arousal caused by perceiving a significant and personally relevant threat
Response Efficacy	Perception that a recommended response will prevent the threat from happening.
Self-Efficacy	An individual's perception of or confidence in their ability to perform a recommended response
Barriers	Something that would prevent an individual from carrying out recommended response.
Benefits	Positive consequences of performing recommended response
Subjective Norms	What an individual thinks other people think they should do
Attitudes	An individual's evaluation or beliefs about a recommended response
Intentions	An individual's plans to carry out the recommended response
Cues to Action	External or internal factors that help individuals make decisions about a response
Reactance	When an individual reacts against a recommended response

Figure 1. (source CommGap, 2009)

Now that we have provided a list of key concepts, we move to pinning down the notion of individual change.

According to Baker (2001) "behavior is more likely to change if the person forms a strong positive intention, or makes a commitment, to perform the behavior"; the environment does not impose constraints that may hinder behavior change; the person is equipped

with the skills necessary to perform the behavior; the person believes that the advantages of performing the behavior outweigh the shortcomings; he or she thinks that performance of the behavior is more commensurate with his or her self-image or that it does not violate personal standards. The normative pressures imposed by the social, political and cultural environment no longer hold. There is aspiration for more social justice.

Individual change starts by aligning one's behaviors, feelings, actions, and thoughts with newly acquired values and beliefs. Universal values of human rights, justice, equality and personal achievement have delineated the traditional society where allegiance is paid to the community and the leader.

For McClelland (1961), motivation to achieve means one has to set high standards for oneself. Success is then the reward for one's endeavors. This philosophy where the individual is more important than the group leads to a defiance of conformism. On the other hand, societies in which one abides by the group's rules and where success is measured in terms of general welfare are categorized as stagnant and traditional.

There is a close relationship between the motivation to achieve and economic growth. Kunczik (ibid, 110) argues that in America, Spain and Britain the economic growth was preceded by an increase in the motivation to achieve; the opposite is true. A falling-off in the motivation to achieve led to an economic meltdown.

Motivation to achieve is a characteristic of developed countries where the individual is the catalyst of economic, political and social change. This achievement-based culture is promoted in the educational system, mass media and laws. However, in the traditional societies, where Collectivism is the norm, there is a massive resistance to change. Means of production are in the hands of the state or of superstructures that form a lobby whose mission is to restrain any individual initiative at all levels: economic, artistic, political, etc. Examples of these superstructures include the government, economic lobbies, dominant political parties, military juntas and religious groups.

Moving from a traditional society into a modern one and fostering modernity and new values (the motivation to achieve, self-esteem, and competence) can be made possible through the adoption of the following steps proposed by McClelland (cited in Kunczik, ibid, 110-11)

1)

a- creation of an informed public opinion typified by a free press

b- emancipation of women because they are bringing up the next generation and as such transmit new values.

c- the significance of foreign educational influences for the strengthening of the motivation to achieve.

With hindsight, no one can ignore the role of mass media in enhancing the philosophy of change.

The next section sketches out the notion of political culture, a move necessary for the classification of Arab societies.

Political Culture

Political culture is a key concept in political science. It refers to the attitudes, beliefs and values that underlie the operation of a particular system (see Wood, 2002). These include knowledge and skills that shape the operation of the political system, positive and negative emotional feelings towards it, and value judgments on the system. Within a political system, regional or ethnic groups with their own values, distinctive attitudes and beliefs are considered subcultures.

In political literature, there are several ways of classifying existing political cultures. According to Almond & Powell (1966) political culture exists at three levels:

2)

a-Political system

b-Political processes and the elaboration of policies

c- Expectation of politics

Political System

How do citizens accept the government and politics in the country in general? Are they satisfied and acceptive of their leaders' decisions? Any political system must guarantee a certain level of legitimacy in the eyes of its citizens. Indeed, an important part of the political culture is legitimacy-the belief that government's authority is legal and should generally be respected. In this context, countries with a long national history (e.g., Morocco) generally have an advantage over the more recently founded nations (e.g., Algeria), which must convince their citizens to develop new political loyalties. However, a long history can be filled by ethnic or religious conflicts (as in Bahrain and Yemen), which in turn can promote legitimacy problems. Whatever the challenge, governments tend to work better if citizens believe in the legitimacy of the political system.

The second criterion in the selection and acceptance of a political regime is the tradition. In this political culture, citizens can accept a government based on heredity, so that when

the king dies, the heir is his son or relative (in some cases the girl.).

The third factor that governs the political system is ideology. A political ideology is a set of beliefs that establishes a vision in place for a better society. Ideologies generally criticize the old order (or ideologies of opposition), assess their problems and define solutions, and try to build public support for their new direction. For example, Marxism criticized capitalism and predicted disaster if capitalism continued and planned a whole new order based on the elimination of private property.

The fourth criterion relates to competitive elections and constitutions. Most modern democracies base their legitimacy on fair and competitive elections, in which citizens have a real choice among candidates. These elections, as well as other political processes, are defined by law. In many countries, a formal constitution establishes a plan that reflects the political beliefs and values of the political culture. Because a democracy is based on the value that people should participate in government, the constitution must include some channels that link citizens to policymakers. In doing so, the constitution must be accepted as a basis of legitimacy.

Political Processes and the Elaboration of Policies

A second level of political culture involves citizens' expectations of how government should operate, how political leaders should behave, and how they themselves should participate. In some countries, people expect to participate actively and are regularly consulted on matters of government, and if they are not, they may decide to throw their leaders, and perhaps to question the legitimacy of the political system. In other countries, citizens are subjects passively obeying the law, but do not get involved in the affairs of government (Algeria under the reign of military junta and Libya under Qaddafi's reign). Instead, they leave political decisions to political leaders. In other countries, citizens can have no knowledge of the government and its policies because they have never had contact with political leaders.

Expectations of Politics

What do people expect from their governments? These expectations impact on the ability of decision makers to formulate and successfully implement a certain policy. How should the government respond to the needs of its citizens? Such questions are the third component of political culture.

For example, in some countries most people believe that the government should ensure that everyone is protected from the need (egalitarian society). Other political cultures require that individuals are primarily responsible for their own well-being (individualistic society). These fundamental differences in political beliefs will surely influence the

tolerance of citizens vis-à-vis high taxes, subsidies for the unemployed and old age pensions. As a case in point, Swedish citizens generally tolerate high taxes, in order to enjoy a prosperous retirement, but the political culture of the United States informs the retirees that social security cannot fund a comfortable lifestyle.

Types of Political Culture

It is important to evaluate the major influences of political culture in a given political system; this task is difficult because the values and beliefs vary between citizens of the same nation. For example, some people in a country may believe that religion should play an important role in the development of policy decisions, while many others may believe in a strict separation of religion and state. The number and depth of disagreements between citizens in a society is the basis of the division of political cultures in two types: consensual and confrontational.

Consensual political culture: Although people may have differing views on certain political processes or policies, they generally tend to agree on how decisions are made, the issues that must be addressed, and how problems should be solved. For example, citizens recognize that elections aim to choose leaders, and they accept the election winners as their leaders. Once leaders take in power, the problems they address are considered by most people as appropriate for the government to manage. In general, a consensual political culture accepts both the legitimacy of the regime and the proposed solutions to solve problems.

Confrontational political culture: Citizens in a confrontational political culture are deeply divided, often both on the legitimacy of the regime and solutions to major problems. For example, if people disagree on something as fundamental as military state and civilian state, conflict will certainly be difficult to avoid. However, if religious differences are as pronounced as the followers of a religion do not accept an elected leader of another religion, these differences undermine the legitimacy and threaten to overthrow the regime. When a country is deeply divided in political beliefs and values over a long period of time, political subcultures can develop and become so entrenched divisions that the government finds it difficult to govern effectively (the case of Lebanon)

Social Organization: Developing Country vs. Modern Society

As we mentioned before, social change refers to an alteration in the social order of a society. It can refer to the notion of social progress or socio-cultural evolution. In other words, it is a process of transition from a traditional society into a modern society. However, it is necessary to specify the characteristics of each type of society in order to further classify the Arab societies and identify the stage of development of these.

The starting point is to begin with ‘dichotomous classifications’. One of the opposed pairs relates to notions of community and society (Tönnies, 1935). The community is the apotheosis of these forms of social life in which the emotional ties between members create the essential situation. There is agreement on the basic feeling about things as there was in the village life, governed by the customs and traditions. For cons, society is characterized by the *rational lifestyle* of industrialized societies. The society members are bound by predefined contracts (e.g., employment contract, electoral platform).

Shapes the community may take include family life, tribe, village and town. For urban societal forms, we can cite life in large cities and national life (political affairs in a given country). In addition, to better understand the differences between the two groups, we appeal to the concept of ‘pattern variables ‘ König (1967, 96).

3)

Community	Society
affectivity	Affective neutrality
particularism	universalism
ascription	achievement
diffuseness	specificity

The features outlined above shed light on the structural differences that characterize evolution. For example, the dichotomy ascription/ achievement refers to the economic roles played by members of each group. Thus, in the caste system in India the role depends on which caste one belongs to. The untouchables can never dream to become a manager of a firm. In the Arab world, one can cite the case of Bahrain where the politico-economic positions are allocated to Sunnis.

On the other hand, the dichotomy particularism/universalism refers to the application of a standard only to members of a minority or to each member of the society. In this context, the notion of equality is an example of universalism. Finally, for the dichotomy diffuseness/specificity we can cite the case of the traditional farmer in a developing country who cultivates his land, builds his house and weaves his clothes. However, in the modern society, where in the economic sector roles are specific, work is divided among different employees (cf. the notion of bureaucracy in Weber, 1968).

The transition from a traditional society to a modern society (i.e., modernization) shows that the model for developing countries is the Western model. In this context, Parsons (1971) argues that “elites in traditional societies accept the values of modernity, especially in the areas of economics, education, political independence and democracy” (adoption of liberal policy/ privatization in Morocco).

Modernization is a process of social change closely related to the rationalization of

society and the individual. It englobes a set of social processes that include technologies, the proliferation of a state educational system, urbanization, secularization, increased political rights and the introduction of mass media. A salient and thorny aspect of modernization is that it variously affects key specific sectors (political, economic and informational). In this regard, Lange (1984, cited in Kunczik, *ibid.* 78-79) argues that “development is like a giraffe, difficult to describe but easy to recognize”. The features of the three sectors mentioned above are as follows:

- 4)
 - a) political Development (multiparty democracy, tutelary democracy, dictatorship)
 - b) economic development (GDP per capita)
 - c) informational development (number of newspapers per 1,000 people and/or pieces of mail entering country per 1000 people and/or number of telephones per 1000 persons).

(Cf. Kunczik, *ibid.* 78-79)

At this stage of the discussion, it should be noted that traditional society does not mean that it is static and that modern society is dynamic. To have such an idea is simply to believe in a fiction (see Malinowski, 1945; Kunczik, 1991).

Another illusion that one should get rid of is the fact that social change is mainly due to the importation of a Western model. There are many causes specific to the society itself. Traditional society is very dynamic. This explains the tendency of these societies to resist all that is foreign / western.

In the literature, many researchers portray traditional societies as agrarian societies ruled over by landlords who form the elites. In some societies this economic power is backed up by religious supremacy or cronyism.

According to Rummel (1963) ‘society is a mixture of different, overlapping and nested structures where a multiple of balances of power intersect’. A traditional society may be classified as authoritative since it is governed by traditional norms, mores, and principles. In short, it is the field of custom which defines duties, privileges, and status. It is the field of authoritative customary laws. Sometimes, it is believed that the ruler is genetically different from the rest of citizens. This distinction is due to the family lineage of the ruler (e.g., king, sheik, religious gurus). Examples of authoritative socio-cultural systems would include Arab Nations like Saudi Arabia. Such authoritative society is what Sorokin (1957) calls ‘ideational supercultural system’.

Truth is prescribed by authorities, transmitted to generations, or supported by special books, such as the Koran or the Bible. As a case in point, religious decrees that confer legitimacy on the regime are issued by special bodies like the ‘Council of Shoura’ or in Medieval Europe by the ‘Church’.

The individual who challenges tradition or who does not abide by norms, or who questions the legitimacy of the ruler will be considered an outcast of society, will be banished, and perhaps will be sentenced to death for their ideas and behavior. History is fraught with examples: “A Lutheran in a Catholic nation, a republican in an Arab Kingdom and an atheist in a religious society have all felt the power of such tradition” (Kunczik , op-cit., 88).

To conclude this section, we can say that the notion of ‘pattern variables’ is relevant to the description of the traditional Arab societies and to the understanding the changes affecting these.

The Political Structure of Arab Countries

An analysis of the current state of affairs in the Arab world requires that we review the major concepts made use of in sociology and political science. This has been the main objective of chapter one. A scrutinization of key concepts like social change, political structure and political system is a prerequisite for an investigation of the katzenjammer-like situation the Arab world is in.

This section aims to shed light on the political organization of Arab countries. In doing so, we intend to deconstruct the dominant political structures and the type of political culture characterizing these countries. Also, we will point out the relationship between these and the issue of development towards more modern and democratic nations.

Political Systems in the Arab Countries

The Origin of the Arabs: A Historical Sketch

An understanding of the current state of affairs in the Arab world necessitates a review of the circumstances that have led to the establishment of these nations. The reason for doing so is that history is a continuum, where one stage leads to another.

The Arabs are those who speak Arabic. One should not confuse the Arab world with the Middle East, for the latter comprises other non-Arab nations such as Israel, Turkey, Afghanistan, etc. Nor should one take the Arab World to mean the Muslim World, as the largest Muslim communities originate from non- Arab countries such as Indonesia, Pakistan, etc.

As far as geography is concerned, the Arab World extends from the Atlantic coast in the West to the Persian Gulf in the East. From North to the South, the Arab World extends from Syria to Sudan. According to Tamari (1999, 1) “today 250, 000 million people live in 17 independent countries that make up the Arab World”.

Religious diversity is another characteristic of this part of the world. In fact, the three celestial religions (Islam, Christianity and Judaism) co-exist. At this stage it should also be noted that the Arab World comprises other ethnic groups who do not identify themselves with Arabic: Berbers in North Africa, Copts in Egypt, Jews in Morocco, to cite but a few.

Before the rise of Arab nationalism in the 19th and 20th centuries, most Arabs identify themselves as members of some closed community or tribe. The notion of tribe as a societal and political structure is a key concept for an understanding of the functioning of Arab societies in modern times and a way to understand the problems many Arab nations face today.

In a nutshell, the Arab World is characterized by diversity: ethnic, linguistic, political and cultural. The starting point to decipher the mystery of the Arab World is to focus on tribal identity, a point we turn to in the next section.

Tribe and Tribalism

Given the geographical variations and the changes the tribal system has undergone in recent years, to define the term tribe is a hazardous move. Still, a tribe can be defined as a societal system based on “collective liability and defense of honor” (FCO Research Analysts and Stabilization Unit, 2012, 1); most of the time, membership is based on consanguinity.

Power inside the tribe is based on consensus and the sheikhly office is passed on from parents to heirs (sons). This office plays an important role in solving conflicts among members by resorting to customary law. The latter is known as ‘I3orf’ in Arabic and ‘Azerf’ in Berber.

In most Arab countries, the customary law is considered an alternative means of arbitration. It is a surrogate for state courts. Therefore, we can say that the coexistence of tribal law and state law reflects the ambivalence that characterizes the Arab states. The same ambivalence is a feature of the political systems in these countries.

In their effort to modernize their societies, many Arab states have tried to eradicate tribal identity and build a national one. In general, many strategies have been adopted. For example, Morocco has forbidden the establishment of political parties claiming a racial, linguistic or religious identity; it has also dismantled tribal identity by implementing

administrative division, in an attempt to prevent tribes from exercising pressure on the choice of candidates in times of elections. It has also institutionalized access to political and social positions that were hereditary under the tribal system. This also called for a reinforcement of national identity in school curricula.

However, despite all these efforts, tribal identity seems to be strong in some countries and even inside some regions of the same country. In Morocco tribal identity seems to be a challenge to national identity in the southern provinces. The same is true for a country like Yemen where “the People’s Democratic Republic of Yemen (PDRY) was unable to eradicate tribal structures. Regional and tribal affiliations were drawn upon to build support during the power struggles within the PDRY regime” (FCO, *ibid*, 1).

The theory of ‘Pattern Variables’ sketched out above shows that the tribal system is characterized by affectivity, particularism, ascription and diffuseness. Members hold strong feelings towards their tribe and their world view is shaped by the canons of their clan. They tend to view the interests of their tribe as primordial. The roles of each member are contingent on the power they enjoy inside the tribal system.

The construction of a modern state is a challenge to the existence of tribes. However, it is very hard to get rid of tribalism. In fact, even if the Arab states have adopted the western model of democracy (the establishment of political parties, parliament, institutions, etc.), members of these political structures pay allegiance to the leaders the same way members of a tribe do with their sheikhs. In other words, modern political structures have been emptied and have emphasized the same political culture specific to a tribe.

In the next section we move to pinning down the idiosyncrasies of political regimes in Arab countries.

Political Regimes in the Arab Countries

Political regimes in the Arab countries are miscellaneous. Out of the 22 Arab states eight are monarchies and fourteen republics. This division is essential to an understanding of the functioning of different states.

Monarchies

A monarchy is a government that has a hereditary chief of state with life tenure and prerogatives ranging from nominal to absolute. Power and leadership are inherited. These regimes are considered legitimate by the citizens of these kingdoms. Barany (2012, 13) argues that “an independent 2009 Moroccan poll found that over 90 % of the respondents approved of King Mohammed VI’s rule”. In contrast, some monarchs may not be themselves popular, but the subjects seem to approve of the monarchy as a regime (the cases of Jordan and Bahrain).

There are at least three reasons for the legitimacy of these monarchies: religious authority, economic prosperity and politico-cultural benefits (Barany, *ibid*, 13). Still, the eight kingdoms draw differently from the three sources of legitimacy.

Religion is of paramount importance in the Arab Kingdoms. It is the source of divine power bestowed on monarchs. The latter have imbued their status with religious significance. The Saudi Arabian king's popularity is not due to oil-wealth, but to his being the custodian of the two holiest cities in the Islamic world. In addition, the king of Morocco, who is a direct descendent of the Prophet Mohammed, is also the Commander of the Faithful (*Amir Al Muminin*), a title that goes back to early days of Islamic empire. As for King Abdullah of Jordan, his religious power stems from his lineage: he is the descendent of the Hashemite Family.

Economic prosperity is another pillar of legitimacy. The oil-rich Gulf States are the most prosperous countries since in 2010 GDP per capita (purchasing power parity), for example, amounts to 179,000 dollars in Qatar. However, it should be pointed out that economic prosperity has led to the establishment of a rentier state. Citizens rely on their respective governments to distribute income accrued from oil revenue in the form of food subsidies, employment opportunities, health care, and all the basic necessities of living. Still, the luxury of not working is traded for a complacent population with little representation, a lack of government, little accountability and mediocre performance. This is reminiscent of the feature ascription mentioned above.

The same situation seems to be the norm even in poor monarchies (Morocco under Hassan II's reign and Jordan). In these two countries the governments have for long bestowed privileges on a handful of networks of families in exchange of stability. On the contrary, the living conditions of large portions of the population are either on average or below the threshold of poverty.

The third fount of legitimacy in Arab monarchies is political in nature. It is believed that monarchies in the Arab World are a warranty of political stability. Kings and ruling emirs, have extra legitimacy, due to their intimate relationship with their subjects. In this vein, (Rabi, 2013) argues that:

“This intimacy is an extension of the tribal relationship of chiefs to their people; the king is the “head chief,” the “father of the nation.” In various ways, kings claim tribal, dynastic, and religious legitimacy simultaneously, enabling them to place themselves above their countries' social and political divisions.” For example, the concluding phrase of the Moroccan national anthem, “God, Fatherland, King” (Allah, al-Watan, al-Malik) highlights the efforts of the Moroccan monarchy to present itself as the unifying symbol at the center of the state and therefore as an irreplaceable part of the state's political and social identity.”

Now that we have shed light on some aspects of monarchies, we move to pinning down the distinctive features of Arab republics.

Arab Republics

At the beginning, Arab republicanism was thought of as a modernizing and democratizing force. It was the instrument used in the overthrowing of monarchies in many Arab states (Egypt, Libya). It raised expectations for a new era in the newly-founded Arab republics. Its legitimacy was based on establishing “modernization, secularization, and welfarism” (Sadiki, Ibid). However, this seems to be a mere subterfuge.

The reason for this is that Arab “republicanism”, which was the result of military coups (Egypt, Algeria, Libya) or the effect of what is called the ‘contagion effect’ (Anderson, 2012), seems to suffer from the absence of authentic republicans with the ideology that can promote popular government and constitutional rule.

In most Arab ‘republics’ military juntas hold power. “Instead of ruling democratically and promoting democracy, and representing a critical juncture in the history of the Middle East and North Africa (MENA), the republican leaders reproduced the same tribal hierarchical structures. The immediate result was the lack of ‘open, egalitarian, and meritocratic standards of public office and public-spiritedness’, argues Sottilotta (2013).

Algeria is a good example of a state run by the military. Any president who dares to exert his powers is either eliminated or discredited.

In a nutshell, nepotism, cronyism and dictatorship are all attributes of republican regimes in the Arab World. These qualities have turned these regimes into what Sadiki (2013) names ‘dynastic republicanism’ or ‘monarchical presidency’. Arab

“republics” have lost much of their legitimacy as presidential power is increasingly being delegated from father to son”. This was the case in Syria in 2000.

Political Culture in the Arab World

Although regimes in the Arab countries are either monarchies or republics, it seems that they share many features. Still, one should not run into generalities, since many countries seem to have introduced many reforms.

Regimes in the Arab world, monarchical and republican alike, have always been described as authoritarian states. The majority of works in the literature on political systems in the MENA region emphasized the ‘absence of democracy’ in the Arab societies of the region.

Many efforts have been made by these states to modernize *à l'occidental* their respective societies. However, it seems that modernization has affected the economic structure and the outward structure of the political system. To illustrate, these states have borrowed the concepts of economic liberalization and political liberalization. Still, one cannot see a real change inside political structure.

Many Arab regimes (Morocco, Algeria, Egypt, and Tunisia) adopted the process of economic liberalization in the 1970s, 1980s and 1990s. Göksel (2013) argues that this strategy actually helped the authoritarian regimes to alter their state apparatus. Sometimes, this was done under duress from international organizations (World Bank's and the International Monetary Fund's recommendations for Morocco to privatize the economy) Thus, economic liberalization helped transmogrify 'the old authoritarian regimes' into more incumbent 'new authoritarian regimes', to use King's (2009) expression.

In this regard, King explains that

'...the privatization of state assets provided rulers with the patronage resources to form a new ruling coalition that would be pivotal in any capitalist economy: private-sector capitalists, landed elites, the military officer corps, and top state officials, many of whom moved into the private sector and took substantial state assets with them' (pp. 4-5).

The concept of 'ruling coalition' is seen as the source of mass support and the means to gain legitimacy for the autocratic regimes.

Moving from a traditional society where all wealth is in the hands of the state to a capitalist state has not improved the economic situation in the Arab countries. In the literature (Levins, 2013), all Arab states are described as being 'rentier states', where "a small portion of society generates the majority of the wealth; the remainder being only engaged in the distribution and utilization of the wealth created" (388).

As far as political liberalization is concerned, many Arab countries have carried out reforms, but the reforms have been directed at modernizing the outward structures specific to democracies, but not at redistributing power in the political system. There have been some political changes: For example, more political parties exist today in most Arab countries than twenty years ago, and more countries hold elections of varying transparency. Access to information and the quality of political debate have increased in many countries as well. Power, however, is still in the hands of kings and presidents.

Before we consider reforms adopted in by Arab countries, we provide a sketch of three models of reforms that will act as platforms to evaluate the changes carried out by every country. However, we should admit that some countries have excelled at changing

the political structures, enhancing human rights, fighting economic graft, boosting development and empowering the poor.

As a case in point, Morocco is often stated as the Par Excellence example in the region. When Mohammed VI became king, he introduced ‘the new concept of power’. This amounts to enhancing transparency of elections, the establishment of a new elections code and constitution, and delegating many of his powers to the Prime Minister’s office. Last but not least, an Islamic party is now in power, something that was and is unacceptable in many other Arab countries (we further discuss this point below).

In addition, under his reign Morocco is committed to protecting human rights throughout the Kingdom. In fact, Morocco has undertaken a number of initiatives to promote citizenship and protect the human rights of all its citizens. Through recent reforms to improve human rights, Morocco is making great strides and has become a leader in the Arab world on human rights and women’s rights issues. It is a signatory to the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social, and Cultural Rights, Convention against Torture, the Convention on the Rights of the Child, and the Convention on the Elimination of all forms of Discrimination against Women. Morocco also established the Moroccan Truth and Reconciliation Commission (IER) which was the first truth and reconciliation commission to be established in the Arab world. The Commission works to advance compensation work initiated by the Advisory Council on Human Rights (CCDH). It is an independent investigative body established to shed light on past human rights violations that took place in Morocco from 1956 to 1999.

Given the multifaceted and pluralistic identity of Morocco, the new constitution has strived to recognize the linguistic and cultural rights of many social groups: Amazigh for Berbers, Hebrew for Jews and Hassani for Sahraouis.

Morocco singles itself out in the area of human development. The new approach to development centered on the eradication of many forms of poverty. The advantage of this new approach stems from the fact that the purpose of economic progress is the realization of the welfare of citizens through the satisfaction of their needs in their social and /or natural environment.

The nearby Algeria, although an oil-rich state, seems to resist all political changes. Even though the Algerian government opened the political system overnight in response to riots that had taken place in October, 1989, it is still a one-party government (the National Liberation Front (Front de Libération Nationale, FLN). Under President Boutefliqa (who is 80 and the FLN candidate for the fourth time for the 2014 presidential elections) the country has experienced a build-up of resentment at what Algerians call “contempt”, the brutal disregard for citizens exhibited by officials at all levels of government. “This

discontent was and remains central to the crisis in the relationship between the Algerian state and society”, claims Tlemçani (2008).

Experts categorize Algeria as a rentier state. The political regime has favored an economy of rent where the Military Institution has permeated all sectors of activity, promoting that feeling of resentment; In fact, Joffé (2002:1) sums up this situation when he states that:

“Algeria’s economic crisis parallels and is an intrinsic part of its political crisis over the past decade. It consists, furthermore, of an interrelated crisis over control of the economic rent and the activities of an informal parallel economy originally based on smuggling and now sustained through violence which is legitimised by Islamist rhetoric. Economic reform, therefore, cannot be meaningfully achieved until appropriate institutions are constructed and a dysfunctional state has been successfully reformed.”

All in all, most Arab countries are in the process of democratization. Consolidation of social, economic and political rights is a popular demand that is sometimes diverted by political actors who seek to protect their own interests. Therefore, is change in the Arab World attainable or is it an illusion?

Change in the Arab World: Reality or illusion

The Arab World has witnessed many turmoils since 2011. Most protests have taken place in Arab republics (Egypt, Tunisia, Algeria, Lybia, Syria, Yemen, Lebanon). Few Kingdoms witnessed temporary protests (Morocco, Bahrein, and Saudi Arabia).

Protesters call for a more egalitarian state, where universal principles of human rights, equality and freedom reign.

Republican regimes can be described as closed systems that lack assimilative channels. Thus, they tend to face more radical and confrontational social movements. On the other hand, monarchies, as mentioned above, have shown more stability for the simple reason that they have more legitimacy due to the monarchs’ religious position (Morocco and Jordan) or to economic prosperity (Qatar, UAE, Saudi Arabia).

In autocratic Republican regimes protesters have to make more efforts if they want to threaten the future economic well-being of the élites (Koopmans, 2004, p. 35). autocracies remain relatively weak as their usual resort to repression in cases of conflict makes them fail to contain mass movements, while monarchies have many containment tactics that help them avoid confrontation in most cases of contention. The result of this disparity is that monarchies that can be easily threatened, have the ability to contain protests eventually, while autocracies, that are relatively hard to defy at the beginning, face a huge damage as soon as their challengers “gain visibility” (Koopmans, 2004, p. 39).

Let us think of the Algerian case. The military junta has been accused of staging a coup d'état in 1992 to prevent the Islamic Salvation Front (FIS) from winning the second round of what would have been the country's first democratic elections and of falsifying the 2019 elections and of appointing the president. The low participation in elections witnesses the failure of the regime to persuade Algerians of the validity of the regime. The *hirak*, Algerian social movement, insists on radical changes in the state's structures. This *hirak* has been oppressed as the élite has not joined in.

Protesters need to find what Koopmans (2004) calls the 'ripe moment'. This happens

when elites are divided among themselves, factions among them may choose to mobilize popular support in order to strengthen their position vis-a-vis rival elites, either by directly sponsoring or even initiating protest campaigns, or by encouraging dissent in more subtle ways.

(Koopmans, 2004, p. 24)

In Algeria, reports have revealed that there are problems among the ruling élite. Protesters are reorganizing themselves. Regional movements claim autonomy: Kabylia in the North, Tuareg in the South, Shawiya and Mozabite. With hindsight, Algeria is likely to become like Syria. Cronyism, changing alliances and economic constraints are factors that have instigated riots in this gas-rich country. The ripe moment has come.

Moreover, protesters' commitment to change is great. Motivation to achieve has increased. Mobilization of efforts, boosted by an increased well-informed public opinion about the threats the society is facing, are all important factors that will lead to the toppling of the regime.

Algerians have come to the conclusion that they are no longer subjects. They claim full citizenship. Roles assigned by the regime do not hold anymore. The repetitive failures of the regime in handling the internal economic and social situation are no longer accepted by the people.

This shift from a consensual political culture to a confrontational one is very salient in the case of Algeria. Many questions concerning legitimacy of the political and economic system have been posed. The people aspire for a more egalitarian society.

Lebanon is a good example of a republic where ethnic identity is the cause of political, economic and social crisis. Politicization of sectarian identity has reached a high pitch. Violent political acts have led to the eruption of a quasi-civil war, leaving the country without a government for months. Sectarian identity is likely to lead to the dismantling

of political system.

On the other hand, the protests in Morocco have been contained because the government responded to the claims of the protesters, changed the constitution and boosted civil rights. The democratic process has been respected. The Islamic party PJD was allowed to govern for 10 years.

Kingdom of Saudi Arabia, under the reign of King Salman and the leadership of the Crown Prince Mohammed Bin Salman, has strived to boost civil rights for women and to modernize the country. The Saudi governance system has been undergoing a radical restructuring. A combination of procedural shifts, personnel changes, bureaucratic restructurings, and changes in jurisdiction are revolutionizing public life. Saudi Arabia needs to reshuffle and to redesign its political structures, to allow for the creation of political parties, a parliament and the enhancement of civil rights.

To sum up, social and political change is likely to take place in Arab Republics. This change is a popular claim. On the other hand, Monarchies claim the change themselves and align their visions with the claims of the people.

References

- Almond, G. A., & Powell, G. B. (1966). *Comparative politics: A developmental approach*. Boston, MA: Little, Brown and Compa.
- Baker, A. Ames, B., & Renno, L.R. (2006). Social context and campaign volatility in new democracies: Networks and neighborhoods in Brazil's 2002 elections. *American Journal of Political Science*. Volume 50, 2, pp. 382-399.
- Barany, Z., & Moser, R. (Eds.). (2009). *Is democracy exportable?* Cambridge: Cambridge University Press. Doi :10.1017/CBO9780511809262.
- Comte, A. & Bridges, J.H. (tr.) (1865). *A general view of positivism*; Trubner and Co., (reissued by Cambridge University Press, 2009; ISBN 978-1-108-00064-2).
- Durkheim, E. (1933). *The division of labor in society*. New York: Macmillan.
- Göksel, O. (2013). Deconstructing the discourse of models: The battle of ideas over the post-revolutionary Middle East. *Insight Turkey*. V. 15, 3.
- Joffé, G. (2002). The role of violence within the Algerian economy. *Journal of North African Studies*, 7, 1.
- Koopmans, R. (2004). Movements and media: Selection processes and evolutionary dynamics in the public sphere. *Theory and Society*, 33, 367–391. <https://doi.org/10.1023/B:RYSO.0000038603.34963.de>

- Kunczik, M. (1991). *Communication and social change: A Summary of theories, policies and experiences for media practitioners in the Third World*. Friedrich-Ebert-Stiftung,
- Leat, D. (2005). *Theories of social change*. Bertelsmann Foundation
- Malinowski, B. (1945). *The dynamics of culture change: An inquiry into race relations in Africa*. New Haven: Yale Univ. Press.
- Marx, Karl 1976 [1867], *Capital: A critique of political economy*. Volume One, translated by Ben Fowkes, Harmondsworth.
- McClelland, D. C. (1961). *The achieving society*. Princeton, N. J: Van Nostrand.
- Parsons, T. (1971). The problem of order in society, and the program of an analytical sociology. *American Journal of Sociology*. Vol. 83, No. 2 (Sep., 1977), pp. 320-339
- Rummel, R. J. *Dimensions of conflict behavior within and between nations*. *General Systems: Yearbook of the Society for General Systems Research* 8 (1963), 1-50.
- Sadiki, L. (2013). *Democratic transition in the middle east: Unmaking Power*. Routledge
- Sottilotta, C. (2013). Political risk: Concepts, definitions, challenges. *Working Paper Series*. ISSN: 2282-4189
- Tlemçani, R. (2009). Algérie: un autoritarisme électoral. *Tumultes*, 2012/1-2 (n° 38-39), p. 149-171. DOI: 10.3917/tumu.038.0149. URL: <https://www.cairn.info/revue-tumultes-2012-1-page-149.htm>.
- Weber, Max (1968). *Economy and society: An outline of interpretive sociology*, New York: Bedminster Press.

About Author

Prof. Youcef Hdouch is a linguist and a researcher at Ibn Tofail University, Kénitra , Morocco. He has published many books on Amazigh phonology and morphology. His current research interests concern political discourse analysis and intercultural communication.

ORCID: 0000-0001-6184-3632

To Cite This Chapter:

Hdouch, Y., (2021). Cultural and political systems in the Arab world: An overview. In A. Csiszárík-Kocsir & P. Rosenberger (Eds .), *Current Studies in Social Sciences 2021*(pp. 27–47). ISRES Publishing.

The Work of Municipalities as Local Administration in Turkey and the Expectations of the People

Fikret ALINCAK

Gaziantep University

Huseyin OZTURK

Gaziantep University

Introduction

Participation of people in physical activities is affected by factors such as the place they live, the social and natural environment, age, gender, economy, time, as well as organizations for this purpose. Local governments try to increase participation in physical activities by creating suitable environmental conditions and organizing various sports organizations. In this study, the role of these organizations in the dissemination of physical activities and gaining habits will be evaluated.

The importance of sports and regular exercise for a healthy life has become more evident (Yılmaz & Dağlıoğlu, 2018; İşenler & Dağlıoğlu, 2020). Physical activity is recommended in the treatment of many diseases as well as its preventive role. It is very important for children to take part in society as physically and mentally healthy individuals who have acquired the habit of physical activity in adulthood, to determine their physical fitness and to determine the level of physical activity. By organizing sports organizations for all ages and occupational groups, people can contribute to a healthier active life with physical activity. It is accepted that the efficiency of physical activities increases with the use of local government resources.

Physical activity is considered as one of the important factors in struggling with problems related to sedentary life and obesity. Physical activity has positive effects on the body composition of sedentary people (Nar et al., 2013; Daglioglu, 2013). Providing physical activity opportunities to people in the places where they live, in educational institutions, health institutions, workplaces, in short, everywhere will serve this purpose. Since human needs and expectations vary according to time and place, local governments have moved away from the classical service understanding and have started to give more space to social and recreational activities that will meet the expectations.

Literature Review

Administration

There are many different definitions of what management is. If we list these definitions; Management is the execution of planning, organizing, directing and controlling activities by bringing together the available resources (human, money, machine, material, information, etc.) in a meaningful way in order to achieve predetermined goals and objectives.

In the broadest sense, management refers to all the activities aimed at providing cooperation and coordination in a group of people in order to achieve the objectives in an effective and efficient manner (Tosun, 1974). Management in a broader sense; It is all of the activities related to the planning, organization, execution, coordination and control functions, and the systematic and conscious application of concepts, principles, theories, models and techniques for the effective and efficient realization of organizational goals (Howard, 1976).

Management is a process that acts in line with the conscious coordination of activities, which are formed by the integration of the division of labor and the dispersed human power, and the work done by people, in line with the purpose or purposes to be realized (Tortop, 2004).

Management is not just about human resources. It emerges as the sum of the processes of making decisions that will enable to use human resources, financial resources, fixtures, tools-equipment, raw materials, auxiliary materials and finally the time factor in a harmonious and effective manner and their enforcement processes in order to achieve certain goals. However, the main factor that makes the management process functional is the human element (Şimşek, 1997).

The aim of the management is to produce some products or services that are needed by the society. It is another aim of the management to realize the predetermined objectives in the prescribed quality and quantity (Doğar, 1997), at the same time, the high job satisfaction of the managers contributes positively to their organizational commitment (Yılmaz & Murat, 2010).

In today's contemporary world, management has become a universal phenomenon. Management is the harmonious organization of all opportunities and resources, especially the human element, in organizations established for a certain purpose or purposes, in order to realize these goals. Today, management is discussed in different sub-disciplines such as business, personnel, sports and public administration.

Analytical approaches such as specialization and division of labor brought by

modernization have also affected the science of management as a discipline. As a result of the said influence, the branches of management mentioned above emerged. In order to better understand the phenomenon of management as a whole, it will be useful to examine the branches of management we have mentioned briefly and in a very general sense. The work of local governments on sports contributes positively to directing children to sports in their families (Öztürk et al., 2017).

Therefore, management is a science that is needed in every field where people are present. Because the easiest way to reach the goal is through the concept of management. Management is a universal process. It is not just about the business or the factory. Family environment, schools, sports organizations, etc. management function is in question (Yılmaz, 2003). Despite the various definitions on the definition of the concept of management, the definition that is more or less agreed upon is defined as “Management is to work through others” (Koçel, 2001).

Management is the whole of the work and efforts spent for the organization and cooperation of people in order to achieve the determined goals (Özalp, 1993). According to another definition, management is a social activity that includes planning, executing and controlling the activities of an organization in a way that will achieve predetermined objectives with the resources at its disposal (Dalay, 2001).

Local Government

The most important factors in the development and development of societies are undoubtedly the fulfillment of the duties and functions of central and local governments. Local governments are units that have emerged in parallel with the historical development of societies in order to meet certain purposes and specific needs. The needs they respond to and the factors that enable them to develop have administrative, political and social characteristics (Koc, 1994).

The definition of local government, which is used extensively in the literature, is given by being universalized. Local governments live in a certain geographical area, are established to provide services to the members of the local community on the issues that most concern them, the decision-making body is elected and appointed by the local communities, has the duties and authorities determined by the laws, special incomes, budget and personnel for the services they undertake. They are public legal entities that can establish an administrative structure and benefit from administrative features in their relations with the central government. The features that are stated as universal qualifications related to local governments and included in the definition; united nations, european council, european local governments autonomy charter is included in the documents of the international union of local governments.

The European local self-government autonomy charter was opened for signature on 15 October 1985. The Turkey agreement was signed on 21 November 1988. In 1991, it was approved by the Turkish Grand National Assembly with the law numbered 3723, and in 1992 it was approved by the Council of Ministers Decision numbered 92/3398. Local Administrations are the organizations that are in the administrative structure of each country and are responsible for producing local quality services that will mainly benefit the people living within the local borders. They are constitutional institutions established within a certain legal order in order to meet their qualified needs (Tezcan, 1977).

As stated in Article 127 of the Constitution, ‘local administrations are public legal entities elected by the voters, whose foundation principles are specified in the law in order to meet the local common needs of the people of provinces, municipalities and villages. In our country, the administrative structure of our state, which is organized on the basis of a unitary state, fits into a triple classification:

General Management (central)

General Administration Provincial Organization

Local Authorities

Local administrations were established in our country on the basis of the example of France, and they are administrative units organized to provide some services other than the basic services that the central organization should provide. ‘Contemporary local government and democracy can only exist in a wide area and in the presence of a central administration that carries out the control function over all the institutions of the society. Local administrations operate in settlements such as provinces, districts, sub-districts and villages to provide services (such as water, sewerage) determined by taking into account the special needs of these units (Gözübüyük, 1983).

The need and desire of people to live together has led to the development of neighborly relations and the emergence of new needs arising from this. Depending on the formation and development process of the society, the problems and needs arising from living together have also grown continuously. Although it varies in size according to the size of the country’s borders and the distribution of settlement areas, meeting the social needs of each country is one of the indispensable duties of the state (Falay, 1982).

With its generally accepted definition, local governments are the ones established to provide services to the individuals of the local community living in a certain geographical area (city, village, province, etc.) on the issues that most concern them due to living together, the decision-making bodies are elected by the local community and determined by the laws. They are public legal entities that have duties and authorities, budget and

personnel, can establish their own organizational structure for the services they undertake, and benefit from administrative autonomy in their relations with the central government (Parlak & Özgür, 2002).

The official definition of local governments is “a public body, which is a sub-unit of a state or regional government, in a relatively small area, tasked and authorized with the determination and implementation of a limited number of institutional policies”, but it is also simple as “the management of the local people by the bodies they choose”. definitions can be made. Even if municipalities, special provincial administrations and village administrations are included in the definition of local government in our country; In general, what is meant by local governments in our country is the management of cities and this is a more developed form of municipalism applied in the country today (Erten, 1999).

Local governments are of great importance in terms of the democratic regime of a country, as well as in terms of the services they provide. The services rendered by these administrations are the services that affect human life and are followed and evaluated most closely by people. Local governments are institutions that should be emphasized not only in terms of service but also in terms of the functioning and validity of the democratic regime of the country.

Local governments are an important and indispensable element of public administration in all countries. The power and effectiveness of local governments in a country are closely related to the level of democracy in that country. Local governments are not only important in terms of democracy, but also indispensable institutions in ensuring efficiency and effectiveness in local services (Ulusoy & Tekin, 2001).

Local governments are considered as one of the most important tools of participatory democracy. In the great majority of the world, the inadequacy of consensus on local governments as both a democratic management unit and an effective and efficient service delivery unit to meet the aspirations of the people, the people’s desire to participate more and more actively increases the importance of local policies, policies affect country-wide policies more (Ökmen, 2002).

Local Administrations in Turkey

Article 127 of the 1982 Constitution has subjected local government units to a tripartite distinction as special provincial administrations, municipalities and villages and defined them as “public institutions whose decision-making bodies are elected by the people in order to meet the local common needs of the people of the province” (TC 1982 Constitution, 2002).

Municipalities are local government units established to meet local common needs in general. Article 127 of the 1982 Constitution, counting the municipalities under the title of local administrations, is defined as “Local administrations are public legal entities, whose foundation principles are specified by law and whose decision-making bodies are elected by the voters to meet the local common needs of the people of the province, municipality or village” (Shepherd, 2002).

Local governments are units that have emerged to achieve certain goals and meet certain needs. The needs they meet and the factors that enable them to develop have political, administrative and social characteristics. What is meant by political factor is the role played by local governments in the process of nationalization. Indeed, local governments are closely related to nationalization and the political unity of a country. In places where this unity is not strong and strong, it is natural to want to strengthen the center and to reduce the effectiveness of the forces outside the center. Central government strengthens decentralization in such cases. Limitation of the powers of existing local units is also applied for this purpose. The existence of local governments is tolerated only to the extent that they strengthen the central government and contribute to the national unity and integrity.

If it is of an administrative nature; With the exception of one very small country, it is not possible to centralize all public services. Except for city-states such as the Vatican, Monaco, and San Marino, the problem is not the existence of local government, but the extent to which they will be developed and what tasks they will be assigned to. This issue is related to the concept of efficiency in management (Keles & Yavuz, 1983).

In our country, the state administration consists of various units and organizations in order to provide services to the public more effectively and efficiently. With such a restructuring, the state tries to increase the quality of service by easing the burden on it.

The administrative structure of our state, which is organized on the basis of a unitary state in our country, is classified into a triple classification.

1. General administration (central administration),
2. General administrative provincial organization,
3. Local local governments,

Local governments in our country; Special provincial administrations are structured in three different ways: municipalities and villages. Among them, municipalities are the most effective. Municipalities have a stronger and more effective structure than special provincial administrations and villages in terms of their powers and responsibilities. The main theme of our thesis is that municipalities have the most effective structure among local governments.

Local governments are administrative, political and social institutions that provide public services to the local community and are managed by the bodies elected by the local people in order to meet the needs of the local people effectively. There are various definitions of the concept of local government in the literature. If we look at the various definitions of the concept of local government;

If we look at a universal recognition of the concept of local government; Local governments are central governments, which are established to provide services to the individuals of the local community living in a certain geographical area, on the issues that most concern them, whose decision-making bodies are elected and appointed by the local communities, have the duties and authorities determined by the laws, special revenues, budget and personnel, can establish their own organizational structure for the services they undertake, It is a public legal entity that benefits from administrative features in its relations with the administration (Nadaroğlu, 1994).

Municipalities as Local Administration

People's Expectations from Municipalities

A municipality administration has to know the people of the town, learn about their expectations and provide services for these expectations. Most of the time, governments are unaware of the real wants and needs of the people. In addition, the public has difficulty in finding the authority regarding their problems. He does not know where to apply, from time to time it becomes a big problem to find the authorized part and person even in the same building.”⁴⁷ At this point, the importance of public relations emerges. The public relations units to be formed by the municipalities will be able to partially reduce these problems. The administration that knows the wishes and thoughts of the people well. will not have difficulty in ensuring harmony with the public.

Various opinions and debates are constantly being put forward in the public and scientific circles on what qualifications our municipalities should have. Although it is being discussed in public and scientific circles, the main determining taboo on this issue is the residents of the towns, that is, the voters, in other words, the people, to which the municipalities are responsible for serving. From this point of view, it is possible to list some of the expectations of the townspeople from the municipalities as follows (Aksoy, 1998). First of all, the people of the town want their municipality to produce effective and efficient services for them. It wants a targeted service to be produced at the most, quickly, cheaply and at the same time with high quality, with the least expenditure of resources (Yalçındağ, 1967)

The developing social structure brings with it new needs and expectations. New services are added to the classical services, and at this point, public relations are decisive in the

process from identifying new service areas to performing these services in the most productive way. Sports services are at the forefront of these new service areas. The dissemination of sports and, in parallel with this, the provision of sports opportunities (neighborhood fields, recreation areas, etc.) is a constitutional right that the state, as a local administration unit, must provide to the citizens of the municipality, as it is important for the development of the dialogue of the municipalities with the public.

In our country, the participation of the people of the city in the administration takes place only during the elections. However, the people want to participate in the decisions of the administration. “The expectations of the people from the municipalities, the transparent, participatory, resource-creating, productive municipality and the municipality of the people”⁷¹ are among the expectations of the people (Yetim, 1992).

Duties of Municipalities Regarding Sports in the Constitution

As stated before, it is the duty of the state to determine and implement our sports policies. Naturally, the responsibility for the protection of youth and the development of sports falls on the local administrations, which have a large share in the administrative structure of the State, and therefore on the municipalities. Duties of Municipalities Regarding Sports in Municipal Laws With the Law 3360 dated 26 May 1987 It is stated in the 13th paragraph of the 2nd article of the same law that “The ones related to National Education, Youth and Sports, which do not exceed the provincial limit, will be financed and managed by the special provincial administrations”. 1993). In the 33rd paragraph of article 15 of the 2nd chapter of the Law on Municipalities, dated 1930 and numbered 1580, published in the Official Gazette; “making games and sports venues”, in paragraph 46; The duties of all municipalities, regardless of their income, to allocate space for sports fields, and to “build, have, operate and have operated stadiums” in paragraph 54, are stipulated (Bicakci, 1999). In addition, with the Physical Education Law No. 3530 dated 1938, the task of “executing and managing the physical education works in towns without an administrative level center”⁵ (Article 10) was assigned as a responsibility to the municipalities.

In terms of the election of presidents, their authority to spend their own organs and revenues; It would be appropriate to assign tasks related to sports to municipalities that have an autonomous structure, as evidence that the state sees sports as a local service. Again, in subparagraph “a” of paragraph “f” of Article 6 of Law No. 3030, the duties of municipalities include the provision “To build green fields, parks and gardens, to perform social and cultural services, to build, have and operate sports, recreation, entertainment and similar places”. (Can & Akgün, 1998).

Duties of Municipalities in Bringing Sports Services to the Public

Increasing the physical strength of individuals, ensuring their spiritual development and spreading sports in the society depend on the establishment of a network of social relations. Sport is an important tool in gaining cooperation and solidarity behaviors. The ability of sports to be carried out in various parts of the society and to become widespread depends on the functions that must be fulfilled by the state, and also requires the contributions of individuals and social groups (Ertekin, 1995).

Sports, as a recreational tool, has undertaken important functions to move people to urban and industrial environments as a result of changing their open life and work styles with industrialization, to civilization and to increase the standard of living, on the one hand, and to eliminate the negative effects of mental and physical deficiencies on the other hand. The decrease in the physical work of a person working in an industrial environment and the increase in mental problems make it necessary for him to engage in different activities and rest in order to increase his work efficiency and, above all, to be happy as a human being. The fact that a job is done for hours, days, months, with the same movements, postures and in the same environments in an industrial and urban environment increases this obligation even more. In eliminating all these negative images, sports, which have great advantages among recreational activities, come to the fore (Karakuş & Başaran, 2000).

At this point, municipalities, which are the closest institutions to the public, should fulfill their sports-related duties given to them by various laws and measures should be taken so that the people can benefit from the sports services provided. Municipalities have undertaken important responsibilities in meeting the sports needs of the people. With the concept of “state” specified in Article 59 of the Constitution, municipalities are given a constitutional responsibility. Because one of the representatives of the state at the local level is the municipality. In addition, duties related to sports are given in various laws (Can & Akgün, 1998).

In addition to many of their duties, municipalities are also given sports-related duties such as “to build game and race venues, to construct and operate stadiums for young people in accordance with the needs of the locality” in Article 15 of the Municipal Law No. 1580.

In the Law No. 3030, the metropolitan municipalities are assigned as a duty to “make, operate and have them run” sports, recreation and entertainment venues.

In Article 10 of Law No. 3530, the task of “executing and managing physical education in towns without a central administrative level” is clearly given to municipalities.

In Article 14 of Law No. 3289, “building sports facilities and contributing to the provincial budget” is also among the duties given to municipalities.

In addition to these duties given to municipalities by the constitution and laws, as stated before, sports also have an important place in terms of public relations. Bringing sports, which is an important communication tool, to the people of the municipalities, which are constantly intertwined with the public due to their functions, will also be an important step in the creation of a healthy society (Municipal Law, 1930).

Conclusion

Sports emerges as the most effective tool for individuals who are under the heavy pressure of social life to get rid of physical and mental tension, to improve their health status or to protect their current health status. As stated in Article 59 of the Constitution, sports are the legal right of Turkish citizens of all ages. Local Authorities, the closest organization to the public, undertake this task on behalf of the state. Our citizens, who have free time in the city life, expect the municipalities to provide sports services in their spare time. Municipalities should give more importance to sports services in terms of making use of the leisure time of the people, and take into account the opinions of the people, and try to build sports facilities. Sports service has a very important place in the relations with the Municipality for the public. The effective use of sports services, which should be seen as a means of communication between the public and the municipality, will strengthen the relationship between the public and the municipalities and increase the trust of the people in public services.

References

- Aksoy, A.Ş. (1998). New right, public administration and local administration; A critical approach, *Contemporary Local Governments*, 7 (1);1-7.
- Blair, S. N., & Hohl, H. W. (1989). Physical activity, physical fitness, and all-cause mortality a prospective study of healthy men and women. *J. Am Med*, 262; 2395-2401.
- Can, H. Akgün, Ş., & Kavuncubaşı, K. (1998). *Personnel management in public and private sector*, Cem-Web Ofset Ltd. St., Ankara.
- Çoban, B., & Devecioglu, S. (2006). Examining the opinions of mayors in Turkey, *Gazi Journal of Physical Education and Sports Sciences*, 11(1);49-60.
- Daglioglu, Ö. (2013). The effect of 8-week submaximal aerobic exercise on cardiovascular parameters and body composition in young men. *International Journal of Academic Research*, 5(4).

- Dalay, İ. (2001). *Management and organization principles, theories and strategies*, Sakarya University Rectorate Press, Adapazarı.
- Doğar, Y. (1997). *Sports management in Turkey*, Öz Akdeniz Offset, Malatya.
- Ertekin, Y. (1995). *Public relations, public administration* Institute of Turkey and the Middle East Publications, Publication No:259, Ankara.
- Erten, M. (1999). *How a local government*, Key Books Publishing House, Istanbul.
- Falay, N. (1982). *Determinants of local government expenses*, Ü. Faculty of Economics Publications, Istanbul.
- Gözübüyük, Ş. (1983). *Administrative law*, Sevinç Printing House, Ankara.
- Howard, MC. (1976). *Management concepts and situations*. New York.
- Isleyen, G., & Daglıoğlu, O. (2020). The effect of aerobic exercise on pulmonary function and aerobic capacity in sedentary men . *International Journal of Sport Exercise and Training Sciences - IJSETS* , 6 (3) , 80-87 .
- Karakucuk, S., & Basaran, Z. (2000). Recreation factor in coping with stress, *Gazi Journal of Physical Education and Sport Sciences*, 5 (3); 63-80.
- Keles,K., & Yavuz, F. (1983). *Local administrations*, Turhan Bookstore, Ankara.
- Koc, Ş. (1994). *Introduction to sports psychology*. Saray Medical Publishing, Izmir.
- Kocel, T. (2001) *Business management, management, organization, behavior in organizations, classical modern contemporary Current Approaches*, Beta Basım Yayım Dağıtım A.Ş. 8th Edition, Istanbul.
- Nar, D., Daglıoğlu, O., & Kaya, F. (2013). The investigation of the effects of 3-month fitness applications on body compositions in sedentaries. *International Journal of Sport Studies*, 3(8), 836-846.
- Okmen, M. (2002). Autonomy tendencies in local governments, Europe and Turkey, Bekir Parlak-Hüseyin Özgür (Ed.), *Within Local governments in Turkey*, Alfa Bookstore, Istanbul.
- Özalp, İ. (1993). *Management and organization*, Birlik Ofset Publishing, Eskişehir.
- Öztürk, H., Yılgin, A., Peksayılır, G., & Yılmaz Öztürk, Z. (2017). Attitudes of parents to children's participation in physical education classes, *European Journal of Physical Education and Sport Science*, 3(11);72-82.

- Parlak, B. (2002). *Local administrations in Turkey in the European union and the integration process*, Alfa Publications, Istanbul.
- Şimşek, MY. (1997). *Management and organization*, Damla Ofset, Konya.
- T.C. 1982. (2002). *Constitution*. Legal Publishing, Ankara.
- Tezcan, M. (1977). *Leisure sociology*, Ankara.
- Tortop, N., & İsbir, E. (2004). *Management science*, Science Published, Ankara.
- Tosun, K. (1974). *Business management*, Volume One, General Principles, Faculties Printing House, Istanbul.
- Ulusoy, A., Tekin A. (2001). *Local administrations*, Seçkin Publishing, Ankara.
- Üçok, T. (1993). *Management principles*, Özkan Printing Industry, Ankara.
- Yalçındağ, S., & Ulusoy, N. (1967). *Decentralization and development*, Todaie Published, Ankara.
- Yetim, AA. (1992). Management processes and sports management, *Journal of Gazi University Gazi Education Faculty*, 8(1);1-8
- Yılmaz, T., & Dağlıoğlu, Ö. (2018). The effect of aerobic training program on cardiopulmonary parameters and oxygen saturation in elite judokas . *Turkish Journal of Sport and Exercise* , 20 (3) , 333-337 .
- Yılmaz, TÖ. (2003). *Total quality management in private sports enterprises*, Marmara
- Yılmaz, Z., & Murat, M. (2010). The relationship between primary school administrators' job satisfaction and organizational stress sources, *Firat University Journal of Social Sciences*, 18(2);203-222.

About Author

Fikret ALINCAK conducts research in the field of microteaching. He completed his undergraduate, graduate and doctoral studies in the field of physical education and sports. He has studies in the fields of learning with games and teaching games in children. He is still working as an Associate Professor at Gaziantep University Faculty of Sport Sciences.

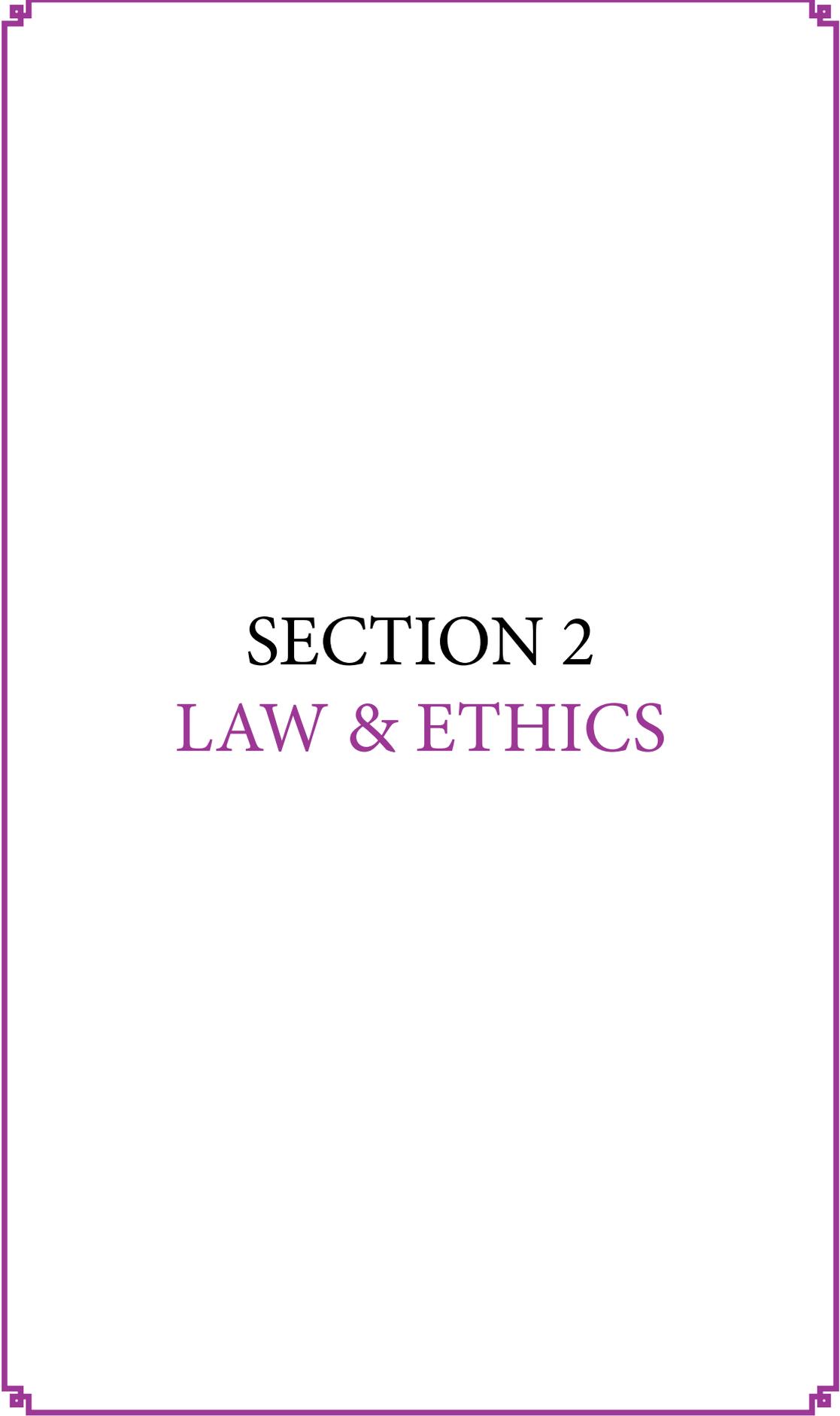
E-mail: alincakfikret27@gmail.com, Orcid id, <https://orcid.org/0000-0003-3459-3441>

Huseyin OZTURK works on social areas and recreation in sports. He has studies on physical activity, leisure time and leadership approaches. Healthcare carries out projects related to generations. He is still working as an Associate Professor at Gaziantep University Faculty of Sport Sciences.

Email: ozturkavrasya@hotmail.com, Orcid id, <https://orcid.org/0000-0002-4968-586>

To Cite This Chapter:

Alinecak, F., & Ozturk, H.(2021). The work of municipalities as local administration in Turkey and the expectations of the people. In A. Csiszárík-Kocsir & P. Rosenberger (Eds .), *Current Studies in Social Sciences 2021*(pp. 48–60). ISRES Publishing.



SECTION 2
LAW & ETHICS

Scientific Theft

Noora Adnan JAHAD

University of Baghdad

Introduction

Among the most famous literary thefts that occurred in the world is news from the Libyan News Agency, which indicated that the source of US President Ronald Reagan's statement before the United Nations General Assembly in 1988 was from the ideas of President Muammar Gaddafi in his book (The Green Book), as well as from political incidents in the field of scientific theft is an announcement Biden withdrew from the battle to win the Democratic nomination, because it was revealed that the speeches he was giving to his fans were nothing but expressions of speeches by other American or British politicians, after which Biden announced his withdrawal, and this is considered the most important incident of political failure due to an attack on copyright. It is possible to describe the poet Al-Mutanabbi as one of the first to formulate the protection of the material rights of the author when he addressed Seif Al-Dawla saying: Allow me if I sing poetry, for with my poetry praises have come to you repeating. We also infer from the house of the poet Ibn Al-Hamali the importance of protecting intellectual property and that he is afraid of intellectual theft. What do you see us saying except that it is repetitive or borrowed from what we say repeated (Jabbour, 1996).

Definition of Scientific Theft and its Types

In Islamic law, theft is defined as taking the money of others in secret. In law, it is the deliberate embezzlement of movable money owned by others.(Article (439) of the amended Penal Code No. 111 of 1960).

Or it is the embezzlement of the scientific and intellectual efforts of a researcher, whether with his knowledge or without his knowledge, and scientific theft can be defined as taking what belongs to others unjustly, or it is the plagiarism of the scientific works of others and claiming their ownership, or claiming explicitly or implicitly the ownership of the ideas or writings of other writers in whole or in part, Or it is the deliberate use of any published or unpublished paper or electronic source of information without proper recognition of copyrights and the failure to apply the generally accepted methods of documentation in scientific research, or it is the usurpation of mental production of any kind without reference to the original source (Al-Kilani, 2019). And we prefer the definition that some thinkers went to, who defines scientific theft as the researcher's intentional use of words, ideas, or information of others without mentioning the author of it and attributing it to himself (Dr.. Salem - p. 91.)

Types of Theft

The social and human sciences are classified as fragile sciences, because the field of personal ijtehad is wide, abundant and controlling. Professor Andresky considered it sorcery and subjected to the direct control of politics (the politics of whims). People rush to search and discover the universe in all fields. In Arabic literature, there are many names given to scientific theft, including copying, flaying, deformation, slander, plagiarism, subversion, raiding, rapprochement, and appropriation, and the differences between them are many (Jabbour, 1996).

Forms of Theft

- 1- Prepare a search by cutting and pasting texts from multiple sources
- 2- Taking the ideas, results or data of others and expressing them in his own way without mentioning the source
- 3- Transferring information without placing it in quotation marks, without mentioning the source, and not complying with the documentation conditions.
- 4- Stealing the idea of researchers or students
- 5- Stealing results
- 6- Thefts carried out by publishing houses, either by translating or reprinting a book or the author that was carried out by the researcher without the permission of its author
- 7- This type has spread among Arab researchers if he translates the research from English into Arabic and claims his ownership.
- 8- Paraphrasing sentences and phrases or changing the order of words in the form of the researcher and attributing them to him. Where some gels or phrases are replaced, but the scientific material remains the same.
- 9- Stealing the researcher himself by adopting the same ideas in more than one research for him and listing the same information, this is considered self-theft.

Types of Scientific theft

- 1- Reproduction, which is by writing or using speaking machines for sermons, lectures, teachers' teaching, and other methods of reproduction.
- 2- Citation (indirect quotation), which is by referring to a specific paragraph from the opinions of a previous researcher or from an author, whether it is a book, an

article, a periodical, or social networking sites, but with the disposal of words by the researcher. Next Steps 1 - The citation from the author with a paragraph or paragraphs from the other author is in line with sound academic custom. 2 - The citation is to the extent justified by its objective. 3 - The author's name and the author's name is mentioned in the body of his research or book.

- 3- A quotation that is the repetition of the same words of a previous researcher, whether written or spoken, and placing them between quotation or quotation brackets, or it is an expression of citing a text or a paragraph of a previous writer with reference to it without acting.
- 4- Partial quotation, which is by referring to the ideas of others or supporting or denying the ideas of others with reference to them
- 5- Stealing: It is taking the efforts of others and previous researchers with reference to the original researcher, but the transfer are literal.
- 6- Plagiarism: It means using the ideas and works of others and attributing them to him, and thus is stealing the efforts of others while ignoring the paraphrasing, that is, only copying and pasting or paraphrasing, but in an ambiguous manner. From here, the difference is clear. The difference between plagiarism (which is to take the efforts of others and previous researchers with reference to the original researcher, but the transfer is literal) and plagiarism is to mention the name of the author or refer to him directly in the first, not to do the same thing in the second type. (Jabbour, 1996).

Reasons for Scientific Theft

It is that there are medical and scientific books of high amounts, the main reason for this theft being the researcher's need for references to maintain his professional level, the poor qualification of the human cadre or researchers in order to detect them, the complexity and ambiguity of electronic piracy, the difficulty of renewing it, the absence of religious and moral motivation and the desire to quickly write Research for the sake of financial returns, obtaining a scientific degree, the large number of sources on the electronic network, the ease of access to them, the absence of punishment, and the researcher's lack of knowledge of how to write a research within the instructions that avoids scientific theft due to the lack of clarity (Abboud, 2020; Al-Kilani, 2019).

How to Detect Theft, Ways to Avoid it, and the Legal and Ethical Consequences of Scientific Theft

The protection of intellectual property rights in Arab countries, including Iraq and developing countries in general, is not the absence of legal texts, but rather the absence

of the application of laws by judicial bodies. We did not find a country in the world that has not yet entered intellectual property laws. Since the days of the Ottoman Empire

Methods of Detecting Theft and Their Effectiveness

There are a number of programs that can be used to detect plagiarism, plagiarism or scientific theft that occurs on scientific research, the aim of which is to know the similarity between the new research and the research that preceded it in the same specialty from the date of submitting the research until infinity.

Ithenticate

Turnitin

Academicplgiarism

Plagiarism

Plaguem

Plagscout.

And other electronic programs, some of which are free.

As for the most Important Methods of Treating Scientific Theft

The concerted efforts of the university community with all its denominations, including libraries, researchers, supervisors and arbitrators, as well as the role of universities in supporting scientific research and raising awareness of this. The existence of a law to protect intellectual property, and at the same time, the procedures for documenting it should be easy and accessible to all. The presence of a detective program or report to reveal the extent of congruence between the research or the published book. Among the previous books in the same field, there are training courses to introduce scientific research and how to collect information about it on the electronic network, and to introduce them to how to write research sources or references, which is in one of the ways:-

The first is the Harvard method: - which begins with the name of the author and the date of publication

The second method is the digital method: which uses a specific number to denote the original researcher, whether this number is written in the margins of the page itself or at the end of the research.

Spreading the ethics of scientific research and scientific honesty and maximizing the ethical role of researchers, and that the media have a clear role in educating researchers

for the purpose of detecting all cases of theft that are presented before the competent courts.

Legal Consequences of Scientific Theft

for Iraq, the Iraqi Penal Code No. 111 of 1969 amended between (without prejudice to any more severe penalty stipulated by the law, whoever infringes on the intangible property rights of others protected by law or an international agreement to which Iraq has acceded) shall be punished with a fine. Copyright), and then the Intellectual Property Protection Law No. (3) of 1971 was legislated, which was amended by Order No. (83) of 2004, and Iraq joined the World Organization for the Protection of Intellectual Property (WIPO) under Legislation No. (212) in 1975 and became effective Enforced on October 21, 1975, in order to enhance the protection of intellectual property rights and innovation, as stimulating researchers to creativity and innovation needs local, international and global protection from infringement.

Article (44) of Law No. (3) of 1971, as amended, stipulates that every author whose right set forth in this law has been violated has the right to appropriate compensation. As for (45) of the same law, the forms of assault that are considered scientific theft are indicated.

The Law of Copyright and Related Rights in the Kurdistan Region (Iraq) No. (17) of 2012 stipulated in Article (36) that the thief of scientific research shall be punished by imprisonment for a period of not less than one month and not exceeding one year, or a fine of not less than (500) thousand Iraqi dinars and not more than (1,500,000) Iraqi dinars or one of the two penalties. The same article, Paragraph (Fifth), indicates the closure of the facilities that were used to perpetrate scientific theft, and the closure is obligatory in the event of recidivism.

As for the instructions of the Ministry of Higher Education and Scientific Research for the year 2016, it was to study the subject of research methods and write the thesis and the thesis to all students of primary and higher studies and to use the electronic program (Trentnet) to detect scientific theft and to slim the number of research pages, knowing that this paragraph is in violation of the instructions No. 1982 Article (38 Paragraph 6/1-6) which includes that the number of pages of the research, thesis or the thesis is determined by the supervising professor and the department concerned with him, and the adoption of a percentage (20%) for citation. A civil lawsuit and the dismissal of the student's registration in the event of proven plagiarism.

Discussion

Scientific theft is in essence a moral and legal problem that affects the academic

community for the reasons mentioned above.

There are some researchers who have shown that there are no differences between the types of scientific plagiarism, and therefore scientific plagiarism is itself plagiarism and at the same time is plagiarism, which is intended to use the ideas and works of others and attribute them to him and thus is the theft of the efforts of others. As for the other opinion of researchers, they have shown that scientific plagiarism Different type and shapes, each one from the other

Overlooking this crime will contribute to the extinction of creativity and thus stop, and the state or the academic community will be satisfied with repetition, only which will lead to making this state among the ranks of backward countries because nations are measured by their creativity, vitality, and their ability to give and help in the progress of mankind. There is no transgression in the matter of copyright. The decision of Islamic jurisprudence of the Organization of the Islamic Conference states that copyrights, inventions or innovations are legally protected, and their owners have the right to dispose of them and may not be violated.

Conclusion

The importance of protecting intellectual property from theft lies in that it supports and encourages creativity and innovation in society. On the other hand, it is the creator's horse and preserves his material and moral rights. As the continuation of scientific theft leads to the reluctance or lack of production of real researchers and real scientific production, we remain in the same circle and the same information and an opportunity is lost. Learn something new.

Scientific research in any field is an organized process that aims to find solutions to problems or answer specific questions by using certain methods to arrive at new scientific knowledge.

A scientific researcher is defined as a person who devotes his time to searching for knowledge of all kinds, as well as adding new things to it that help him progress and develops.

Scientific plagiarism is the intentional use of any published or unpublished paper or electronic source of information without proper recognition of copyright and non-application of the generally accepted methods of documentation in scientific research, or it is the usurpation of mental production of any kind without reference to the original source

Recommendations

- 1- Working to spread awareness of the importance of researcher rights and the existence of a culture in the academic community under the slogan (for scientific theft), and this matter does not stop only with the researcher, but also in all scientific institutions.
- 2- Striving to simplify the author's judicial procedures before the competent court and to rule in the spirit of the law
- 3- It is considered a crime against the honor of the profession
- 5- The necessity of defining the meaning of plagiarism, which leads in the future to prevent confusion between the researcher between plagiarism, quotation or theft and what is also permissible.....
- 6- That the Intellectual Property Protection Law should include the obligation to belong to the associations for intellectual property protection, in order to ensure Iraq's affiliation to the TRIPS Agreement.
- 7- A paragraph is added to the instructions of the Ministry of Higher Education and Scientific Research on the existence of the bibliography, as it includes in addition to the original sources used by the researcher in addition to the sources from which he was not directly quoted, meaning that the researcher benefited from them indirectly.
- 8- A paragraph shall be added to the instructions of the Ministry of Higher Education by writing a pledge that includes (I am a writer (thesis or research) I pledge that it is the result of my own research, except for what was mentioned in the margin and that any part of it was not previously submitted to any university or Institute or magazine or publication and in succession I bear all the legal consequences and for him I signed Name Signature Date.

References

- Abboud, S.M. (2020). Ethics of scientific research and method research writing. *Dr-Science House - Baghdad* - 69-91.
- Al-Kilani, J.A.Z. (2019). Scientific theft and the criminal responsibility resulting from it. *Journal of Science of Sharia and Law*, 46(1), 410-414.
- Jabbour, G. (1996). *On intellectual property and copyrights*. Damascus: Dar Al-Fikr – Damascus, 1

The Iraqi Penal Code No. 111 of 1969

The Intellectual Property Protection Law No. (3) of 1971

The Law of Copyright and Related Rights in the Kurdistan Region (Iraq) No. (17) of 2012.

To Cite This Chapter:

Jahad, N. A., (2021). Scientific theft. In A. Csiszárík-Kocsir & P. Rosenberger (Eds .), *Current Studies in Social Sciences 2021*(pp. 62–69). ISRES Publishing.

Towards European Union Standards: The Albanian Legal Development and Protection of Author's Rights

Ergysa IKONOMI

Ismail Qemali University

Introduction

The Civil Code of King Zog I was the first modern law to recognize Intellectual Property (IP) rights in Albania.

The end of WWII was an important moment for global political development. Unfortunately, Albania became part of the Eastern communist bloc. Since 1945 a set of signs began to appear, indicating deep modification of the society, political regime, economic organization, and the culture was forced to submit to the soviet model. (Topçiu, 2008)

During the communism era there were finalized real attempts in the separation, not only as concepts, but also as legal regulations of the two branches of IP: the author's rights and industrial property.¹ Over this period there had been adopted several legal acts (decrees) recognizing author's rights in Albania. These acts had short and indoctrinated contents, to accomplish the main aim of the state: total control over intellectual creativity. As it was stated in the preamble of the Albanian Decree no 4389 of 1968, the copyright laws served "*in order to encourage and develop the creative activity of people of literature, arts and science to create works with a sound ideological content and high artistic value in the service of socialism and revolutionary education of the masses...*".

By controlling the creators, the authors, and the contents of their works, it was easy to manipulate people, given that the literary and artistic creations were the main mode of entertainment.

"And under this main appeal the actors of the materialization of ideology (artists) were oriented by the state to clearly understand their position in support of the cause, otherwise they risk being considered unnecessary, worse yet, enemies. They must serve ideological transformation, otherwise "spiritual food of the masses". They have to materialize ideology into a "real", understandable, based on sanctioned principles, initially imported from the state of communism and then implemented in the Albanian reality as one need for necessity." (Hoxha, 2014) In Albania the authors suspected of modernism and authors of tradition, who did not conform to formal ideological schemes, had tragic fate. Their violent punishments were not necessarily for anti-Marxist or anti-Communist ideas, but only for the form of artistic manifestation outside the socialist

¹ Industrial Property was often expressed under the terminology of "inventions and rationalizations".

realism templates. (Topçiu, 2008)

Beyond censorship and totally oriented creativity, that discouraged the real and proper creativity, the legal framework produced negative consequences even regarding the economic exploitation of the artworks. It was conceptualized and expressed as an author's impetus to renounce from "exaggerated rewards" from their works: "...*relying on their revolutionary initiatives to give-up excessive rewards for literary, artistic and scientific works*", but also "only one-time reward" was enforced by laws.² "The initiative" was most appreciated by state, expressed as: "*manifestation of socialist patriotism, putting the general interest over the personal interest, were the initiatives of workers and intelligence to give-up royalties, many additional rewards and other income over the salary base...*". (Instituti i Studimeve Marksiste-Leniniste, 1981) The panorama of forty-five years, apart from cultural backwardness, produced also lack of interest on exploiting the artworks and widespread indifference on author's rights. The overthrow of the political regime in the early 90s, introduced *inter alia* the necessity of the adoption of a new law regarding the author's rights.

This article will tend to clarify in detail the Albanian efforts towards completing the legal framework, by adopting several laws on author's rights, ratification of many of the international acts regarding author's rights and also by raising the level of protection of author's rights similar to the EU level. *The first part* of the article will focus the adoption of the law of 1992. It was an early phase that had a great importance because it completely changed the way of regulating the relationships originated from the intellectual creativity. The second law on author's right was adopted in 2005 and introduced significant improvements regarding author's rights. The differences with the previous law and the new regulations will be discussed in *the second part* of the article. *The third part* of this article will be dedicated to the actual law, adopted in 2016 highlighting the need for its adoption and the highly approximation to the EU Directives. In all the three parts, it will be analysed not only the respective law, but also according to the respective periods of time there will be mentioned the ratification of international legal acts, the foreign reports on the Albanian progress on author's rights and on the work of competent authorities.

The Early Phase (1992-2005)

The long-awaited change of the political regime imposed the obligation to finally adapt with international legal developments, by adopting a complete different legal framework starting from Constitution. In April 1991 was adopted the law "*Për Dispozitat Kryesore Kushtetuese*", which introduced a general approach to Human Rights, like those recognized by international acts. In addition, the art. 27 (2) of Universal Declaration

² The author was entitled of one-time reward for publishing, the republishing of the elaborated work and for any other use of the work. This reward was given to the possessor of the artwork, if the work was published, displayed, executed in public for the first time, after the death of the author.

of Human Rights is the first and properly selected one to show the importance of intellectual creativity and its moral and material interests. Furthermore, the provisions of the Albanian *quasi*-Constitution highlighted the plurality of properties as the base of economic development, guaranteeing each of them equal protection by law. These provisions with a brief and general content, can be interpreted undoubtedly as referring to intellectual property as well.

A year later was adopted the law “*Për të drejtën e autorit*”, which had a short, but modern content that made possible: (1) the cut off from past regulations of author’s rights included in the Civil Code of 1982, and (2) the return of previous experience of decrees on separated legal acts for author’s rights and industrial property, with one law dedicated only to author’s rights.

The Law of 1992 defined a list of creations (*literary, artistic and publicistic*), considered works including the original and the derived works. Between the works mentioned (even the list was not exhaustive), the genres of which were previously created and released in Albania, for the first time were mentioned “computer programs” in the category of written works. There were provided moral and economic³ rights for the author (s) as: “*the first owner of moral and economic rights over his work*”. The incomes from the author’s rights were considered personal incomes, so a taxable category, calculated only by personal declarations of the beneficiaries of the incomes. The law provided also for guaranteeing the rights of phonogram producers, broadcasting organizations and the executors, without grouping these categories under the “neighbouring rights” concept but mentioning them as “other rights”.

The respective rights and the way of administering them were different in cases of: (1) co-authoring, (2) collective works⁴ and (3) works created pursuant to the employment contract. While moral rights could be transferred only after the author’s death according to the legal regulations of inheritance, the economic rights could be transferred even by the author himself. One of the ways of exploiting the economic rights was the issuance of licenses by the author. In both cases the law required the written form.

There were included provisions about the collective management of author’s rights, mentioning the creation of only one national Agency, which would be responsible for the collective administrative directions of the rights if the authors did not exercise the rights by themselves or in case of lost or unknown authors. In fact, the role of the Agency as the only national legal entity under the supervision of the Ministry of Culture was not clearly defined. In the absence of a specific state authority for author’s rights, it seemed that the Agency was that authority, but when the law indicated the proper functions of

³ Specifically mentioned by law as “moral rights” and “economic rights”, terms which will not be used by subsequent laws.

⁴ The creation of the collective work identified the possibility for the author to be not only a natural person, but also a legal entity “*with the initiative and under whose direction the work is created and with whose name has come up*”.

the Agency, it became clear that it would carry out a similar activity as the actual CMOs.

One of the main provisions of the law was related to the term of protection of the rights. Aiming to be coherent with the most European states legal experiences in this field and especially to the Berne Convention, the Albanian law provided generally 50 years of protection after the author's death.⁵

Shortly before the adoption of the law, Albania had become a member state of WIPO. In the coming year Albania took the first step in signing, ratification or accession to other international acts related to author's rights. *Imprimis*, it was decreed the Albanian accession to the Berne Convention. Until the adoption of the new law in 2005, Albania also realized through laws the accession to: Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations, Convention for the Protection of the Producers of Phonograms Against Unauthorized Duplication of Their Phonograms, WIPO Performances and Phonograms Treaty, Universal Copyright Convention and its two Protocols and WIPO Copyright Treaty.

In 1998 Albania adopted the Constitution which has a dual approach to the author. *First*, as a person, as declares the fundamental human rights and freedoms as: “*inseparable, inalienable and inviolable and stand at the base of the legal order*”, recognizing that everyone has the right to earn their livelihood by lawful, accepted and selected work, based on the freedom of economic activity and the prohibition of forced labour. The inclusion of creative activity and its benefits respectively in the Civil Code and in the Labor Code tells of its nature as a form of work. (Ikonomi & Zyberaj, 2017) *Second*, as an author precisely guaranteeing the freedom of artistic creation and scientific research, their use, and moral and material benefits from them. There is only one article on author's rights, which means a general protection for these rights, but also indicates their importance as it states that the author's right is protected by law, referring to a specific law which has to respect the Constitutional standard of protection.

In 1995 there were made a few changes to the Albanian law of 1992, which were focused in three key issues: (1) the term of protection (2) the collective management of author's rights and (3) the expressed statement that the author may be a legal entity also. Undoubtedly under the impact of the Council Directive 93/98/EEC the amendments extended the term of protection from 50 to 70 years *post mortem auctoris*, to adapt to recent European development. The term of protection did not change for the applied art works. The amendments recognized the possibility for the authors to create “agencies” to realize the collective protection of their rights. These agencies were private partnership companies, different for every branch of art. These agencies, under the supervision of

⁵ According to the law the moral rights were forever preserved (except for: (1) anonymous or pseudonymous works and (2) collective photographic or audio-visual works, the protection terms of which were equated with the protection of the economic rights). Also, both economic and moral rights of applied art works had 25 years of protection from the day of production.

the Ministry of Culture, had to perform a non-profit activity and their functions were like those of the national Agency of the law of 1992. The art. 2 of the amending law also provided for the author not only as a person, but also as a legal entity: “*which takes the initiative and the responsibility*” to realize the audio-visual work.

In 2000 there were adopted further amendments. The art 50 was amended to be more specific about the violations of the author’s rights. It was enlisted a list of actions which if contravened the law or international agreements, despite that they violated moral or economic rights, were considered criminal offense. Respectively, the new Albanian Criminal Code which entered in force in June 1995, provided for two criminal offenses that were related to plagiarism and piracy. While the disputes between the user and the copyright holder (author or agency) should be submitted for civil court proceedings.

The last additions on the Law of 1992, before it was abolished, were made in 2001. These additions were necessary to identify the administrative violations, the authorities responsible for controlling and sanctioning. The administrative violations were all punishable with fines, 40 % of which were benefited by author’s agencies.

The Second Phase (2005-2016)

In 2005 a new law related to author’s rights was adopted in Albania. This new law “On Author’s Right and Other Neighbouring Rights related to it” was the fulfilment of the purpose to have a more complete law, also closer to the European legislative developments.

The 2005 law provided with a list of “definitions”, necessary as a mini dictionary in explaining 43 terms regarding author’s rights and other neighbouring rights. Generally, this new law included as protected works same list of creations as the previous law,⁶ but added the list of creations, which were not protected as works with:

- *ideas, theories, concepts, discoveries, and inventions in a creative work, regardless of the way it is received, explained, or expressed.*
- *official symbols of the state, organizations, and public authorities, such as weapons, seals, flag, emblems, medallion, badges, medals.*
- *means of payment.*

The content of author’s right continued to be expressed as divided in two main parts, which were named as personal non-property rights and property rights. The personal non-property rights maintained their nature and characteristics and through this law were added more personal non-property rights, such as:

⁶ The 2005 law provided for database, for *sui generis* rights of its author and for the short term of protection of this type of work: only 15 years.

- *to decide whether, how and when his work will be presented to the public, and the place where his work will be presented for the first time in public.*
- *to withdraw the license to use the work, if necessary, to ensure that the rights and legitimate interests of the right-holders of the exploitation of the work are not violated, which may be undermined by this act of the author.*

The property rights were expressed in a more complete way compared to the simple way used by the previous law and also the 2005 law used the term “exploitation of his work both in material and immaterial form” as the main exclusive right, instead of “allowing over his work”. In this case more than the way of expression, the difference lied in the mode of conception of property rights of the author. Moreover the 2005 law explained the way some of the property rights could be exercised by the author. One of the rights not recognized by the previous law was the “*droit de suite*” was mentioned by the 2005 law for works of fine arts, calculated as 5% of the price of the resale of the work. This new right had the hybrid nature of a moral right because could only pass through inheritance and of an economic right because the way was exercised and of the profit of the author.

The term of protection was the same, but the 1992 law considered the protection to be over the last day of the last year of protection, meanwhile the 2005 law provided that the protection of the work after the author’s death to be calculated form the first day of the following year of the death of the author or, as the case may be, of the first lawful appearance in the public of the work.

The property rights were transferrable only by written, registered and certified contracts. The author might allow his property rights to be exploited exclusively on non-exclusively by benefitting a reward. It was clear that the volume of rights that could be exercised by the third person and the author’s reward were proportional. The 2005 law specifically provided for two types of contracts, explaining the form and the rights and obligations of the author and the third persons. Probably the two most common and used contracts: the publication contract and the contracts for theatrical and/ or musical performances, were included in two different sections of the law.

The second part of the 2005 law provided for the neighbouring rights. it was the first time those rights were named so. There was no definition for neighbouring rights, but the law implied the “dependence” nature of them as stated that: “*The neighbouring rights of author’s rights do not violate the rights of the latter.*” The neighbouring rights, both property and non-property rights, were the similar to author’s rights and belonged to: (1) performers and executor artists, (2) producers of phonographic registrations, (3) producers of cinematographic and other audio-visual works and (4) companies of radio and television.

The administration of rights could be realized even by the Collective Management Agencies (CMO), one for each branch of art, licensed by the Ministry responsible for the culture, for 3 years term, with the renewal right. They had the right to transfer the administration of author's rights and other neighbouring rights to foreign agencies of same or similar branch of art. The 2005 law provided for the main institution The Albanian Office for Author's Rights (*ZSHDA*) responsible to carry out activities in support of and implementation of the Albanian legislation on author's right and other neighbouring rights within the territory of the Republic of Albania. In 2006 a decision 232/2006 of the Council of Ministers defined in details the status and the activity of *ZSHDA*, its structure and organization, its duties and responsibilities, its financial organization, the procedures of application, registration and certification and the functioning of regional offices, one for each county.

The signing of Stabilization and Association Agreement between the EU and the Republic of Albania in 2006 marked an important moment of the beginning of the difficult process of Albanian integration in the EU. The SAA was considered one of the most important political achievement in Albanian history, but it also meant the fulfilment of a list of duties. One of the main duties was the making of the existing laws and future laws gradually compatible with the Community *aquis*. The approximation should focus primarily in important areas, such as: "*intellectual, industrial and commercial property rights*", among others. The SAA provided that within the next four years Albanian should take the necessary measures to guarantee "*a level of protection of intellectual, industrial and commercial property rights similar to that existing in the Community*".

Albania had just adopted the new law in 2005, so it would be difficult to adopt immediately another. The National Strategy of Development and Integration 2007-2013 recognized "*the protection of intellectual property through, among others, the strengthening and consolidation of ZSHDA*" as one of the strategic priorities regarding the development of the Albanian culture.

In 2008 the 2005 law had an amendment by the law no 9934 of 2008 'On one amendment on law no 9380 of 2008 "On Author's Right and Other Neighbouring Rights related to it"'. It was really an interesting amendment regarding the extension of the term of protection of the works of the authors who had created and published during the dictatorship period. The legislative initiative was based on the grounds that their heirs had not benefited the legitimate rewards, since it had been forbidden by law to receive reward more than once for a work. The Parliament extended by law the term of protection of the economic rights to 23 other years. (Ikonomi & Zyberaj, 2017) The next law amendment in 2013 was focused more on administrative offenses and the procedures of control and appeals.

In those years, the situation in Albania was not improved. Counterfeiting and piracy

remained not only widespread, but even unpunished. Few cases regarding especially the author's rights were brought to court. The general level of the public awareness was very low. The 2008 Albanian Progress Report of European Commission defined the Albanian progress on intellectual property rights as "limited". The regional offices were not established and there was only one inspector on author's rights to cover the entire country. Additional human resources and further training of them was needed to strength the capacity of *ZSHDA*.

Next year the Albanian Progress Report of European Commission recognized some progress on intellectual property especially the accession to the European Convention on Cinematographic Co-production, but underlined some weak points, such as: (1) the 2005 law was not yet compliant with European standards and the draft national strategy on intellectual and industrial property was still pending adoption, (2) the capacity of *ZSHDA* remained weak although the training of its staff and (3) the planned network of 11 regional copyright offices had not yet been established.

The Council of Ministers adopted the National Strategy of Intellectual and Industrial Property (NSIP) 2010-2015, based on Czech experience, to reform efficiently the whole system. This Strategy mentioned the preparations for a draft law, which was expected to improve by: (1) guaranteeing author's rights and neighbouring rights, (2) strengthening state control, monitoring and punishment measures and (3) providing with accuracy the cases which constituted administrative offenses. The draft law would be approximated with some EU Directives, as well,⁷ but it was highlighted by the 2010 COM Analytical Report that as *ZSHDA* operated under the 2005 law, the process of adopting a new law indirectly created inactivity in implementing the law in force.

In November 2010, an analytic report of the Commission called "fulfilled" the commitments of Albania from SAA regarding the participation in international organizations and being a party of most of the international agreements regarding author's right. But the legal and institutional set-up was still weak, even it was expected that the new law to be adopted before the end of 2010. It seemed that the first stage of the ten years term of SAA was partially successful for Albania. This is the conclusion of the Albanian 2011 Progress Report which stated that: "*progress has been limited in the field of intellectual property law and Albania has not succeeded in meeting its SAA obligations on time*". While the progress regarding enforcement has been limited, there was no progress as regards alignment with the *acquis* in the area of copyright and neighbouring rights.

⁷ Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonization of certain aspects of copyright and related rights in the information society; Directive 2001/84/EC of the European Parliament and of the Council of 27 September 2001 on the resale right for the benefit of the author of an original work of art; Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights; Directive 2006/115/EC of the European Parliament and of the Council of 12 December 2006 on rental right and lending right and on certain rights related to copyright in the field of intellectual property (codified version); Directive 2006/116/EC of the European Parliament and of the Council of 12 December 2006 on the term of protection of copyright and certain related rights (codified version).

As the new law failed to be adopted and the Strategy was not effectively implemented and monitored, there was little progress recognized by the 2012 COM Progress Report. A little progress was made in awareness-raising process, through informing and training activities carried out by *ZSHDA*, especially “targeting” judges. The 2013 COM Progress Report repeated that *quasi* any progress was made during the last year, except for the staff training and the amendments of 2005 law, as mentioned above. Highlighting the lack of new law adoption, the Report stressed out the need for its adoption, although calling even the preparations as not advanced.

The decision of the European Council of June 2014 to grant Albania candidate status was a recognition for the reform steps undertaken, but also an encouragement to step up the pace of reforms, especially in those areas where the concrete improvements were moderate, such as: the protection of intellectual property rights. As long as Albania had not met the SAA commitments, it was required, as stated by the 2014 COM Progress Report, urgent and determined action to: (1) adopt the new copyright law, (2) strengthen inspection capabilities by, inter alia, establishing the market surveillance inspectorate, (3) improve the collective management system and (4) apply effective sanctions for infringement. In 2015 the new law on author’s rights was not adopted yet. So even the obligations provided for by the National Strategy of Intellectual and Industrial Property 2010-2015 were not fulfilled, exceeding any given deadline. The 2015 COM Report highlighted the need for improvement of the functioning of the CMOs and payment of royalties to rights holders.

The Actual Law

Effectively some of the activities included in the NSIP 2010-2015 objectives remained unrealized. The foremost one, the adoption of the new law failed to be fulfilled. The National Plan on European Integration (NPEI) 2016-2020 admitted the problem of delay in adopting the new law. Although the NPEI 2016-2020 highlighted some achievements regarding: (1) the increase of administrative capacities of *ZSHDA* through training, (2) the monitoring of IP market, (3) the functioning of 4 CMOs and (4) the introducing of IP module in the curriculum of schools and universities. The next NPEI 2017-2020, emphasized the need for the adoption of some legal acts pursuant to the law and the relevant amendments to the Criminal Code and Procedural Criminal Code.

Finally, Albania had the new law “On author’s rights and other neighbouring rights related to them” adopted at the end of March 2016, which entered in force six months later. The Relation of the Council of Ministers stated that the purpose of the new law is to: “*ensure a better level of protection for authors, artists, and copyright holders in general, to provide a suitable environment to ensure the respect of these rights, ensuring in full the balance between the private rights of the rights holders and the public interest*”

in information as well as the appropriate business climate”.

The adoption of the 2016 law, was followed few months later by the adoption of a new National Strategy on Intellectual Property. The new NSIP 2016-2020 does focus not only on the simple implementation of the IP rights, but mostly on the improvement of the whole IP system through scientific research work and by raising awareness on the protection of IP rights, so NSIP will function as a policy tool to encourage investment both in research and development. The main issues in the focus of NSIP 2016-2020 are: (1) further strengthening of the national system of protection of author’s rights, (2) public awareness of the importance of IP rights, (3) the well-functioning of the collective management system of rights and (4) institutional co-operation.

Certainly, the actual law is the most complete law on author’s rights in Albania, and *“harmonized at the highest possible rate in Albanian jurisdiction”* with EU Directives. The 2016 law has been fully or partially approximated *quasi* to all EU Directives regarding author’s rights, except for the Directive 2012/28 EU on orphan works. The respective explanation on exclusion was justified by the fact that: *“this is a directive which also the countries of the region, where the structure of this law based, have approximated after they have become part of the EU. So, even among the EU member states there are countries which have not made it part of their national laws because of the specifics of its regulatory object and their national context”*, and the Directive on orphan works is specific, so to be fully approximated with further legal amendments of the law.

The actual law avoids containing a “dictionary article”, but nevertheless provides some definitions *via* some of them. A year later the Ministry of Culture adopted the Manual of Definitions pursuant to the law, with a total of 102 definitions. Along with the non-exhaustive list of creations that are considered works, for the first time it is recognized the protection of each part or element of the work, like a character, or the title of the work only if it represents an intellectual creation, or when it is used for a particular work, will not be used for the same kind of work if this title creates confusion for the author of the creation.

Even the 2016 law based on the principle of automatic protection, avoiding any requirement for formalities, it also provided for the registration of the works on volunteer basis and explained the importance of registration and certification from the Directorate of Author’s Rights (*DDA*). This is a strategy to encourage the registration, as a public record which help asserting the author’s rights and can have positive impact in preventing the works from being orphan. The procedures are simple and last for not more than 45 days from application and the registration fees are reasonably affordable.

Regarding the personal non-property rights the actual law has defined them in 4 articles, explaining each of them. The right of withdrawal, unlike in the previous law, is widely

explained included the procedure and the terms it can be exercised. At the end of the same article, in only a paragraph are declared the characteristics of the personal non-property rights of the author as they: “*are not subject to resignation, are non-transferable, licensed, negotiable, and are inexhaustible*”. The property rights are divided in exclusive property rights and other property rights, each of them explained in different articles. The article on the *droit de suite*, expressed as the resale right properly using the EU Directive’s terminology, provides that the resale price must not be less than the equivalent value in ALL of 500 EUR, in order for the resale right to be claimed. The value of 500 EUR implies the net price, excluding VAT or other fiscal obligations. The highest royalty rate is 5% and the lowest 0,25% of the price. The Albanian scheme of the resale right royalties follows the logic that the percentage decreases as the resale price increases. The total amount of the royalty, belonging to the author, may not exceed 12 500 EUR.

The term of protection remains the same, except of the neighbouring rights and *sui generis* rights from databases. The 2016 law offers protection of property rights of the works already in public domain, if a person:

- publishes for the first time in a lawful manner or lawfully places a previously unpublished work at the disposal of the public. The term of protection shall be 25 years from this moment.
- publishes a critical and scientific publication of a work that has become part of the public domain. In this case the term of protection shall be 30 years from the date of the first lawful publication.

The protection of the property rights of this person are like the protection the law guarantees for the author of the work.

The new law contains explains in detail the publication contract and also provides for two different types of contracts in order to realize an audio-visual work: (1) the contract of audio-visual adaption and (2) the contract of audio-visual production, in which shows up the *quasi*-complete transfer of economic rights to the audio-visual producer, who holds the whole responsibility of realizing the audio-visual work.

The management of author’s rights and neighbouring rights is possible to be realized both individually and collectively, but the actual law defines that different rights must be managed only in a collective way by CMOs. The relationship between the author and the CMO begins with a contract. The creation, the activity, and the responsibilities of CMOs are provided by law. Their activity is transparent and monitorable.

ZSHDA is “transformed” in DDA. According to the new law, the way DDA is organized and its provided competencies, is expected for an efficient activity and less bureaucracy.

DDA proposes and implements the appropriate strategy and policy for the protection and enforcement of author's rights and is the representative body of the Republic of Albania with the authority to cooperate with similar foreign bodies. There is an important role of *DDA* regarding the licensing and monitoring the activity of CMOs. So, *DDA* examines the application documents and proposes to the Minister the licensing of the CMOs, keeps their records and supervises their activity. Also, *DDA* keeps and adjourns the records of voluntary registration of creations, the works that fall into the public domain and other important data for CMOs and users.

The 2016 law has created a new specialized body, the National Council for Author's Right (*KKDA*). *KKDA* is collegial decision-making and advisory body, composed of 5 members with a four-year mandate. Its activity is focused on the cooperation with the authors, CMOs and representative's associations of users. The mission of *KKDA* is to guarantee and protect right holders regarding the royalties for the use of property and non-property rights in the intellectual market. Through its specifically regulated activity it is possible to certify and publish the fees for the users, as a transparent process, guaranteeing competitive and escalating fees depending on the level of use, and also the purpose of exploitation of intellectual products. The new NPEI 2018-2020 recognized the successful and constant activity of *DDA* and the creation of One Stop Shop system by *KKDA*, called S.U.A.D.A, which activity is the collection of royalties to distribute than to the 4 CMOs, and further to the rights holders.

For the first time there are recognized the technological measures and the way they must be used, to be effective. The authors, performers and executor artists, producers of phonograms or audio-visual works, audio-visual media service providers or database producers can create, use, and control these measures to protect their rights.

The 2016 COM Report recognized the progress made, but after the adoption of the new law highlighted the need to ensure the implementation of law and to improve the functioning of CMOs and the payment of royalties to rights holders. The COM Report of 2018 and 2019 encouraged improving the functioning of CMOs and the payment of royalties to rights holders, while mentioned the amendments of Criminal Code to refine the legal mechanisms and better address copyright infringements and the establishment of State Inspectorate for Market Surveillance since 2016 and its responsibility for inspecting, controlling, and enforcing copyright and related rights. These reports highlighted that Albania actually has some level of preparations regarding IPRs but suggested further improve to the functioning of collective management agencies and the payment of royalties to right holders.

Conclusions

In almost three decades the situation in Albania, regarding IP rights and more specifically

the author's rights, has changed a lot. There has been a real improvement in recognizing, guaranteeing, and enforcing both personal non-property rights and property rights of authors and other subjects who benefit from neighbouring rights.

Although there has been adopted three laws, each of them has marked a positive result of the legal efforts of Albania in the field of author's rights. Except for the fact that each subsequent law has definitely been an improved and more complete variant of the previous law, each of them at the time of their adoption has made significant innovations aiming and helping that the legal situation in Albania to be similar to that of the EU. Also, Albania has not hesitated to become part of international organizations, conventions, and treaties of IP.

Albania has a new law, which has been adopted after a period of two years of preparations and consulting, "*harmonized at the highest possible rate in Albanian jurisdiction*" with EU Directives. The Council of Ministers has adopted some decisions as well for the further and fast implementation of the 2016 law. There are some priorities that the new law considers, such as: (1) the guarantee of legal certainty that each right holder to maximize the exploitation of his rights through the variety of forms offered by the digital era, (2) the implementation of a transparent process of approving and collecting fees and distributing royalties, (3) the definition of the legal status and responsibilities for state bodies, determining their respective roles, in order to enforce the law and to minimize the violations of author's rights and (4) the strengthening of controlling and monitoring of application of coercive measures. So, the main and final aim of the law is to achieve the EU standard of protection of author's rights by creating a healthy environment for creation, development, and investments.

There are some issues that must be considered important to work with, such as promoting the activity of CMOs. But, the most delicate issue, which require dedication constant work and long time to be solved, remains the raising of the public awareness. With all the measures that the law provides and all the informative and training campaigns of DDA, much time is needed for the Albanians to offer attention and support to the author's rights, so that to be possible to be compared with the standard of awareness of EU citizens.

References

Albanian Decree no 4389 of 1968 "On author's right"

Albanian Decree no 487 of 1993 'On the accession of the Republic of Albania to Berne Convention "For the protection of the literary and Artistic Works"

Albanian Law no 7491 of 1991 "On the main constitutional provisions"

Albanian Law no 7564 of 1992 "On author's right"

- Albanian Law no 7585 of 1992 “On personal income Tax”
- Albanian Law no 7923 of 1995 ‘On some amendments on law no 7564/ 1992 “On Author’s Right”’
- Albanian Law no 8630 of 2000 ‘On one amendment on law no 7564 of 1992 “On Author’s Right”’ (amended)
- Albanian Law no. 8594 of 2000 ‘On some additions and amendments on law no 7564 of 1992 “On Author’s Right”’
- Albanian Law no 8826 of 2001 ‘On some additions on law no 7564 of 1992 “On Author’s Right”’ (amended)
- Albanian Law no 9380 of 2005 “On author’s right and other neighbouring rights related to it.”
- Albanian Law no 9934 of 2008 ‘On one amendment on law no 9380 of 2008 “On author’s right and other neighbouring rights related to it.”’
- Albanian Law no 78 of 2013 ‘On some additions and amendments on law no 9380 of 2008 “On Author’s Right and Other Neighbouring Rights related to it.”’
- Albanian Law no 35 of 2016 “On author’s rights and other neighbouring rights related to them.”
- Constitution of the Republic of Albania (1998)
- Criminal Code of the Republic of Albania (1995)
- Decision of the Albanian Council of Ministers no 73 of 1968 ‘On the approval of the Regulation “On the reward of authors of literary, artistic, scientific works and various performers”’
- Decision of the Albanian Council of Ministers no 232 of 2006 “On the foundation and operation of the Albanian Office of Author’s Rights (*ZSHDA*)”
- Decision of the Albanian Council of Ministers no 760 of 2010 “On adopting the National Strategy of Intellectual and Industrial Property 2010-2015”
- Decision of the Albanian Council of Ministers no 74 of 2016 “On the adoption of the National Plan of European Integration 2016-2020”
- Decision of the Albanian Council of Ministers no 527 of 2016 “On adopting the National Strategy of Intellectual and Industrial Property 2016-2020”
- Decision of the Albanian Council of Ministers no 33 of 2017 “On the approval of tariffs for the services provided by the Directorate of Author’s Rights”.

Decision of the Albanian Council of Ministers no 34 of 2017 “On the procedures of registration, organization and classification of author’s rights works”.

Decision of the Albanian Council of Ministers no 35 of 2017 “On the way of functioning, organizing and of reward of the National Council of Author’s Right (*KKDA*)”.

Decision of the Albanian Council of Ministers no 42 of 2017 “On the adoption of the National Plan of European Integration 2017-2020”

Decision of the Albanian Council of Ministers no 246 of 2018 “On the adoption of the National Plan of European Integration 2018-2020”

Decision of *KKDA* no 2 of 2017 “On adoption of the regulation of organizing and functioning of the national council of author’s right (*KKDA*)”

Decision of the Albanian Ministry of Culture no 138 of 2017 “On the adoption of the Manual of Definitions pursuant to the law no 35 of 2016 “On author’s rights and other neighbouring rights related to them.”

European Commission, “Albania 2008 Progress Report” COM (2008)

European Commission, “Albania 2009 Progress Report” COM (2009)

European Commission, “Analytical Report” COM (2010)

European Commission, “Albania 2011 Progress Report” COM (2011)

European Commission, “Albania 2012 Progress Report” COM (2012)

European Commission, “Albania 2013 Progress Report” COM (2013)

European Commission, “Albania Progress Report” COM (2014)

European Commission, “Albania 2015 Report” COM (2015)

European Commission, “Albania 2016 Report” COM (2016)

European Commission, “Albania 2018 Report” COM (2018)

European Commission, “Albania 2019 Report” COM (2019)

Hoxha, E. (2014). *Arti në Shqipëri 1945-1990* (Doctoral Dissertation, University of Tirana, 2014) Retrieved from: <http://www.doktoratura.unitir.edu.al/wp-content/uploads/2015/10/Doktoratura-Ermir-Hoxha-Fakulteti-i-Histori-Filologjise-Departamenti-i-Arkieologjise-dhe-Trashegimise-Kulturore.pdf> (June 21, 2018)

Ikonomi, E. & Zyberaj, J. (2017). *E drejta e re e autorit në shqipëri dhe të drejtat e Lidhura*, Tiranë: Botimet Pegi.

Instituti i Studimeve Marksiste-Leniniste. (1981). *Historia e partisë së punës së*

Shqipërisë. (Botimi II). Tiranë: Shtëpia Botuese “8 Nëntori”. Retrieved from: <https://www.marxists.org/shqip/subjekt/dokumente-shqiptare/ppsh/historia/vii/3-5.pdf> (June 22, 2018)

National Strategy of Development and Integration 2007-2013, Albanian Council of Ministers

Relation of the Albanian Council of Ministers on the draft law “On author’s rights and other neighbouring rights related to them” (2015)

Stabilization and Association Agreement between the EU and the Republic of Albania (2006)

Topçiu, L. (2008). Paradigmat modernitetit në letërsinë shqipe, arspoetica, 5. Retrieved from: <https://books.google.al/books?id=KPTwBQAAQBAJ&pg=PA9&lpg=PA9&dq=krijimtaria+artistike+ne+komunizm&source=bl&ots=4PivGfZh8d&sig=u5j9adefrfaqTBv0Y1b9wrRhCK4&hl=sq&sa=X&ved=0ahUKEwibjMrRyZbbAhWEkSwKHYvXBxc4ChDoAQgzMAI#onepage&q=krijimtaria%20artistike%20ne%20komunizem&f=false> (June 22, 2018)

About Author

Ergysa IKONOMI is a Lawyer and Lecturer at “Ismail Qemali” University of Vlora, Albania. She holds a Doctorate in Contract Law. Her research is focused on Intellectual Property Law, especially on the protection of author’s rights. She has published in various academic journals and has participated in many international scientific conferences. She has also published two books which are used as basic literature in university.

E-mail: ergysa.ikonomi@univlora.edu.al, ORCID: 0000-0001-8071-4916

To Cite This Chapter:

Ikonomi, E. (2021). Towards European Union standards: The Albanian legal development and protection of author’s rights. In A. Csiszárík-Kocsir & P. Rosenberger (Eds.), *Current Studies in Social Sciences 2021* (pp. 70–85). ISRES Publishing.

An Overview of the Italian Judicial System

Xhemile SALIU

In General About Italian Judicial System and the Italian Civil Law

The Law on Civil Procedure has been in force in Italy since 1942. This law was amended in the following years. Italy is a representative of the Italian-Canonical model (Basset, 1978). of civil trial which model has been applied in many countries in Continental Europe and which countries were under the influence of this system in the first 70 years of the 20th century and for which system will be discussed in the following sections of this paper. The Italian civil trial in terms of type is divided into three stages.

In general the first stage is called the “initial stage” (introdutative stage) at which stage it is determined in which court the trial will take place.¹ In the second phase which is called the “preparatory phase” (fase di trattazione od istruttoria) the preparation of the process takes place which will be the basis for the development of the court procedure and the passing of the judgment. At this stage, the disputed issues are determined, the lawsuit and the defense are cited and evidence is presented and then accepted by the court.² In the final phase, called the “decision-making phase” (fase decisoria), the lawsuit and the defense are reviewed and a decision is made³.

In some processes, the line between the second and third stages is definitive. All this because if the process is conducted by a single judge, the decision is taken by a commission composed of three judges. However, in a large number of court proceedings both the preparatory phase and the placement phase are conducted and led by a single judge (Cappelletti, 2013). As is the case in most systems of Continental European countries, the hierarchy of courts in Italy is divided into three stages.

Against the decisions of the courts of first instance (Tribunals), appeals are filed in the court of second instance (Corte di Appello), while against the judgments of the courts of second instance the procedural parties address their civil case to the Supreme Court (Corte di Cassazione)⁴. However there are some features that distinguish Italian civil trial from civil trial in Continental Europe and the Anglo-American legal system. The following differences will be examined below:

¹ For more see the : Regolamento Recante la Determinazione dei parametri per la liquidazione dei compensi per la professione forense, Al Sensi Dell'articolo 12, Comma 6, della Legge 31 Dicembre 2012, N.247; b) per fase introduttiva del giudizio (pg.441); (G.U. Serie Generale n. 77 del 2 aprile 2014); - Il Ministro della Giustizia; - [Regulation Establishing the parameters for the payment of fees for the legal profession, In accordance with Article 12, Paragraph 6, of Law No. 247 of 31 December 2012] - b) for the introductory phase of the trial (pg. 441); (Official Gazette General Series n.77 of 2 April 2014); - The Minister of Justice.

² Ibid, 442.

³ See: Code of Civil Procedure of Italy, article 189 & 275.

⁴ Mauro Cappelletti I Joseph M. Perillo - Civil Procedure in Italy (a book); Chapter 3 - Judicial Organization, I. The courts - page 69-73/65.

Some Qualities of Judgment

Development of the Process by the Procedural Parties

Each stage of the trial depends on the initiative of the procedural parties. The procedural parties file a request (lawsuit) and also go to court for their deadlines and extension. The court can not assess these claims, it is authorized only on this basis and also court decisions are limited to claims (lawsuits) and defenses filed by procedural parties. In addition the decision, as a rule, can be based only on the evidence presented by the procedural parties. The process is a long process in Italy and consists of a number of preliminary sessions. Lawyers generally attend hearings where only relevant verbal evidence is submitted and hearings where the latest verbal evidence is presented, while other less experienced professional colleagues attend other hearings⁵.

More Preliminary Hearings and Written Evidence

In Italy it is necessary to hold several preliminary sessions at certain intervals, where preparations for the trial will be made, where evidence will be submitted and discussed. Prior to each preliminary hearing, the parties shall submit their requests in writing and respond to the requests of the opposing party. Therefore, the process can take a long time. In the Italian civil judicial system, written evidence and experts are of paramount importance. In most special legal proceedings it is decided without taking witness statements⁶.

Therefore, only when written evidence can not be obtained or can not have access to them, then only verbal evidence is obtained. From this point of view the initial stage consists of requests and other documents of the procedural parties, while the verbal part of the trial is presented only as a pure formality.⁷

Equality of Procedural Parties and Independence of Judges

In the Italian trial system, as is the case with other judicial systems, during the trial the parties have the same rights, opportunities and conditions. Regardless of whether a decision that will be brought in court will be final or temporary, that decision cannot be made without hearing the procedural parties. Even ordinances and temporary detentions are not brought without hearing the procedural parties (Giorgiantonio, 2009).

Court costs in Italy compared to other countries, are lower. In order for the trial to be conducted fairly and conscientiously, it is extremely important that the court be impartial. Therefore, judges in Italy are neither elected nor appointed. To become a judge you must pass a state exam. In addition, it is preferable to regulate the division of proceedings that

⁵ Ibid, page 54-67/65.

⁶ Elisabetta Silvestri - Evidence in civil law, Department of Law, University of Pavia; page 10 & 11, 2014.

⁷ Ibid, page 11.

are rigorous, in the courts of first instance. This rule is made to prevent the parties from choosing a court where a decision can be made in their favor⁸.

Judicial Organization

The judicial hierarchy in Italy is divided into three stages. Courts of first instance include the so-called tribunals and the courts of peace (Giudici di Pace) which administer simple court proceedings. The courts of second instance are the courts of appeal (Corti d'Appello). The court of third instance is the Supreme Court (Corti di Cassazione). The so-called tribunals act as courts of first instance in almost all trials, with the exception of trials left to peace courts. In addition, they are also responsible for some tax-related cases and cases regarding the conditions of individuals.⁹

A special feature is that the decisions of the courts of peace are considered as decisions of the courts of second instance¹⁰. Also, peace courts conduct litigation related to movable property whose value of disputes does not exceed the value of 2,600 euros, then litigation where the subject of dispute are traffic accidents where the value of causing damage does not exceed the amount of 16,000 euros and these courts also conduct court proceedings related to disputes where immovable property is presented as a case.¹¹

Courts of second instance review decisions of tribunals that appear as courts of first instance¹².

Whereas the Supreme Court reviews the decisions of the courts of second instance from a legal point of view. In Italy there are also specialized courts such as tax courts (tax courts). Proceedings in these courts are led by expert judges (professionals in the above field). While, in terms of special processes (such as bankruptcy proceedings, legal matters in the field of company law, will enforcement, divorce and other topics of family law) in the courts of first instance for leadership a commission consisting of 3 judges is engaged in these processes. In such processes the experiences of well-known experts in many fields are used. The courts of appeal consist of three members from that area, while the Supreme Court consists of 5 members from that area (Grossi, 2010).

Main Phases of the Trial

Obligations to be Fulfilled Before the Beginning (Initiation) of the Civil Judicial Procedure

Prior to the initiation of civil court proceedings, there is no obligation to notify the opposing procedural party. However, if no deadline is specified for the fulfillment of

⁸ Ibid, page 9, 10, 13, 19 & 20.

⁹ Civil Code of Italy, article 9.

¹⁰ Italian Civil Procedure Code, article 341.

¹¹ Ibid, article 7.

¹² Ibid, article 30.

an obligation by the other (opposing) party and if the other party has not fulfilled this obligation before initiating a court proceeding, it is required that the other procedural party be notified. After a warning if the other party does not declare within 15 days, in this case the possibility of starting (opening - initiation) of the procedure is immediately opened¹³.

As a rule, there is an obligation to represent the party by the representative by proxy¹⁴. But, in certain situations where the value of disagreement in the procedure and disputes in the business field is not more than 500 euros, there is a possibility for the procedural parties to initiate and conduct their own procedure.¹⁵ Requests to initiate proceedings and other written statements must be signed by attorneys. Therefore, lawyers must be present in court together with their powers. Lawyers with at least 10 years of work experience are authorized to attend second instance courts¹⁶.

Physical and legal persons can initiate court-civil proceedings without fulfilling preconditions. However, in such situations when we are dealing with legal persons who are minors who do not possess the ability to act and also when disputes arise where the parties are firms, then the above-mentioned persons must be represented by their legal representatives. It is important to mention that the initiation of the procedure depends on the legal interest (benefit)¹⁷.

Initiating the Procedure and Giving Answer to that Initiation

The litigation starts from the moment when the respondent (convenuto) will be notified about the request for initiating the procedure (atto di citazione). Contrary to the legal systems of other countries, in Italy, before the initiation of civil proceedings before a certain court, since the request for initiation of the procedure is addressed to the relevant court, the respondent is notified. However, there are some special cases and ways in which this rule does not apply. The request for initiating the civil-judicial procedure must contain all the points mentioned by the Law on Civil Procedure.¹⁸ According to this, the request for initiating the procedure must contain the result (merit) of the dispute (petitum), while the response to the request for initiating the civil-court procedure must come from the respondent within 20 days before the date of the hearing and the obligation for the respondent to be present in person at the hearing.

The date of the first hearing is chosen by the plaintiff from the possible dates for the court hearings submitted by the court at the beginning of each specific year which relates

13 Italian Civil Procedure Code, article 1453.

14 Ibid, article 82.

15 Ibid, article 82 (1).

16 Ibid, article 82 (3).

17 Ibid, article 105.

18 Ibid, article 163.

to the new proceedings that will be instituted.

According to Article 137 of the Civil Law Procedure¹⁹, if the residential address of the defendant is within the court area, then the official person gives the summons to appear in court (court summons) in hand, while if his residence is outside the area of the court, the court summons is sent by mail in the form of a letter of recommendation. 10 days after the submission of the notification for the request with which the procedure is initiated, the plaintiff submits the request for initiating the procedure in the court and thus the court procedure starts. Two days after the submission of the request for initiating the procedure the request is certified in court. Immediately after that the president of the court is ordered to appoint a judge who will lead the court proceedings. The president of the court appoints a judge who will lead the initial stage of the proceedings. In a large number of proceedings, a judge who is engaged to lead the initial stage of the proceedings is committed to continuing the proceedings to the end. The respondent, in turn, is responsible for responding to the proceedings. Otherwise, the court proceedings will take place in the absence of that procedural party.

The response regarding the procedure must be given at least twenty days before the first hearing²⁰. The answer can be given even after the deadline, even on the day of the first hearing.

However, in this situation, it is presumed that the defendant waives the right to file a counterclaim. In its response, the opposing party presents its objections and its defense and in particular responds to the plaintiff's allegations highlighted in the request for initiation of proceedings. In response to the request for initiation of the procedure, the documents supporting the defense of the defendant should be included. The respondent must also report any other evidence which he has requested to be collected. In response to the request for initiation of court proceedings, the respondent party may accept the proceedings or file a counterclaim.²¹

Preparatory Phase and Preliminary Sessions

The date of the first hearing is determined by the plaintiff and the court and the defendant are informed about this. The judge in the first hearing checks whether the procedure has been initiated in accordance with the rules and whether both parties are ready for the procedure. If neither party has attended the first hearing, the judge sets a new date for a new hearing. If the parties do not participate in the second hearing either, in that case the procedure is withdrawn. If only the respondent does not appear at the hearing in that case the procedure will be conducted in his absence. If the defendant neither appears at the hearing nor gives an answer regarding the request for initiation of the procedure, then a

¹⁹ Italian Civil Procedure Code, article 137.

²⁰ Ibid, article 166.

²¹ Ibid, article 167.

judgment is rendered in his absence.²²

At the first hearing, the procedural parties mention their selected claims and the results of the claim and if necessary, amend them. The judge who is engaged to lead the procedure determines the dates of the preliminary hearings and the dates of their holding, then arranges the mutual submission of claims and also deals with the activity of gathering evidence.²³

It is essential that the investigation phase be held for a long time before the hearing of the procedural parties and be composed of several preliminary hearings. At this stage, first of all, the evidence to be collected is determined and then in accordance with the procedure, the evidence is collected. Evidence in the Italian system includes: witness statements, statements of procedural parties, expert reports and oaths²⁴.

Phase after the Main Review Session and Legal Ways for Appeals

In the Italian civil trial, the decisions of the courts of first instance are subject to review and review in the courts of second instance and the decisions of the courts of second instance are reviewed by the Supreme Court. In addition, appeals and objections may be lodged against decisions which are final through extraordinary legal channels. In the context of the recent reforms, the judgments of the courts of first and second instance without expecting their finality, have been brought into a situation where they can be executed. However, under certain conditions, enforcement (execution) can only be affected by the adoption of a particular decision²⁵

Court Costs

In the judgment which has become final, the court costs are also decided. The costs include court costs and costs for the payment of proxy representatives (lawyers). Since the cost of court costs can vary in percentage with the change in the value of the dispute, depending on the type of litigation they can also be fixed. According to the Law on Civil Procedure, court costs and expenses for the payment of proxy representatives (lawyers) are attributed to the procedural party which will lose the dispute (civil court proceedings).²⁶

Basic Problems of the Italian Judicial System

Regarding the articles of Italian Law and the application of the same articles in practice,

²² Ibid, article 181, 182.

²³ Ibid, article 175.

²⁴ Paolo Biavati, 2008 - Oral and written evidence in Italian civil procedure law - Location: Orality and writing in an efficient civil process : [Colloquium of the International Association of Procedural Law, 2008] / Federico Carpi (ed. Lit.), Manuel Ortells Ramos (ed. Lit.), Vol. 1, 2008, (Presentations generals and national reports = General reports and national reports), ISBN 978-84-370-7214-2, pp. 313-323, Valencia-2008.

²⁵ Italian Civil Procedure Code, article 337.

²⁶ Italian Civil Procedure Code, article 91.

there is a strict antagonism (contradiction). Article 24 of the Constitution of Italy²⁷, recognizes that every citizen (citizen of Italy) and every individual has the right of protection of their freedoms, rights and interests and also those citizens who can not pay court costs due to Weak economic opportunities are allowed by the same article to cover these costs through legal aid.

However, in reality it is about something completely different. In reality, when access to justice (distribution of justice) is complex, to overcome these complexities, it can be seen that the state can not take the necessary measures. In access to justice, lack of knowledge is a major obstacle. The lack of knowledge is said to stem from the fact that members of the legal profession strongly oppose, lobby strongly and share their professional knowledge with the public. Therefore, access to justice can only be achieved through lawyers. It is said that for people seeking justice from the Italian legal system, it is useless.

Fair trial has been replaced by some with some complicated and obscure celebrations that delay justice. Therefore, the procedural party that is guilty uses such cases and can hide himself after a procedure that lasts a long time. While, on the other hand, the procedural party which claims to be entitled to litigation, sees its only chance in the European Court of Human Rights (Viljanen, 2003 & Viljanen, 2008).

The main problem in the Italian legal system is the excessive delay in justice. This state of affairs, in the context of recent reforms, in the new Article 111 of the Constitution²⁸, brings the principle of “reasonable time for trial”, which is considered a disaster, ie a state of chaos.

This situation, which has a long history, further aggravates the situation. Therefore as a fundamental problem in the Italian legal system is the excessive length of court proceedings that can not be tolerated. The procedural law of 1942, which made several attempts to resolve this issue, but with a strong reaction from the Comoros, was formed against the 1950 reform which left the efforts made in progress. Attempts made to change this situation, with the exception of one attempt, did not bear fruit.

Only the 1973 amendments to business law disputes (and subsequently to lease disputes) succeeded in reducing the length of the trial. Also, drafts related to procedural law have been prepared and discussed for years however, no general reform of the Italian legal system has been achieved (Biavati, 2010).

In the next ten years after 1950, Italian legal doctrine highlighted the lack of an Italian judicial system and proactive reforms were proposed. However, none of these objections yielded a result. Many of the Italian legal doctrines, with the exception of a few, failed

²⁷ Constitution of Italy, article 24.

²⁸ Constitution of Italy, article 111.

to understand the true causes of the crisis, so they are stuck in the mud of abstract and theoretical hearings. The political power did not try at all to solve such problems and never tried to argue with the Comoros organization and traditional opponents (Caponi, 2016).

Conclusion

Regarding the legal-judicial system in Italy, we see that; although there is a grounded division of judicial stages; which makes a litigation in civil courts less complicated, again in practice there are some problems that emerge. Although the Italian constitution gives all citizens of the state the right to the protection of their freedoms and interests; even the same constitution enables citizens who do not have the right economic conditions to be able to cover their court costs through legal aid, in fact in reality we have a completely different situation from that presented in the articles of the Italian constitution. In reality, in Italy when such cases occur; that is, when citizens can not cover court costs due to poor economic conditions, the state in most cases can not take the necessary measures.

Another problem for the Italian civil-judicial system is the excessive delay; that is, civil-court proceedings take a long time, which makes the legal system in Italy less efficient and productive. Although many efforts have been made to prevent and avoid this situation, we see that in practice this seems a bit impossible. Although there have been reform efforts in the Italian state, what in my opinion would bring these legal reforms to be made, but also to be implemented in practice; is understanding the real causes of the crisis; and because this is not being properly understood to bring about change in practice, the entire legal elite is stuck in the mess of abstract and theoretical sessions.

Therefore, I share the opinion that, in order to have a more efficient and qualitative civil judicial system, it is not enough to bring about reforms only in theoretical terms, but also to analyze that, if the reforms are achieved in theoretical terms, how the same will be implemented in practice. In order to achieve this in the Italian judicial-civil system, it is necessary to look at all the real problems that exist, such as: excessive length of civil proceedings, failure to enable citizens with difficult economic conditions to have legal assistance; and then think of a real solution to the same problems; which solutions will be accessible and feasible for the Italian state.

References

- Bassett, W. W. (1978). Canon law and the common law. *Hastings LJ*, 29, 1383.
- Biavati , P. (2008). *Oral and written evidence in Italian civil procedure law - Location: Orality and writing in an efficient civil process* : [Colloquium of the International Association of Procedural Law, 2008] / Federico Carpi (ed. Lit.), Manuel Ortells

Ramos (ed. Lit.), Vol. 1, 2008, (Presentations generals and national reports = General reports and national reports), ISBN 978-84-370-7214-2, pp. 313-323, Valencia-2008.

Biavati, P. (2010). *Review to C. Consolo, Explanations of civil procedural law*. Third volume. The first instance trial and appeals, in *Quarterly Review of Law and Civil Procedure*. p. 1008-1011.

Constitution of Italy - articles: 24, 111.

Caponi, R. (2016). The performance of the Italian civil justice system: an empirical assessment - *The Italian Law Journal* (Vol. 02 – No. 01, page 16-31 - 2016).

Cappelletti, M. (2013). *Civil procedure in Italy*. Springer.

Giorgiantonio, C., (2007). *Civil procedure reforms in Italy: Concentration principle, adversarial system or case management?*. - Quaderni di Ricerca Giuridica (Legal Research Papers) ; Legal Services and Law Studies Department; number 66en pg.9.

Grossi, S. (2010). A comparative analysis between Italian civil proceedings and American civil proceedings before federal courts - ind. *Int'l & Comp. L. Rev. Vol. 20:2*, - 4.4 Courts and decisions; pg.213 - 279, 2010.

Italian Civil Procedure Code - articles: 7, 9, 30, 82, 82 (1), 82 (3), 91, 105, 137.163. 166, 167, 175, 181, 182, 341.

Silvestri, E. (2014). *Evidence in civil law*. Department of Law, University of Pavia; page 10 & 11

Viljanen, J. (2003). *The European court of human rights as a developer of the general doctrines of human rights law. A study of the limitations clauses of the european convention on human rights*. Tampere University Press.

Viljanen, J. (2008). The role of the European court of human rights as a developer of international human rights law. *Cuadernos Constitucionales de la Cátedra Fadrique Furió Ceriol*, (62), 249-265.

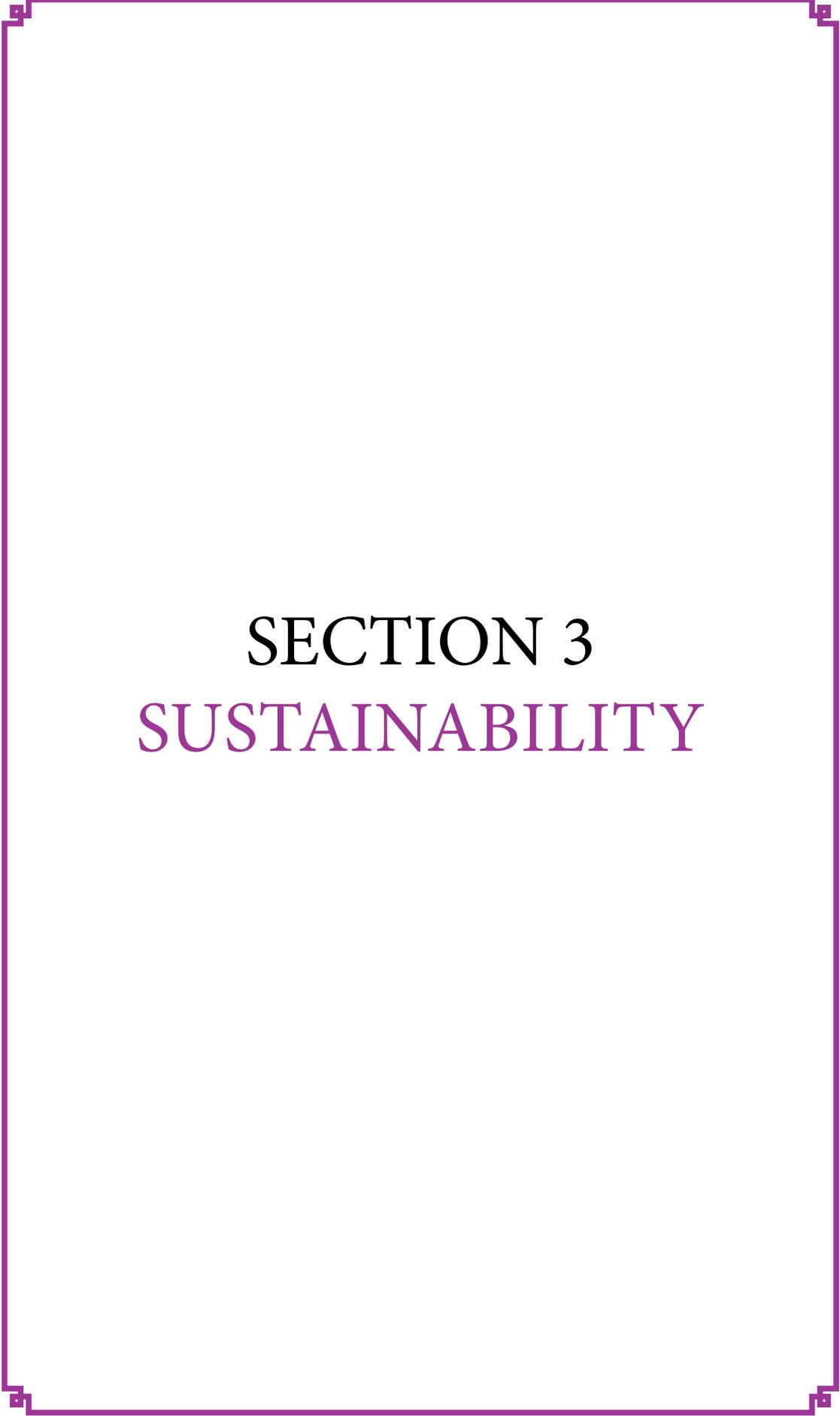
About Author

Xhemile SALIU is a social researcher and lawyer. She has academic and professional experience in the field of law, especially family law, inheritance law, civil law and procedure civil law. She has worked in the EU-wide projects such as “Active and Aware”. She has finished PHD on the topic: “ Compulsory portion in comparative aspect and in

the legal rules of North Republic of Macedonia. She works as Assistant Professor at Faculty of Law at International Balkan University.

To Cite This Chapter:

Saliu, X. (2021). An overview of the Italian judicial system. In A. Csiszárík-Kocsir & P. Rosenberger (Eds .), *Current Studies in Social Sciences 2021*(pp. 76–95). ISRES Publishing.



SECTION 3
SUSTAINABILITY

Sustainable Products, Processes and Systems: An Overview

B.H.S. THIMMAPPA
Manipal Institute of Technology

Introduction

The general objective of this chapter is to provide the necessary background and a flavor of the goal of sustainable development involving the economy, social equity and justice, and environmental protection. The specific objective is to capture the very essence of the environmental aspects and developmental prospects to bring about a sense of balance between nature and civilization. Sustainability, in the most comprehensive sense, should be interpreted to mean the practice of actual values in economics, ecology, culture, and politics for the endurance of systems and processes (Anastas & Warner, 1998; Dresner, 2002; Madhavan et al., 2013; Pogaku et al., 2013; Piemonte et al., 2013). It creates and maintains the conditions under which humans and nature can co-exist to fulfill the social, economic, and other requirements of present and future generations. The pillars of sustainability include three Ps: people, planet, and profit representing the social, environmental, and financial dimensions (Figure 1). There is a need to strengthen the education, employability, and productivity chain in crucial public and private sectors, including manufacturing, infrastructure, healthcare, education, and tourism. Social and economic development has to be balanced by environmental factors such as the use of land, consumption of resources, and the management of waste. The fine balance of oxygen, water vapor, nitrogen, and carbon dioxide in the biosphere is maintained by multiple biological processes. The natural biogeochemical cycles such as the hydrological, nitrogen, carbon, phosphate, and sulfur cycles, stabilize the biosphere and sustain the life processes on the planet. The range of landscape from the lush green tropical environment to the scrublands of deserts is threatened by climate change, and it would eventually destroy flora and fauna. A coastal oil spillage, for instance, is a disaster for the surrounding wildlife. The products ranging from petrochemicals to pharmaceuticals, fibers to food products, and from fast-moving consumer goods to functional foods are manufactured in industrial processes, and these creative expressions of human activities are an integral part of our living. The modernizing impulses are too strong that it disrupts the mechanism of contributing to balancing societal needs and environment. This trend affects the quality of the air we breathe and the quality of water we drink, impacting human health around the world and the world economy. Air pollution due to nitrogen dioxide and ozone provokes chemical changes in some airborne allergens and when it combines with changes in global climate, contributes to the more common airborne allergies. Despite all the emphasis on eco-friendly approaches, environmental problems like climate and temperature change, severe drought and hailstorms, untimely monsoons and flash floods, hurricanes and forest fires, water resource vulnerability, heatwave conditions, and emission of greenhouse gases (GHGs) have become more common in

the recent past. The wind speeds and storm duration have increased considerably over the past 50 years. Today, we know that human activities across the world have a significant influence on climate change.



Figure 1. Scheme showing the whole picture of sustainable development, including triple-bottom-line approaches of clean employment opportunities, environment, and social development.

It is essential to understand the step-by-step mechanisms of product formations, scale-up operations, and manufacturing processes that will have a direct bearing on future higher growth prospects. An essential element is to gain a more in-depth insight into the processes that occur during their service under different environmental conditions. The detailed study of product or process development is vital to obtain rational insights into the precise nature of the environmental problems and to ensure the smooth operation of the system that reduces environmental impact. The interrelationship between development and other global environmental impact parameters helps better coordination among the stakeholders. The process or product level indicators such as water and energy usage, the efficiency of the process, the performance of the products, and waste produced are relevant to the manufacturing industry. We have to analyze the pros and cons of each product to have a firm direction on futuristic experiments and better outcomes in the journey of transformation that matters and remains. It is essential to take multiple concrete steps to resolve the issues and a battery of measures necessary to foster skills development and environmental protection for the collective and comprehensive development of the world. From this perspective, the citizens themselves need to distinguish between ‘good’ and ‘not so good’ human activities and think the shades of gray differently to face a different set of divergent challenges to adapt to the rapidly changing world. With a growing concern about environmental deterioration, it is better to focus on human activities with a more integrated approach to the challenges, including both the technological and cultural dimensions. The essential components of a sustainable ecosystem from a global and practical perspective include the following:

- * Conservation of natural ecosystems
- * Restoration and preservation of biodiversity
- * Recycling of residues and wastes
- * Minimizing product wastage
- * Air and water pollution control
- * Reducing environmental impacts across the entire ecosystem
- * Innovative industrial solutions for efficient and clean production
- * Establishing efficient transport networks
- * Enhancing engineering skills
- * Adopting better management practices
- * Focus on emission reduction targets
- * Protecting Earth's climate system
- * Use of renewable energy resources
- * Dramatic energy efficiency improvements
- * Need to emphasize healthy cooking methods
- * Sustainable agricultural practices
- * Stabilization of population for survival
- * Environmental education and social awareness
- * Expansion of formal sector and creation of jobs
- * Remove legal and infrastructure hurdles
- * Innovative green energy policies and programs
- * Change people's mindset towards responsible citizenship
- * Creating new and meaningful business models
- * Sensitizing people through online and offline campaigns
- * Educate the public on current environmental concerns

Multiple Perspectives

The strategic goal of sustainable development is to balance the social, economic, and

environmental needs of present and future generations. The key objectives include the effective conservation of natural resources, environmental protection measures, stable economic growth, social equity and justice, and creating conditions for future social and intellectual development. A cluster of social, political, and economic issues needs to be resolved to meet the requirements of a modern nation leading the way towards progress and prosperity. The part of the agenda of the civil society movements in several countries is to fulfill the basic needs of water, food, energy, employment, and sanitation. Environmental policymakers need to define the broad framework towards rethinking, redesigning, and restoring balance and stability in different cycles in nature while moving towards sustainable and holistic global developments. In addition to an array of effective environmental management techniques, it is essential to invest in establishing infrastructure for biosafety testing for toxicity and allergenicity, and implementing a rigorous biosafety process to prevent any serious adverse health impacts of genetically modified crops or products. The progress in industrial ecology involving the study of material and energy flows through industrial systems to meet the needs of humanity is essential for sustainable development. While short-term goals should be aligned with individual efforts, long-term goals should be aligned with collective efforts to produce more permanent finished products with clean processes and functional systems in our developmental journey. Another vital aspect of being considered is the life cycle analysis (LCA) or cradle-to-grave analysis involving the chain of steps, including raw materials supply and transportation, product manufacturing, packaging, actual use, and their safe disposal in an end-to-end model.

It is essential to divert the attention of the public from destructive activities and direct them in the path towards greenness. Higher education is an important instrument for changing the perceptions associated with the products, processes, and systems. It is indeed vital to adopt a middle path between industrial and environmental activism to strike a balance in the three sectors-economy, energy, and environment. The teaching-learning process and powerful positive thought processes develop value systems in life, and interdisciplinary research enables us to develop innovative products, physical and chemical processes, and complete systems with a focus on sustainability. The higher education system has a significant role in creating a global platform by managing quality, scale, and cost through a focus on learning outcomes, skill development on a large scale, and affordable cost. It is essential to strengthening the science, technology, and product linkage via enhanced coordination among universities, research and development laboratories, and industries. The implementation of mega-science projects via this crucial link can boost exploration and development as well as results and perspectives. There is a need to create credible mechanisms for development programs, particularly in emerging nations, to achieve remarkable progress. While awareness about environmentally friendly products spreading across the world, restoring environmental equilibrium,

and taking clear and very valid eco-friendly approaches are useful in reducing the risk of future environmental problems. Incorporation of regular course on environmental studies in higher education, awareness programs, environmental workshops, seminars and symposia, literature festivals, interactive sessions, radio and television discussions, industry-institute interface meet, ecological risk assessment process, drama, dance or satire performances, and futuristic initiatives with increasing involvement of the general public would lead to remarkable improvements. Similarly, lead articles, editorials, special magazine features, technical commentaries, and even walkathon or marathon to highlight and draw attention to environmental and hygiene issues in the world can contribute towards meeting the expectations of the people through green methods. The science writers, critics, educationists, chief mentors, and researchers can play a pivotal role in providing the young and enthusiastic readers an overview of the current scenario and stress the need to develop the right attitude and a robust value system. A little psychological push for action in the right direction can make a massive difference in results. There is scope for turbulence, revolutionary activities, and mass movement to address the sustainable development and climate change challenges, as it is the top in the global challenges for humanity. The human development index (HDI) of a country is a measure of achievement indicating health, education, and prosperity, while the human sustainable development index (HSDI) also includes per-capita carbon emissions. We need to change the perception of public life and the environment by sensitizing people towards environmental issues worldwide and raise voices against environmental destruction and unregulated development. The integration of a holistic way of life in the most efficient manner, increasing connection with nature, and sense of the link between political ideology and organizational priorities could significantly influence the thoughts of the younger generation.

The emphasis on exploring science and engineering, technology and optimization, system, and management could contribute to enhancing the quality of life. The increased use of lead-free petrol, auto-exhaust catalysts, ethanol-petrol mixture, and compressed natural gas (CNG) in vehicles provide cleaner transport in the future, and providing high-quality public transport in a rapidly changing world is an important step towards sustainable systems. Because of recent rapid urbanization and accelerated carbon space utilization, the green building concept has gained immense importance in shaping modern infrastructure. Another recent trend is to establish eco-friendly industries and the development of micro-industrial hubs and the creation of regenerative cities. It is more useful to develop ancillary units using eco-technology principles to cater to large-scale industrial hubs. The cutting edge technologies and energy-efficient products and systems ranging from elevators to escalators, from digital photography to drug delivery systems, from petrochemicals to pharmaceuticals, from community food systems to higher education systems and smart materials to paperless smart offices will move us towards a

progressive future. The broader implications of technology initiatives like a virtual office with business tools, a single-desk system, effective networking pathways, digital library, publications online store, and information technology-driven implementation include less paper consumption, improved efficiency, and productivity. Innovative, sustainable office concepts and workplace solutions like working from the home office have been gaining momentum in the recent past. The introduction of breakthrough changes in smarter products and services will be instrumental in driving people towards green growth and contribute to concerted conservation efforts.

There is a need to establish a comprehensive database on development and environmental fact and figures, information on types of environment, their characteristics, and importance, products that are hazardous to the environment, academic research data and findings, moral questions and answers, legal procedures, and explanations to educate the reader on every aspect of environmental care. Innovative initiatives like organic farming practices, the use of natural insecticides and genetically modified organisms in integrated pest management, and the use of biogas slurry as the significant nutrient for long-term plantation crops have enhanced the vibrancy of agricultural life. The application of membranes for water treatment and desalination, carbon dioxide separation and conversion, and designing the next generation of agrochemicals from nature also contribute to pollution control. The ecofriendly way of life, including veganism, recycling, alternative constructions, the use of solar panels at the rooftop and the windmill in coastal or desert areas, natural ventilation, and purchasing locally available seasonal vegetables and fruits go a long way to introduce change on a large scale. There is a 'grow your own' movement taking place across the world involving rooftop vegetable gardening for the sake of the environment and improving health. A new way of individual life that includes making conscious purchases of things we need for a healthy, happy life should be encouraged, and minimalism should enter the entire mindscape of people to meet the growing demand of the ever-increasing world population. It is better to have a crystal clear window to manufacture weapons based on logical needs in design and quantity. Our modern mechanical and busy life with high expectations would lead to a robotic existence, and we need catalysts to activate green goals to pursue. A series of development initiatives such as the development of megacities, world-class Greenfield city, multistoried complexes, manufacturing hubs, cleaner production, green computation, and large public projects would require benchmarking practices in making a sustainable ecosystem. The discipline, dedication, and determination enable us to be better equipped and smarter in dealing with the growing market challenges. In the future, the interplay between large multinational companies (MNCs) and megacities will play a significant role in determining prosperity. Best management practices at the asset reconstruction companies (ARCs) can result in a significant reduction in non-performing assets (NPAs) in the banking sector. Interestingly, sustainable cuisine comes within the principles of

the natural world to preserve and protect the food supply for future generations and enhance the 'farm to fork' experience.

The use of renewable sources like solar energy would enable continuous and clean power supply, and smart grids could provide efficient energy services to the people. To solve the problems of intermittency and uncertainty, the radical idea of globally interconnected, smart, and robust grid clean energy delivery systems known as the 'global energy internet' may be useful. The hybrid cars that feature an additional clean electric engine are now on the roads that serve as an alternative form of transport. The use of fuel cells in transportation and electricity generation is also an example of green engineering. Changing the global energy landscape via energy production and its use in an eco-friendly manner improves the quality of life. There are ample examples of processes that involve some green aspect, such as the use of catalytic converters on cars, and efficient scrubbers on smokestacks and further investigations will reveal the most impactful way in which we should visualize our role in contributing to moving toward environmental restoration. The development of micro- and nano-electromechanical systems (MEMS and NEMS) enables the fabrication of sophisticated and miniaturized functional devices in different fields of application. The penetration of nanotechnology-based products in food packaging, medical diagnostics, energy, and security sectors, and innovation in nanotechnology is expected to create the next wave of global advances in technology. Green nanotechnology and green neuroscience have emerged recently as fascinating new disciplines, and the research focus will enhance knowledge and enable us to create new biomedical gadgets or targeted drug delivery systems (Drexler, 1992; Niemeyer & Mirkin, 2004; Smith & Granqvist 2010; Yarmush & Shi, 2012). The safety of nanotechnology depends on critical assessment of environmental exposure, toxicity concerns, models and methods of predicting and evaluating the impact of nanomaterials, and evolving techniques to avoid the risks and undesirable side effects. The development of tiny nanomachines or nanorobots may form the basis of the idea of a fully functioning nanofactory of the future. The creation and manipulation of nanoparticles can result in unique optical, mechanical, magnetic, electrical, and catalytic properties that are of great use in different fields of application. Self-cleaning surfaces based on the lotus leaf or construction of bionic cars are examples of innovations inspired by nature. The study involving innovation at the molecular level, focusing on new reaction pathways, leads to green chemistry. The design of eco-friendly alternative pathways for industrial products and processes to meet social needs and economic feasibility can lead to the development of sustainable chemistry. The co-existence model brings people and nature together to restore environmental temperature or to host intricate ecosystems that influence the development process. While moving to eco-friendly systems and processes, the lack of awareness in environmental systems, the inertia in the modern world, and a smaller percentage of overall products that are hazardous become obstacles

to the development. Environmental research is rapidly expanding globally, and it would have a profound impact on the process of living. A long-term corrective action plan can restore equilibrium and contribute to sustaining standard weather patterns from season to season. A progressive development model, including a shift towards adopting responsible production standards, strategic management, creation of high-, middle- and low-skilled occupations, advancement in tertiary education practices, and healthcare management, will play a predominant role in achieving the green global mission and long-term sustainable growth.

There is considerable scope to reduce contributors such as industrial, transport, and firewood cooking emissions of GHGs through optimum combustion and minimal loss of energy. Carbon dioxide capture and sequestration (CCS) techniques can be used as a strategy for reducing GHG emissions. Other eco-friendly initiatives such as solid waste, e-waste, and biomedical waste management, rainwater harvesting, resource, and energy conservation, solar energy cultivation, development of smart materials and systems, green printing, green chemical process design, and manufacturing initiatives and recycling programs for paper, plastic, and glass would undoubtedly help in the protection and preservation of ecology. Establishing a large number of biomethanation plants worldwide to process the vast quantity of municipal solid waste (MSW) generated would help harness energy for human benefit and environmental conservation. Recycling of bulk e-waste such as smartphones, laptops, and tablets through a scientific recycling process in an environmentally sustainable way will have an impact across the globe. The disturbance of the marine ecosystem due to industrial effluents, chemical pollutants, sewage discharge, and climate change poses severe threats to fish populations. The growing energy demands of fuels (diesel and kerosene) in large-scale mechanized marine fishing and putting seafood on the plates also contributes significantly to climate change. The corrective measures include improvement in more efficient sources of seafood that play an essential role in reducing the carbon footprint and eventually achieve the sustainability of seafood. The used materials from beverage containers to plastic bags on coastal beaches and industrial waste discharge into the sea pose a grave threat to the ecosystem. This issue requires periodic cleaning and specific preventive measures as a part of waste management. Conversion of biodegradable food waste from hotels and hostels into high-efficiency green fuel cooking gas, methane, through the anaerobic digestion process, is an example of a sustainable livelihood model involving systematic disposal of tonnes of daily waste. The three dimensions of teaching-research, institution, and nation-building activities contribute to the developmental journey of humanity through a more meaningful global connection. The focus on multidisciplinary studies and the development of relevant research at the global level enables us to build the knowledge base to understand better the overall natural ecosystem health and issues related to the global challenges of a sustainable future. It may be worthwhile to set up

a Special Environmental Operations and Protection Group (SEOPG) to inspire, educate people about pollution prevention processes and green development, and conduct regular safety and environmental audit.

The creation of a high-skilled, strong workforce by first-rate higher education would lead to a massive expansion of manufacturing products, and export-led growth in the competitive global markets. The three elements of innovation involving recognizing the problem, coming up with a solution, and its implementation would go a long way in the direction of the development of sustainable products, processes, and systems. Designing sustainable products and systems includes design thinking that involves three fundamental aspects: perception, possibility, and practicality with particular consideration for the environmental impact during their whole life cycle. The fundamental elements of successful product design include product quality (desired characteristics, precision, and ease of use), cost of manufacture, development cost and time, and enhanced development capacity. Chemical research and engineering should encourage the concept of an ecofriendly design of chemical products and processes that minimize or eliminate the use and production of hazardous compounds. The bottom line is to be able to evaluate the environmental, economic, and social consequences of different options in their personal, family, social, and professional lives that can make a world of difference, leading to a healthy, happy, and prosperous multicultural society. One of the most significant public challenges globally is to change mindsets to establish a collective action and enhancing awareness levels on vital conservation issues. This awareness can provide a new dimension to our thought processes and be able to perform a variety of roles across multiple functional domains in tackling progress-related health and environmental complications. A comprehensive system with the essential inbuilt checks and balances helps us to move forward in making cross-sector collaborative efforts in achieving global standards of learning and innovation. The practice of green chemistry and engineering not only leads to the development of sustainable products and processes but also has positive economic and social impacts. It is essential to apply the twelve principles of green chemistry to drive people towards green goals. These goals could be achieved by motivating them with a sense of purpose through the carefully crafted development plan, feasibility study for the projects, facilitating legislation, preservation of local ecology, hard work, and dedication (Ahluwalia & Kidwai, 2004; Ahluwalia, 2007; Anastas, 1998; Anastas, 2000; Anastas et al., 2002; Anastas & Beach, 2007; Anastas, 2013; Anastas & Crabtree, 2009; Chen et al., 2011; Collins, 2003; Dicks, 2011; Ehrenberg, 2011; Kirchhoff & Ryan, 2002; Lancaster, 2010; Leadbeater, 2010; Manley et al., 2008; Matlack, 2001; Newman, 2009; Parent & Kirchhoff, 2004; Ryan & Tinnesand, 2002; Roesky & Kennepohl, 2009; Sanghi & Shrivastava, 2007; Shankaranarayanan et al., 2010; Sharma, 2010; Sheldon, 2005; Tundo, Wilson & Schwarzman, 2009).

Waste prevention - Prevention of waste is better than treating or clean up after

its formation in a process. The cost involved in the treatment and disposal of waste byproducts and unreacted starting materials adds to the overall cost of production. It is worthwhile to avoid the generation or use of hazardous substances than to waste money, time, and effort to deal with the consequences.

Atom economy - Design of new synthetic techniques to maximize the incorporation of all ingredients used in the process to obtain the final product and to increase the conversion of reactants into final products without generating undesired byproducts. It is a measure of how much of the reactants are incorporated into the desired products. Reducing the number of steps helps in the higher atom economy of the overall process.

Less hazardous chemical syntheses - Discover new synthetic methods that use and produce substances that are less toxic or non-toxic to human health and the environment. As risk is the product of hazard and exposure, it is possible to minimize the risk by reducing the hazard and exposure can never be reduced to zero.

Design for safer chemicals - Design of functional chemical products with reduced toxicity or no toxicity to human health in the short and long terms, i.e., reduction of intrinsic toxicity through structural modification or replacement while preserving the efficacy of function. Careful structural analysis or mechanism of action of specific chemicals can indicate the functional groups to be used in their synthesis depending on their desired activity or toxic effects.

Safer solvents and auxiliaries - Avoid unnecessary solvents, reagents, and auxiliary substances, however, safer ones should be used wherever possible. The use of supercritical carbon dioxide, water, or immobilized solvents could reduce the impacts of solvents on the environment and health.

Design for energy efficiency - Synthetic methods should be conducted at ambient temperature and pressure as far as possible. Recognizing the energy requirements for their environmental and economic impacts would have positive consequences around the world. Recovery and reuse of energy resources within the process can reduce the requirement for additional resources.

Use of renewable feedstocks - Use of renewable rather than depleting raw materials to obtain finished goods whenever technically and economically practicable. Minimize the use of dwindling resources such as coal, gas, and oil as they cannot be replenished through natural processes as rapidly as they are consumed.

Reduction of derivatives - Avoid or minimize unnecessary derivatization whenever possible to eliminate the requirement of additional reagents and energy. Use of blocking groups, protection, and deprotection, temporary modification of processes should be avoided as these steps generate additional toxic or benign waste and multifunctional reagents may be developed.

Use of catalysis - Selective catalysts offer distinct advantages over typical stoichiometric reagents. The use of heterogeneous catalysts has several advantages over homogeneous catalysts. Synthesis approaches for sustainable catalysis represent progress towards more sustainable chemistry. They may decrease the temperature of the reaction and enhance selectivity in specific reactions.

Design for degradation - Develop chemical products so that at the end of their function, they are degradable. They should not persist in the environment and break down into innocuous degradation products. Today, several biodegradable products are available in the market, and microbial degradation is also an alternative path for ecofriendly design.

Real-time analysis for pollution prevention - Develop analytical techniques to allow for real-time in-process monitoring and control. A monitoring mechanism for periodic course corrections would have effects on the consequences by reducing or eliminating the formation of toxic byproducts.

Inherently safer chemistry for accident prevention - Substances used in a chemical process should be chosen to minimize the chances of chemical accidents, including fires and explosions. If we use inherently safe chemicals, the likelihood of leaking into the environment through accidents such as explosions, fire, or the spill is minimized.

The process of development is more a question of visions of the vibrant and robust planet and collective efforts in providing clean and healthy living conditions that require necessary physical and digital infrastructure facility, institutional strength and modest skills base, and trade and other essential services at affordable costs. It is essential to create and develop engineering solutions beyond current or dominant technologies through improvements, innovations, and inventions on eco-friendly practices while protecting human health and well-being. Bioenvironmental and sustainability approaches and system approach to study nature, technology, and society are two of the megatrends in science and engineering. There is a need to learn the lessons from the history of previous incidents or events worldwide such as the greenhouse effect and global warming, industrial and environmental disasters, and sow the seeds of twelve principles of green engineering in the years to come that could lead towards a better future (Abraham & Nguyen, 2004; Anastas & Zimmerman, 2003; Avella et al., 2005; Kaab et al., 2019; Nabavi-Pelesaraei, 2019; Najafi, 2018; Nilashi et al., 2019; Nizetic et al., 2019; Nosratabadi et al., 2019; Parry & Baker, 1984; Stevens & Verhe, 2004)

Inherent rather than circumstantial - Designers need to strive to ensure that all materials and energy inputs and outputs are as inherently safe and benign as possible. It is preferable to use water as a solvent than an organic solvent as it is inherently benign, reducing the need for constant monitoring.

Prevention instead of treatment - Strive to prevent waste generation than to treat or

clean it up after its formation. Preventing or reducing waste at the source through the design of novel and innovative processes is more profitable for industries as it requires fewer unit operations. Reducing the amount of waste reduces the cost of additional processing, materials use, and energy and creates less burden on the environment.

Design for separation - Design separation and purification operations to minimize energy consumption and material use. Many conventional methods for separation need large amounts of hazardous solvents or consume large amounts of energy as heat or pressure.

Maximize efficiency - Products, processes, and systems should be designed to maximize mass, energy, space, and time efficiency. The standard chemical engineering optimization techniques would add value to maximize efficiency. It is better to maximize the energy intensity in the process rather than using low energy for long periods. We can reduce the need for elaborate safety and risk management methods by conducting the process in small spaces over a short time.

Output-pulled versus input-pushed - Products, processes, and systems should be 'output pulled' rather than 'input pushed' through the use of energy and materials. It is best to minimize the amount of resources consumed to produce desired products. It is better to remove the product produced immediately from the process to enable more significant product formation.

Conserve complexity - Embedded entropy and complexity must be viewed as a worthy investment when making design choices for recycling, reuse, or beneficial disposition. Simple products can be more easily recycled while complex products must be designed for reuse, and they need to be broken down into individual components, which are more material and energy-intensive.

Durability rather than immortality - The design goal should be targeted durability, not immortality. It should be durable enough to withstand anticipated operating conditions and avoid immortality of unwanted materials in the environment as stable molecules migrate to the upper atmosphere. The long-term impact resulting in environmental issues like bioaccumulation and persistence is reduced by designing a durable and biodegradable product.

Meet need, minimize excess - Design for additional capacity or capability solutions should be considered a design flaw. Innovative reactor design and miniaturization would lead to efficient heat and mass transfer, reduced reaction time, eliminate waste byproducts, and enhanced safety features. It is better to incorporate the specific requirements and functions of materials to avoid waste of materials and energy.

Minimize material diversity - Minimize material diversity in multicomponent products

or systems to promote disassembly and value retention. The options for final disposition are increased through designs that use a single material capable of performing the required functions. For instance, a polymer backbone can be tailored to accomplish the desired properties rather than using multicomponent materials.

Integrate material and energy flows- Design of products, processes, and systems must include integration and interconnectivity with available energy and material flows. Reusing waste heat or materials from another process by integrating process results in the recovery of materials and energy resources.

Design for commercial ‘afterlife’- Performance metrics include designing for performance in a commercial ‘afterlife.’ Use life cycle thinking in all engineering activities. The design strategy of a pesticide should be such that it decomposes into safe materials in the natural environment within a time frame.

Renewable rather than depleting- Material and energy inputs should be renewable rather than depleting. Minimize the depletion of critical natural resources. The use of alternative sources of energy such as solar, wind, hydroelectric, geothermal, biomass, and hydrogen helps in this direction. The cost of recycling glass, paper, plastic, and aluminum is less than that obtained from fresh raw materials, and such methods contribute to the net consumption parameter.

Understanding the reasons for past and present pollution can help create multiple methods for future green development through reorganized thinking. For instance, lead is a toxic substance, and hence, serious health and environmental damage arising from exposure to toxic lead pigments, compounds from lead processing factory, and careless disposal of used lead-acid batteries by consumers. Lead can alter the body’s neurological, biological, and cognitive functions and can cause problems like diminished intelligent quotient, inattentiveness, and hyperactivity in children.

A broad-brush observation suggests that environmental thought should be woven into our individual and collective psychologies to strive towards positive change in a growth-oriented approach. The emission of GHGs - water vapor, carbon dioxide, methane, and nitrous oxide - due to an increase in the set of domestic and international human activities have disturbed the natural mechanism to regulate the atmosphere. These gases trapped the heat of the sun and increased the average global surface temperature by 0.5° C in the past hundred years. Climatologists believe that planet warming by at least 2° C in the next few decades is entirely possible. Indeed, an increase in the global temperature may trigger a series of changes within the overall global climate system, and this could have unpredictable social, economic, and environmental consequences. We need to understand the interactions within and between biological and ecological systems influenced by human activities from a global perspective. It is even more critical that we understand

the processes at work inside the Earth and underlying weather mechanisms for climate protection. The systematic increase of concentrations of substances extracted from the Earth's crust and those produced by society, physical degradation by natural processes, and unsafe working conditions all contribute to an imbalance in complex environmental systems and adverse climatic conditions. The potential impacts of climate change include rising sea levels, loss of coastal land, melting of polar ice caps and mountain glaciers, changes in evaporation and precipitation patterns, and drought and crop failure. Climate modeling has indicated that global warming will have a significant impact on the Earth's climate in this century. The large-scale migrations of climate refugees will increase as global warming continues. It is possible to protect ecologically sensitive areas (ESAs) sensibly, recognizing the gravity of climate change. The bio-indicators such as lichens, mosses, and algae species can indicate the quality of a wide range of ecosystems. They can indicate pollution due to sulfur dioxide or excessive phosphates and nitrates. It is essential to take urgent steps to address the conservation concern of vulnerable and critically endangered species across the world. The discipline concerned with analysis, design, engineering, and management of these systems is known as earth systems engineering management (ESEM), and the learner of this multi-dimensional subject can understand the capabilities and limitations of technology and the mechanisms to bring about real change in the existing lifestyle practices. A multilayered view can play an essential part in adding to the whole spirit of clean development mechanism (CDM) while technically correct priorities and global best practices will significantly improve the investment climate. It is worthwhile to have a global museum that displays photos and paintings of environmental disasters to tell the stories that people dealt with incidents and destructive activities, environmental struggle, and social protests. Such recorded transformative experiences and struggles can enlighten and influence our lives today and help us to take appropriate steps to reduce future adverse ecological effects or negative effects on human health. We have to adopt a comprehensive strategy to empower people through innovative information technology solutions to have better working, connecting and collaborating capabilities, and improved quality global communication networks. This strategy helps in a long-term engagement in creative thinking, collaborative decision making, developing design concepts, obtaining proof of concept, conducting validation studies, transfer of technology, and commercial-scale development of products or systems from affordable lifestyle products to dedicated devices.

The proper assembly of best-in-class products can achieve the desire for an economical solution for the essential needs in different processes within a complete system. The human brain is a very complex machine that can perform tasks that are beyond the current capabilities of artificial intelligent systems (AIS). It is essential to put efforts into the study with a focus on enabling technology and enterprise to enhance the sustainability of systems and to address complex sustainability challenges involved through systems

thinking and an understanding of ecological principles. The purpose is to understand interconnections between products, processes and systems, and energy through nature and those through industrial civilization. Our body is like a sophisticated chemical factory ever designed consisting of many molecular systems working in harmony. The precise knowledge about how human body systems such as digestive, circulatory, respiratory, nervous, reproductive, and immune systems work together to make an impact suggests approaches to specific medical problems and health care systems. For instance, it may lead to the development of better recycling and waste removal systems, techniques of transforming different raw materials into substances we need to survive, the intricate defense system to fight against natural and artificial chemicals that can injure us, or the development of special senses, memory, and thinking. Inventions inspired by the observation, analysis, and understanding of natural processes and their use in innovative engineering designs and real-world technological applications may provide insight into some of the global effects of climate change.

Cutting-edge technology, sophisticated medical equipment, and insightful opinions from a team of medical experts can provide world-class health care delivery services for patients. The integration of different technologies in a system approach, state-of-the-art infrastructure, and multidisciplinary team of technical experts and civil society can provide a global platform for keeping our environment healthy. Systems engineering focuses on design and development, operation and evaluation, modeling and simulation, implementation, and management of complex systems over their life cycles. It may include a combination of several different systems such as chemical, mechanical, manufacturing, electrical, electronic, digital, civil, reliability, thermal systems, and precision components. There are enough opportunities for designing systems and managing green development in strategic sectors such as nuclear power, defense, space travel, satellite launch vehicles, aircraft, and missiles. The most critical problem with nuclear power generation is massive quantities of radioactive waste disposal at the 435 operable civil nuclear reactors across the world that have a severe impact on vegetation. Radioactive isotopes of noble gases Kr, Xe, and Ar are fat-soluble and can cause genetic diseases due to the emission of high-energy gamma radiation. The problem of space pollution due to spent or malfunctioning satellites, launcher stages, and fragments at specific orbits and altitudes have to be tackled systematically. Environment and climate change have been the subject matter of multilateral negotiations, strong inter-linkages, and interdependencies. Therefore, agreements among the nations in the World regarding the reduction of emissions of GHGs are the current global trend towards decreasing pollution and global warming without hampering industrial productivity growth prospects of certain developing countries. The concept of sustainable development is the origin of the Kyoto Protocol to combat global warming and climate change by reducing both its rate and magnitude by a legally binding agreement. It is an international agreement

on climate change by setting internationally binding emission reduction targets of GHGs and allow us to face problems in an organized manner in a rapidly transforming modern world. The use of supercritical water medium and perfluorinated liquids or the use of solvent-free conditions, electrochemical methods, and milder operating conditions have a role in sustainable development because of environmental and human safety concerns of traditional reaction media. It may require the integration of many complex components fabricated at the nanoscale, such as active electronic materials, sensors, and light detectors to make customized biomedical devices or other functional systems that would have profound implications to support life. The integration of smart indoor and outdoor devices in embedded systems would lead to better healthcare and environmental monitoring. Similarly, the application of eco-conscious colors to fabrics using natural dyes and creating biocompatible and biodegradable healthcare products, and establishing a vibrant electronic system design and manufacturing (ESDM) ecosystem would go a long way in supporting sustainable systems. Adopting alternative methods of transportation like walking, using public transport, car-pooling, use of ecofriendly cloth bags, conserving forests which are the treasure trove of biodiversity, planting trees in our surroundings and setting up of water treatment plants, and ensuring the recycling of wastes can help save our precious environment through environmental care systems. The design, manufacture, and distribution of eco-friendly and economical light-emitting diode (LED) lighting products and systems to government offices and commercial establishments across the globe play an essential role in moving towards a healthy development-environment balance. The end of analog film processing with the arrival of digital cinema and state-of-the-art digital laboratory reflect technology transition and the recent developments in green technologies like the use of LED lighting systems, which are of immense significance to understand and appreciate the connection of green aspects with human progress. At another level, a sprinkling of water to contain the pollution due to fine coke dust in individual petrochemical plants helps prevent local ecological damage.

The most fundamental approach to preventing pollution is green chemistry, and it is about reducing waste, materials, hazards, risks, energy, and cost. The main aims of green chemistry are to find out alternative synthetic pathways for pollution prevention and lower overall costs associated with environmental health and safety. It has now been possible to carry out environmentally benign chemical synthesis using aqueous phase, supercritical fluids, ionic liquids, phase transfer catalysts, enzymes, ultrasound, and microwave technologies under green conditions. This green reaction medium would replace the conventional volatile organic compounds (VOCs) used as industrial solvents in several processes. The discovery of a catalytic process called metathesis, which uses significantly less energy and stable at room temperature and pressure, is a typical example of green chemistry. The metathesis can be used to break down natural oils and recombine

the fragments into high-performance chemicals. It can be used in combination with greener solvents to manufacture certain specialty chemicals, and the process reduces GHG emissions. Yet another example is the process that uses supercritical carbon dioxide in one of the steps of computer chip preparation that significantly reduces the quantities of water, energy, and chemicals required to produce such chips. The green synthesis of the drug, Sitagliptin, used in the treatment of type 2 diabetes is possible using an enzymatic process that reduces waste, improves yield and safety, and eliminates the need for a metal catalyst. The preparation of biodegradable plastics from agricultural products and waste, paint formulations using bio-based oils to replace petroleum-based solvents, and creating a paint that is safer to use and produces less toxic waste or fewer amounts of VOCs. It is also vital to improve the sanitary landfill and incineration techniques in waste management, implement noise control, absorption and protective measures, and effective control of water, air, food, and vector-borne diseases. Monitoring air and water quality, noise, and radiation levels can be used to manage pollution and waste. Recently, much progress has been made in the preparation and characterization of starch-based and chitosan nanocomposites. These nano-biocomposites show great potential in biomedical applications because of biocompatibility and biodegradability. Examples of designed chemical systems made up of a discrete number of assembled molecular components include supramolecular systems to mimic the functions of biological systems, and reacting system examples include chemical process industries (cracking of crude oil), waste treatment ponds, and extraction of metals from the ores. The practice of efficient energy management systems, domestic wastewater, and industrial drainage treatment systems, telecommunication, and software systems help to realize the dreams of the future. We can certainly improve the safety, health, and working conditions of humans with efficient environmental controls, continuous improvements in new technologies, and encouraging entrepreneurship and dynamic leadership. The increased entry of the right people into the global entrepreneurial ecosystem will fuel the growth engine dramatically and ensure the smooth operation of the interconnected systems with productivity and efficiency.

It is necessary to respect the environment in the best interest of the people and conform to the principles of sustainability as we should help people from all walks of life. Also, protect the environment to avoid the severe consequences of the greenhouse effect and climate change effects that may trigger several diseases in susceptible individuals. Sustainability and development must be put in the correct perspective with an element of pragmatism. The climate change challenge has to be dealt with locally and globally with active involvement and participation of the stakeholders comprising groups across academia, industry, government, funding agencies, and civil society in a constant process. Climate Resilient Agriculture (CRA) is an initiative towards a practice of sustainable agriculture in a changing climate scenario. While economic growth requires enhancing agricultural production and establishing a manufacturing base, it should not be at the

cost of the environment. Mechanized farming practices and the creation of distinctive manufacturing clusters will serve as an excellent vehicle to take development to the next level. There is a need to strike the right balance between the interests of people and environmental protection, just like a healthy work-life balance. Therefore, it is necessary to include environmental impact assessment (EIA) and social impact assessment (SIA) in the plan evaluation of any developmental project. We have to proceed further via practical and tailored long-term strategies that will help us reach the green goals more efficiently and effectively. There is an opportunity for the green climate fund (GCF) and CDM to carry out collaborative research activities to get better insights into crucial sustainability issues. Identifying several functional systems in Nature allows us to set up future research projects focused on understanding how each system functions with the ultimate goal of developing artificial systems specifically for particular applications. The comprehensive study of ecosystems helps to explain the interrelationships and interactions between living organisms and their biological, chemical, and physical environment, and publishing articles, create awareness among the people about the judicious use of natural resources. Today, more attention is paid to learning about critical ecological concepts and ecosystems, including improvisation and exploration within an educational system that helps to accelerate the process of sustainable progress and prevent the danger of doing the planet irreparable damage. Exploring the research challenges, developing cutting-edge technologies, discussion of future possibilities, and implementation of advances would lead to novel sustainable products, processes, or systems with significant economic growth and increased living standards. World Environment Day (WED) is celebrated every year on the 5th of June to raise global awareness of environmental issues to take affirmative action to protect, preserve, and enhance the environment.

The energy system is the aggregate of different sources and forms of energy and techniques of obtaining, converting, distributing, and using them at different levels and interconnected sophisticated equipment and organizational systems. The development of the energy industry needs reliable production indicators involving processes that make full use of raw materials and less waste generation. The impact of a coal-based power plant on the environment due to GHG emissions must be minimized by promoting ‘green coal’ technologies, scaling up wind and solar energy production, and the use of alternative fuels such as CNG in vehicles, that are less polluting. The use of pollution control equipment such as high-efficiency electrostatic precipitators (ESP), low-NO_x burners, high chimneys, and flue gas desulfurization (FGD) plants help reduce air pollutants from thermal power plants to some extent. Interestingly, biogas power plant systems provide renewable energy at low cost and help improve public hygiene by recycling waste, plant, and algal materials and low environmental impact. Biogas as an alternative fuel can be used for cooking, heating, and generating electricity. Institutes around the globe should equip the learners from a broad spectrum of sectors in systematized

knowledge (theory) and contemporary practice (practical experience) so that they strive to make a difference in the world by changing the production and consumption patterns of fossil fuels. It is the responsibility of the education system to ensure education in a dignified manner through proper mechanisms, as it is a powerful weapon to change the world by influencing the mind of the learners. Tertiary education should promote path-breaking basic science research and cutting-edge frontier technologies in a disciplined way for a brighter world. It should address the issue of a lack of the requisite number of paraprofessionals specialized in this sector that is a significant factor in implementing environmental and resource management from a scientific perspective. The implications of this transformation in the whole environmental care scenario are manifold. The education should emphasize environmental lessons most interestingly to get a thorough insight into development management. There is a need to develop a performance culture towards sustained high and equitable growth, and a comprehensive learning experience equips the student community to deliver better results and become responsible global citizens of tomorrow.

There is a need to provide a sound support system across a broader spectrum of innovative technology ideas with considerable potential for impact or commercialization or improved environmental performance. We need to encourage a sustainable enterprise that has a minimal negative impact on the environment, economy, and society. Establishing an interconnected network of detectors or people to monitor all human activities on earth and promoting environmentally conscious and sustainable activities by proper planning and implementation is an essential step towards climate change and sustainability. The medical system must consistently address patients' needs to fulfill societal obligations and for the benefit of the suffering humanity through expert treatment, skilled surgery, technological solutions, and emotional attachment for effective and efficient humane healthcare. There should be a significant improvement in preventive and curative aspects of healthcare systems that would bring big dividends. The unsustainable exploitation of certain critically endangered medicinal plant species should be prevented to preserve the entire biodiversity and care for the planet by supporting sustainable practices. The medical education and research system should be appropriately oriented from detailed planning to operational execution to achieve a broader objective of health for all and the right to health with a sense of equality and justice.

The development of non-conventional power systems on a mass scale could arrest pollution to no small extent, and sophisticated technologies coupled with legislative reforms could make a significant contribution to development processes. The discovery of new methods to control pollution due to rapid industrialization with the potential for more sophisticated follow-up observations could reduce harmful ecological consequences, and effective disaster management also has enormous ecological importance. The

long-term commitment to an extensive ecological restoration, including afforestation, sustainable cultural practices, and adopting the least intrusive means in promoting ecotourism and horticulture traveling, may result in the stability of the atmosphere and enhance the green cover in the planet. Nature camp, nature walks, and bird watching activities provide youngsters an exciting exposure to natural experiences and particular orientation towards sensitizing them to the ecological aspects and conservation issues that help develop the eco-consciousness. In a larger university system, each institution is represented by several departments working together in harmony and strengthening the academic culture of science-based problem solving and societal development with social awareness aimed at achieving technology commercialization through CDM and primary pollution prevention to effectively mitigate global climate change. The emerging trends in technology include additive manufacturing using 3D printing to print spare parts for machines, drone technology for commercial photography and to save survivors during flash floods or landslides, and the development of tabletop, handheld, and wearable devices. 3D printing is useful in making medical implants, dental crowns, joint implants, and other organs for transplants. Recently, a water sampling drone was tested for its capability to collect water containing bugs, mud, or algae in hard-to-reach areas and check for signs of oil spills at a later stage in a laboratory. A variety of wearable devices such as activity trackers, smartwatches, and smart-shirts are already in the market. Higher education plays a substantial role to awaken, educate, enlighten, and fortify the younger generation with the ordinary random facts woven into a new fabric of more meaningful value chain development while working towards progress. A comprehensive study of all the developmental and environmental aspects will help us to know the logic of sustainable practice and to gain the edge and the depth that are essential for definite progress. In this context, it is essential to pursue a series of specialized lines of investigation to understand nature and its behavior and to tread the sustainable scientific path of development. We have to take proactive and exemplary actions and ideals forward with a sense of justice. This aspect is determined by the pattern of thoughts and concepts that arise and a passion for progress.

Bulk, fine, and specialty chemical processes of the future can be redesigned to eliminate or decrease the use of hazardous organic solvents. The process design must include downstream processing as an integral component and should have fewer steps, minimum waste, and maximum yield. They should be inherently safe and preferably involve one-pot continuous operation using operational tools such as catalysis, waste management, and process intensification while practicing sustainable engineering. It involves the sustainable use of energy and resources in the design of products, processes, and systems or operating systems with the integration of social, environmental, and economic considerations (Figure 2). A multipronged approach from ideological education agenda to a catalyst of higher education excellence is required to generate a value chain, including

awareness, concern, action, and results in the right direction. The immediate challenge before the education system is to excel in higher science, engineering, and management education, research, and practice. Interdisciplinary research work should be encouraged to obtain new insights and better practices. A particular focus on advanced molecular modeling techniques helps scholars to design innovative solutions to complex problems faced by the healthcare research domain and the development of drug therapies. A change in procurement policies of certain commodities like palm oil that involves deforestation and social evil, the use of child labor in individual countries would have a higher ecological significance that should be encouraged. We have to look at development as a participatory process to bring about a dramatic transformation by considering the long-term sustainability of each of the products, processes, and systems. A shift in the attitudes of the younger generation towards the environment will be a significant milestone in the long term to establish the crucial links between human beings and nature. The essential requirement is to take immediate pollution measures to reduce the intensity of the problem without ignoring other developmental aspects in the pipeline. Enhanced use of technology and multiple office connectivity in real-time helps move towards total green office solutions. It is essential to motivate people to create cleaning processes in public spaces, including religious places. The implementation of projects with checks and balances is needed to keep the surroundings clean and safeguard the ecology and maintain the highest standards of hygiene.

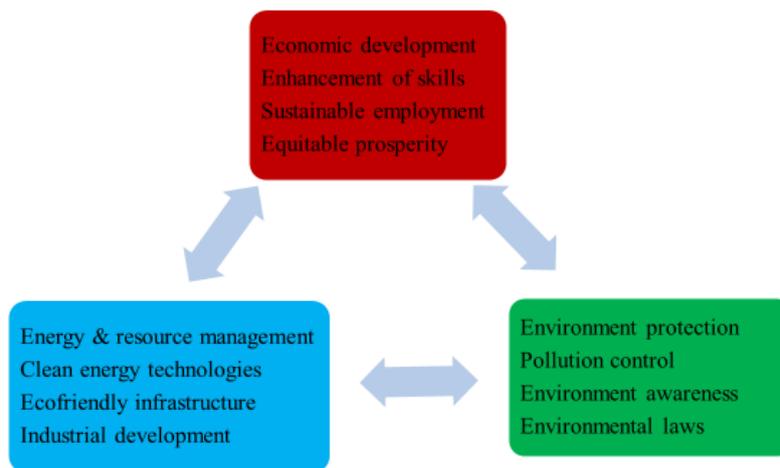


Figure 2. Scheme showing a continuing sequence of stages that can occur in economic, energy, and environment sectors in the actual process of sustainability

More excellent knowledge of the various biogeochemical mechanisms governing global environmental balance should enable us to better target remedial measures according to the local environmental profile. The current trends, recent advancements, and new approaches cover the multiple aspects of design, delivery, disposal, productivity, profitability, and packaging. Domain expertise, workmanship, professionalism, and social skills will lead to smart technologies for the production of compact disc players to complex scientific instrumentation systems and artificial satellites to military embedded

systems. The complex issues in sustainability involve the journey in the value chain, including human resource development and impact on environmental footprint. This aspect consists of factors such as innovative downstream process technologies and the process of continuous improvement, minimizing negative economic, environmental, and social impacts, and enhanced system reliability. The critical issues in the chemical and material industry must be addressed through comprehensive vision, strategic sustainability objectives, developing new initiatives, effective execution processes, key performance indicators, and sustainability improvements in the products, processes, and systems. For effectiveness, the print, television, and web narratives should cover the newsworthy items in education, healthcare, and environmental sectors to prevent future environmental degradation, and inspire, influence, and inform young minds about active involvement in public affairs that will ultimately help bring profound change. This trend also helps prepare people to speak of sustainable development, spread information about activities, form a network of supporters, face sustainability challenges, and force the government to take much more comprehensive measures. The sustainability culture must be developed via strategic actions to arrive at sustainable solutions as we should leave future generations a better place to live.

It is essential to establish green systems that ensure accountability, responsibility, transparency, and active involvement of people in healthy and desirable activities. Building a better environment is the responsibility of all of us, and this noble act will be in the interest of the whole world. The entire humanity and industrial leaders, journalists, lawyers, environmentalists, and civic associations must coordinate to drive economic growth and empowerment to the citizens. Given the crucial importance of the environment and healthcare systems, higher budgetary allocations are required to make any significant improvements to cater to the human needs of the population. There should be greater coordination among the different countries in the world on sustainability issues, systems, and operations. Cooperative global proactive approaches, strengthening of multilateral partnerships, a mammoth social awareness campaign, advancing core priorities with economic and environmental interests and creating and developing ecotourism and industrial parks, development of mega and smart cities, coupled with pollution control mechanisms could radically change the whole environmental landscape of the planet leading to the positive impact of a global growth increase (Figure 3). The strict imposition of laws is necessary but not sufficient for the building and sustenance of scientific communities to ensure greener earth for a better future. The regulatory steps required to control pollution and necessary clear guidelines at various stages, even in the engineering phase, of production, assembly, and marketing of functional systems, must be framed and executed. The supply systems and management must ensure that the quality products reach the consumer without any adulteration down the entire supply chain. The establishment of a center for the environment (CE) is essential to check and

report harmful chemicals such as mercury in cosmetics and skin tightening lotions, and adverse reactions of commercially available consumer products or drugs, and to detect adulteration of petrol, oil, and other food products that we consume every day, in the interest of the society. The natural consequences of this outlook are a step-by-step analysis of the conditions for the practice of science as a process and the general orientation of policies towards underlying issues related to industrialization. Further, a museum of inventions and prototypes from all fields of engineering and industry and a digital repository of knowledge, including training materials, will set the individual on the track of innovation and create awareness about the delicate balance between ecological sustainability and industrial transformation. Perspectives of the origin, evolution, and development of processes provide a platform for people interested in sustainable and holistic living, and planned and positive thinking with due considerations to green aspects provides a prudent approach to productivity and profitability.

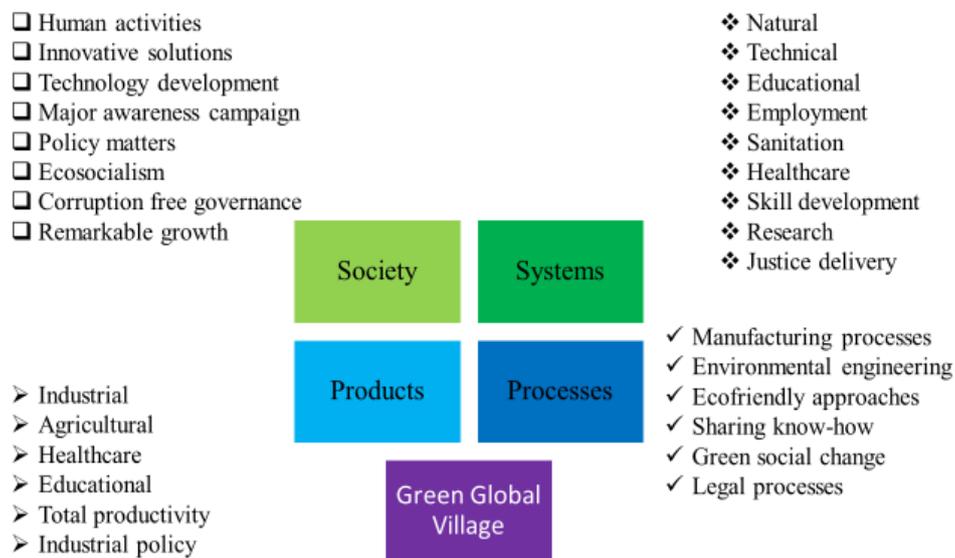


Figure 3. A Broad View of Economic, Scientific, and Infrastructural Development Aspects that Provides Green Signal for Accelerated Growth in Different Sectors Using Available Resources while Reducing Environmental and Industrial Health Hazards.

Conclusions

Our collective future rests on actions to push public awareness campaigns for clean air and to prevent environmental degradation of various scales through industrial policy formulation and implementation. The challenge is to strive for a balance between specific directions and the collective sustainable sensibilities in promoting the true scientific spirit. It is more useful to focus on the interests of people toward climate change and climate justice in our developmental journey. The standard legal document that conforms to international best practices and processes that lead us to a better understanding of how one can proceed forward will be a significant milestone in facing the development challenges ahead, and this is significant in the context of the right to a pleasant environment. Moreover, it is crucial to initiate constructive reforms and empower environmental courts

committed to the protection and preservation of the environment and providing a more effective mechanism relating to liability and compensation to the victims of pollution and ecological damage, and promoting environmentally sustainable growth via practical and tangible action plan and acceleration in technological advances. Success involves the integration of various elements from a desire to design and from futuristic ideas to advance technologies. They can be listed as strategic vision, specific reforms, innovative thinking and professionalism, a culture of performance, entrepreneurial ecosystem, expansion of the industrial cluster model, conducive business environment, business-friendly tax structure, value-added services, climate parliament, and policy matters. It remains to be seen whether a multidimensional approach to the topic and the same ideological bents of mind coexist and proper coordination and constructive cooperation will result in green progress soon with success in multiple fronts to make sure the Earth remains a good place to live for generations to come.

References

- Abraham, M., & Nguyen, N. (2004). Green engineering: Defining principles-results from the sandestin conference. *Environmental Progress*, 22, 233-236.
- Ahluwalia, V.K. (2007). *Green chemistry: Environmentally benign reactions*, CRC Press, Boca Raton.
- Ahluwalia, V.K., & Kidwai, M. (2004). *New trends in green chemistry*, Kluwer Academic Publishers, Dordrecht.
- Anastas, P.T., & Beach, E.S. (2007). Green chemistry: The emergence of a transformative framework. *Green Chemistry Letters and Reviews*, 1, 9-24.
- Anastas, P.T., & Crabtree, R.H. (2009). *Handbook of green chemistry and catalysis*, Wiley, New York.
- Anastas, P.T., & Kirchoff, M. M. (2002). Origins, current status, and future challenges of green chemistry. *Accounts of Chemical Research*, 35, 686-694.
- Anastas, P.T., & Warner, J.C. (1998). *Green chemistry: theory and practice*. Oxford Science Publications, Oxford.
- Anastas, P.T., & Williamson, T.C. (1998). *Green chemistry: Frontiers in benign chemical syntheses and processes*. Oxford University Press, Oxford.
- Anastas, P.T., & Zimmerman, J.B. (2003). Design through the twelve principles of green engineering. *Environmental Science and Technology*, 37, 94A-101A.
- Anastas, P.T., & Zimmerman, J.B. (2013). *Innovations in green chemistry and green engineering*. Selected Entries from the Encyclopedia of Sustainability Science and

- Technology, Springer, New York.
- Avella, M., De Vlieger, J.J., Errico, M.E., Fischer, S., Vacca, P., & Volpe, M.G. (2005). Biodegradable starch/clay nanocomposite films for food packaging applications. *Food Chemistry*, 93, 467-474.
- Chen, D., Sharma, S.K., & Mudhoo, A. (eds.) (2011). *Handbook on applications of ultrasound: sonochemistry for sustainability*. CRC Press, Boca Raton.
- Collins, T. J. (2003). The importance of sustainability ethics, toxicity and ecotoxicity in chemical education and research. *Green Chemistry*, 5, G51-G52.
- Dicks, A. P. (ed.) (2011). *Green organic chemistry in lecture and laboratory*. CRC Press, Ontario.
- Dresner, S. (2002). *The principles of sustainability*. Earth Scan Publications, London, UK.
- Drexler, K.E. (1992). *Nanosystems: Molecular machinery, manufacturing, and computation*, John Wiley & Sons, New York.
- Ehrenberg, R. (2011). Better by design. *Science News*, 179, 26-27.
- Kaab, A., Sharifi, M., Mobli, H., Nabavi-Pelesaraei, A., & Chau, K-W. (2019). Combined life cycle assessment and artificial intelligence for prediction of ooutput energy and environmental impacts of sugarcane production. *Science of The Total Environment* 664, 1005-1019.
- Kirchhoff, M., & Ryan, M. (eds.) (2002). *Greener approaches to undergraduate chemistry experiments*. American Chemical Society, Washington, DC.
- Lancaster, M. (2010). *Green chemistry-an introductory text*. 3rd Edn., RSC Publishing, Cambridge.
- Leadbeater, N.E. (2010). *Microwave heating as a tool for sustainable chemistry*, CRC Press, Boca Raton.
- Madhavan, G., Oakley, B., Green D., Koon, D., & Low, P. (eds.) (2013). *Practicing sustainability*. Springer, New York.
- Manley, J.B., Anastas, P.T., & Cue, B.W. (2008). Frontiers in green chemistry: meeting the grand challenges for sustainability in R & D and Manufacturing. *Journal of Cleaner Production*, 16, 743-750.
- Matlack, A.S. (2001). *Introduction to green chemistry*, Marcel Dekker, New York.
- Nabavi-Pelesaraei, A., S., Rafiee, S. S., Mohtasebi, H., Hosseinzadeh-Bandbafha, K-w, Chau (2019). Comprehensive model of energy, environmental impacts and

- economic in rice milling factories by coupling adaptive neuro-fuzzy inference system and life cycle assessment. *Journal of Cleaner Production*, 217, 742-756.
- Najafi, B., Ardabili, S.F., Shamshirband, S., Chau, K-W., & Rabczuk, T. (2018). Application of ANNs, ANFIS and RSM to estimating and optimizing the parameters that affect the yield and cost of biodiesel production. *Engineering Applications of Computational Fluid Mechanics*, 12, 611-624.
- Newman, M.C. (2009). *Fundamentals of ecotoxicology*, 3rd Edn., CRC Press, Boca Raton, 2009.
- Niemeyer, C.M., & Mirkin, C.A., (eds.) (2004). *Nanobiotechnology: Concepts, applications, and perspectives*, Wiley-VCH Verlag, Weinheim.
- Nilashi, M., Rupani, P.F., Rupani, M.M., Kamyab, H., Shao, W., Ahmadi, H., Rashid, H.T.A., & Aljojo, N. (2019). Measuring sustainability through ecological sustainability and human sustainability: A machine learning approach. *Journal of Cleaner Production*, 240, 118162-118172.
- Nizetic, S., Djilali, N., Papadopoulos, A., & Rodrigues, J.P.C. (2019). Smart technologies for promotion of energy efficiency, utilization of sustainable resources and waste management, *Journal of Cleaner Production*, 231, 565-591.
- Nosratabadi, S., Mosavi, A., Shamshirband, S., Zavadskas, E.K., Rakotonirainy, A., & Chau, K-W. (2019). Sustainable business models: A review. *Sustainability* 11, 1663-1693.
- Parent, K., & Kirchoff, M. (eds.) (2004). *Going green: Integrating green chemistry into the curriculum*. American Chemical Society, Washington, DC.
- Parry, D.A.D., & Baker, E.N. (1984). Biopolymers, *Report on Progress in Physics*, 47, 1133-1232.
- Piemonte, V., De Falco, M., & Basile, A. (2013). *Sustainable development in chemical engineering: Innovative technologies*, John Wiley & Sons, Chichester.
- Pogaku, R., Bono, A., & Cho, C. (eds.) (2013). *Developments in sustainable chemical and bioprocess technology*. Springer-Verlag, New York.
- Roesky, H.W., & Kennepohl, D. (eds.) (2009). *Experiments in green and sustainable chemistry*. Wiley-VCH, Weinheim.
- Ryan, M., & Tinnesand, M. (2002). *Introduction to green chemistry*, American Chemical Society, Washington, DC.
- Sanghi, R., & Shrivastava, M.M. (2007). *Chemistry for green environment*. Narosa Publishing House, New Delhi.

- Sankaranarayanan, K., van der Kooi, H.J., & Arons, J.de S. (2010). *Efficiency and sustainability in the energy and chemical industries: Scientific principles and case studies*, 2nd Edn., CRC Press, Boca Raton.
- Sharma, S.K. (2010). *Green chemistry for environmental sustainability*, CRC Press, Boca Raton.
- Sheldon, R.A. (2005). Green solvents for sustainable organic synthesis: State of the art. *Green Chem.*, 7, 267-278.
- Smith, G.B., & Granqvist, C.G.S. (2010). *Green nanotechnology: Solutions for sustainability and energy in the built environment*, CRC Press, Boca Raton.
- Stevens, C.V., & Verhe, R. (2004). *Renewable bioresources: Scope and modification for non-food applications*. Wiley, London.
- Tundo, P., & Anastas, P.T. (2000). *Green chemistry: challenging perspectives*, Oxford University Press, Oxford.
- Wilson, M.P., & Schwarzman, M.R. (2009). Toward a new U.S. chemicals policy: Rebuilding the foundation to advance new science, green chemistry, and environmental health. *Environmental Health Perspectives*, 117, 1202-1209.
- Yarmush, M.L., & Shi, D. (eds.) (2012). *Frontiers in nanobiomedical research*, World Scientific Publishing, Singapore.

About Author

B.H.S. THIMMAPPA Chemistry professor having a wealth of knowledge in the development and implementation of educational technology tools and their applications in the classroom. In-depth expertise in chemistry with 66 research papers in peer-reviewed journals and a rich experience of 25 years plus as an educator. Adept in creative teaching strategies that fully engross students in the learning process. Profoundly invested in accomplishing term through organizational service, board contributions, and achievement-oriented approach to teaching.

E Mail : thimmappabhs@gmail.com, ORCID 0000-0002-0054-6973

To Cite This Chapter:

Thimmappa, B.H.S. (2021). Sustainable products, processes and systems: An overview. In A. Csiszárík-Kocsir & P. Rosenberger (Eds.), *Current Studies in Social Sciences 2021*(pp. 97–123). ISRES Publishing.

Environmental Problems as a Threat to Sustainable Urban Development in Kano Metropolitan- A Review

Nura Isyaku BELLO

Kano University of Science and Technology

Introduction

Environment can be seen as all physical, non-physical, external, living and non-living situations surrounding living organism that determine its existence, growth, development and survival at a particular time. It also encompasses constantly interacting sets of physical elements and non-physical, living and non-living such as social, cultural, religious, political, economic systems, which determine the characteristic features, growth and sustainability of both the component elements of the environment and the environment itself (Muoghalu, 2004). Hence, sustainability in this context relates to the ability of the ecological, economic and socio-cultural systems in a manner that does not limit the possibility of meeting the present and future needs of the various components and aspects of the environment. It can also be viewed as the carrying capacity of the supporting ecosystems (Marcuse, 1998).

Environmental challenges may be broadly grouped into major and minor types depending upon their potential to cause damage to human life and property (Joseph, 2009:1). Also, environmental challenges are classified under the broad titles of natural and artificial, based mainly on their mode of occurrence. Natural events occur suddenly and swiftly and consequently cause severe damage to the society and surrounding (Santra, 2011:560). Artificial challenges are influenced or induced by man. They have some elements of human error, negligence and or intent. The earth as an ecosystem, has a threshold or terminal borderline within which it can effectively absorb or withstand the impacts or effects resulting from circumstances within and without it, if dangerous deterioration and overstrain is to be avoided (Uche, 1995:9).

In Nigeria, the environmental problems are characterized by soil erosion, high population pressure and increasing congestion in urban centres, which are further compounded by unplanned growth, and increasing problems of domestic and industrial wastes disposal and pollution. Human related activities since 1980s, especially in the developmental projects of the oil and gas sector, led to the loss of the topsoil and deforestation; loss of habitat, species and biodiversity; and degradation of wetlands (NEST, 1992). Environmental problem has resulted in the deterioration of Nigeria's urban and rural environmental quality, which is characterized by water shortages and floods that play a major role in the transmission of communicable diseases. These worsen the condition of the poor. Also, drought and desertification threaten food security and nation's ecological

integrity, and are drivers of population displacements (Nwafor, 2006).

Kano is one of the ancient cities of the Hausa Land of northern Nigeria with longest history dated to transaharan trade. This make it to be the most popular and populous city in the country. The city is contineously becoming the dwelling centres of diverse people from all nooks and crannies of the country, the city growth is not only in terms of population but also in terms of function and scale of problems. It manifest both positive and negative dimensions. It is equally theplaces of cultural life, political activites and power. Similarly, it is the centre of poverty, unemployment, crime, human right abuse and great environmental and health problems. Hence, city bring lots opportunities and challenges to which all stakeholders needs to put hand on desk to coped with challenges and improve the potential opportunities.

”Sustainable development” is the term use to describe the development that met the needs of the present without compromising the ability of future generation to meet their own needs. Environmental problems are caused mainly by natural forces and human influences. (Coenraads, 2009) identified the major causes of natural disasters such as geological events, meteorological incidents as well as biological disasters. According to him, geological events are triggered by the inherent working of our planet while meteorological events are caused by the variations in global weather patterns and biological events are caused by actions of living agents (plants and animals). Anthropogenic challenges are caused mainly by human interference with the environment.

Sustainable development is the pattern of economic development in which the resources used aims to meet the human need while preserving the environment so that these need can be meeting not only in the present but also for generation to come. There is an additional focus on the present generation responsibility to improve the future generation life by restoring the previous ecosystem damage and resistance to contribute to further ecosystem damage. Sustainable development ties together concern for carrying capacity of natural ecosystem with social challenges faced by humanity (Brundtland Commission, 1987).

According to Miller and Spolman (2009) environmental problems are caused by population growth, wasteful and unsustainable resource use, poverty, as well as insufficient knowledge of how nature works. Human activities such as agriculture, fishing, livestock rearing and hunting are exerting too much pressures on the environment. Other activities includes mining and exploration for petroleum, land reclamation, overfishing, overgrazing, deforestation, hunting, as well as the use of pesticides and herbicides are responsible for many environmental problems. Many problems concerning environment and biosphere are simply there because so many people contribute little bits and pieces to it, all of which put together assume enormous dimensions (Asthana and Asthana, 2013).

The aim of the research is to look inward into the major obstacles that hindered sustainable urban development in the metropolitan part of Kano state, Nigeria. The research is kind of review research where the data are from secondary sources such like journal articles, technical reports, projects and news papers.

Study Area

Kano metropolitant is located on Latitudes $11^{\circ}56' N$ - $12^{\circ}04' N$ and Longitudes $08^{\circ}26' E$ - $08^{\circ} 39' E$. It occupies an area of about 683km^2 , with a crow fly distance of 19km from east to west and about 15km from north to south. Kano Metropolis is bordered by Minjibir LGA to the North East and Gezawa LGA to the East, while Dawakin Kudu LGA to the South East, Madobi and Tofa LGAs to the South West. It is the largest urban center in the Hausa land and most influential commercial town in the Northern Nigeria and the most populous. It is the third largest in the federation of Nigeria coming after Lagos and Ibadan. The metropolitan comprises eight (8) local government area namely Dala, Gwale, Fagge, Tarauni, Kumbotso, Nassarawa, Kano Municipal and Ungogo with total population of 2,828,861 (NPC, 2006).

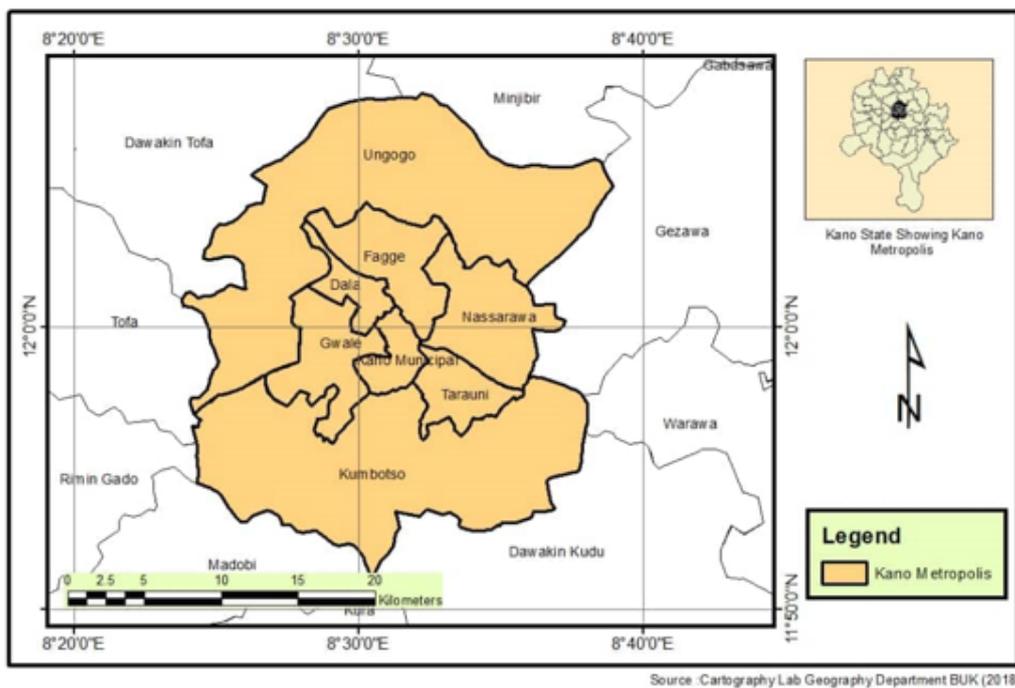


Figure 1. Map of Kano Metropolitan

Research Findings

There are so many problems associated with sustainable urban development in Kano metropolitan as it presents in all developing countries particularly in Africa and Asia. Some of these problems are naturally induced while others are human induced. These serve as the major impediment to sustainable urban development. These includes

Housing Planning and Development

In Kano city and its environs, government officials and rich individuals are enjoying decent and luxurious life of urban centres, they account for minimal percentage of the total population while the majority of the populace are overcrowded in an area with ineffective physical planning. The people erect structures haphazardly most of the plots are demarcated with little or no planning popularly known in Hausa as Awon Igiya. This results to series of flooding during the rainy season, because the water channel or drainage are not there or have been blocked (Ahmad, et.al, 2021). The town and country planning of the colonial masters of 1946 remain unchanged not because of its effective, comfort and satisfactory nature but rather because of negligence from the authority concern. A number of committees having set up by state government on land allocation and administration but due to corruption, favourism and political problems all effort remains in vain. Another important effort is that of site-and-service which try to open up a new areas and upgrade slums areas through provision of basic infrastructural services to already existing disorderly and crowded settlement. Kano state housing cooperative, Kano state bureau of land management and Kano Urban Planning and Development Agency (KNUPDA) as well as Kano geographic information system (KANGIS) are institution saddled with responsibilities of houses provision, lands allocation and ensure full compliance of law by structures builders and developers respectively. But unfortunately, they do not meet their expectation. Its of recent Kwankwaso led administration constructed three different housing estate namely, Kwankwasiyya, Amana and Bandirawo with view to decongest the city centre but the houses are too expensive because they are what refer as settelite settlement which meant for only those born with silver spoon. Hence, it is not affordable to average income earners and common man. Similarly, the present administration embarked on 2000 houses construction at Fari town with aim of decongesting and provide affordable house to resident of the study area (Survey, 2018).

Water Supply and Sanitation

Adequate water supply and sanitation for environmental and personal hygiene are not adequately available in Kano metropolitant. Despite the effort of international drinking water and sanitation compaing of 1980s, water-borne diseases such like cholera are very common. Therefore, only few locations have been served with pipe borne water and flush toilet especially those situated very close to water treatment projects and well planned housing estate, while vast majority of the populace depend solely on domestic wells, borehole and water vendors as the source of their water supply (Nura, et.al, 2014). Large portion of the populace still use pit latrine, some people still defecate and urinate indiscriminately in the open spaces or nearby bushes. The public conveniences are not adequately available and located haphazardly (Auwal, et.al, 2019). As such they were located sometimes closes to the eateries, cafes and markets As a result of this food and

water can easily get contaminated as its exposed to human waste. Different administration at various time made effort to curtail water shortage problems but unfortunately no remarkable achievement recorded due to population explosion, corruption and political reasons. Kano state water board is responsible for water abstracting, treatment and distributing to Kano city and environs. Tamburawa water treatment and Challawa water work are largest water work meant to provide incessant water supply to the Kano city and environs, but few location benefitted due power failure and poor maintenance culture as well as political reasons (Nura & Ibrahim, 2014). Majority of the resident sources water from domestic wells, water harvesting in raining season and other unreliable and contaminated sources which posed serious threat to their health because the water quality and safety is not guaranteed. Hence, hinder smooth sustainable urban development.

Waste Disposal and Drainage System

Huge amount of waste are generated on daily basis from domestic and commercial activities in Kano metropolitan. The system of collecting, transporting and disposing of these waste are not effective this lead to the proliferation of diseases, rats and other rodents are also found. Refuse Management Agency and Sanitation Board (REMASAB) is the body saddled with responsibility of refuse collection and disposal but several locations in Kano Metropolitan are not accessible because of the nature of building and narrow streets and some places are not served with refuse collection containers, and people reckless attitudes toward environmental sanitation. As a result of this people are disposing their waste indiscriminately. This make Kano metropolitan to look somehow unattractive and unpleasant. The metropolitan have open drainage system, narrow and shallow trenches which can be block easily, thereby producing unpleasant odour, pothole in the street, pools of the stagnant water, and waste gushing from bathroom and kitchen give way for breeding of malarial mosquitoes and other related diseases which affect the health and wellbeing of the residence (Geoffrey, 2005).

Proper management of solid waste is critical to the health and well-being of urban residents (World Bank, 2003). In Kano metropolis, as it is in most cities in the developing world, several tons of municipal solid waste is left uncollected on the streets on daily basis, blocking drains, creating favourable feeding ground for pests that spread disease and creating a myriad of related health and infrastructural problems. A substantial part of the urban residents in the old city and suburban informal settlements of Kano metropolis also have little or no access to solid waste collection services. This is due to lack of proper land use planning which resulted in the creation of informal settlements with narrow streets that make it difficult for collection trucks to reach many areas. The result is that a large portion of the population is left without access to solid waste management making them particularly vulnerable (Nabegu, 2008a). x larger

Traffic Congestion

Traffic congestion is the serious problems associated with most of the cities and large urban areas of developing countries. Kano is no an exception, Kano metropolitan is characterized with traffic congestion cause by road transportation which is the commonest means of transportation there. The major roads with high traffic flow are Bello road, Zoad Road, Kofar ruwa-Kurna – Miltara- Dawanau Road among others, and all the roads linked to main markets in the area. Majority of these roads are narrow even in the city cetres and there are only few flyovers and underpass ways as a result of this roads becoming so congested due to large number of automobile especially in the rushing hours of morning and evening when peoples are going out and coming back respectively. Furthermore, the available roads are indeplorable condition especially those leading to local areas several potholes can be observed vividly and lack of drainage. Hence, road accident is very rare and automobile developed faults. Recently past and present administarion embarked on fly over and under pass road contruction in order to reduce traffic congestion in the major road within municipality and outskirt. As a results of this milestone development, it vividly observed that traffic flow and road accident having reduced greatly but still there is a need to construct more roads, flyovers and underpass so as to attained sustainable urban developemnr in the study area.

Housing Congestion

Housing Sector plays a key role in a country's welfare than is always recognized. Adequate housing provision has since the early 1970s consequently engaged the attention of most countries because it is one of the three most important basic needs of mankind– the others are food and clothing. Housing congestion is a situation where houses are exploit beyond their carrying capacity. The shortage of houses leads to the problems of housing congestion. A single plot meant for a single house fragmented to built many houses with little or no housing facilities (Afolabi, 2008). There are serious housing congestion in the study area, most of the quaters within the area lack proper planning as such houses are constructed haphazardly. Hence, serious of housin congestion recorded in different of the study area. A good example of congested area includes almost all residential areas located within the city wall, Gaida, Sheka, Kwana Hudu, Rimin Kebe among others. These housing congestion result in rapid spread of diseases especially when there is outbreak of epidemics like cholera and so on. Therefore, people resort to buy plot of land at unplanned areas because is very cheap untill these problems curtails, the issues of sustainable urban development could never be realised.

Environmental Pollution

Pollution is the release of toxic or harmful substances in to the environment which posed great threat/danger to living organism and physical environment. The first and

the most dangerous environmental pollution is the air pollution where toxic substances are discharge into atmospheric system, due to high number automobile, burning of fossil fuel and industrial activities green house gases (CO_2 , CH_4 , O_3 , SO_4) are discharge into the atmosphere, it lead to contamination of atmospheric gases. Hence, acid rains and depletion of ozone layer as well as trapping green house gases from escaping outer space which leads to global warming. Industrials waste from Sharada, Challawa, Bompai Industrial area are constantly discharge into water bodies especially from tannary industries and steel industries thereby contaminating water bodies making it unsafe for human consumption and also leads to the killing of aquatic organism and agricultural activities in urban areas depend upon, this in turn affect human health, when consume agricultural product and /or fisheries. Other forms of pollution observe are soil in place characterised with oil spillage and noise pollution especially in market places and/or industrial area from machines sound which combine affect the sustainable development of the study area

Inadequate Basic Infrastructural Facilities

Social amenities are very significant to the people social welfare without life will be boring and uncomfortable, Kano urban centre are not well attach with basic infrastructural facilities, despite the fact that state have alot of resources with high level of income, these social services like Roads, electricity, clean water supply, Hospital, stadia, cinema, among other were insufficient. Millions of people patronizing hospitals with shortage of qualified doctors with dilapidated health care services facilities, huge number children were concentrated in small class room more than 200 children in a single class room with poor ventilation. A good example in Bachirawa primary school with more than 300 pupils in a classroom, tertiary institutions and universities are very limited, and therefore, can not accomodate the increase number of student graduating from secondary school among others. Shortage of this service serve as a major impediment to sustainable urban development.

Conclusion

Finally, Kano metropolitant is abundantly blessed with different resources one may think of, ranging from human to natural resources. Severals agencies, programme, panels, committee were established by different governments ranging from military to civilian government in order to come up with rules, laws, and regulations, but all these were remained on papers when its come to real implementation is where the problems laid. In a nut shell, one may come to conclude that mismanagement, corruption and reckless are what dragging the study area (Kano Metropolitan) backward since the creation of the state in 1963. This is the reasons for emergence of several environmental problems ranging from natural and anthropogenic ones. These are the main impediment to the

achievement of sustainable urban development in the area. Until and unless measures are taken to tackle the aforementioned challenges, the attainment of sustainable urban development in the study area could never be actualized.

Way Forward

There are several threats to sustainable urban development in Kano metropolitan, these challenges can be curtailed or minimized when the following strategies are adopted.

1. The housing planning development policy should be strictly observed all the institutions charged with responsibilities of plots allocation and housing development and control must be empowered to ensure proper compliance with laid rules and regulations concerning structures erecting and development, and punished defaulters accordingly irrespective of their social, economic or political status. There is also a need of effective coordination between different institutions charged with urban planning, development and control.
2. The issues of water, air and land pollution need to be addressed with utmost care. The pollution control unit of Kano state ministry of environment should be empowered to ensure all the industries in different industrial estates in the study area fully comply with all rules and regulations concerning discharge of industrial waste (solid, liquid and gas) into the atmosphere and water bodies. Thereby, polluting air and water respectively. Similarly, there is a great need for sensitization campaigns to educate the households on where to dispose their domestic waste properly to avoid indiscriminate waste disposal.
3. To curtail challenges of water supply and sanitation, reliable sources of water such as steady pipe-borne water, boreholes and handpumps need to be developed and sustained which will guarantee standard water quality and safety. The populace ought to be educated on the health consequences and implications of consuming water from contaminated sources. For this to be actualized, the hand must be on deck; government alone cannot meet water demand of the entire populace. Non-governmental organizations, philanthropists and communities must come in to ensure sustainable water supply for sustainable urban development.
4. The authorities should expand the road network, construct new ones and ensure those roads in dilapidated conditions are renovated and maintained. Flyovers and underpasses should also be constructed to decongest roads that are highly congested.

References

Ahmad, S. A., Nura, I. B., Umar, A., Abdulkadir B., Adamu H. (2021). Evaluation of community preparedness on flood management; A public survey in Kano

metropolitan. *Academic Platform Journal of Natural Hazards and Disaster Management* 2(1), 37-46, 2021 DOI: 10.52114/apjhad.919669

Auwal, H.I., Ahmad S.A., Bello, N.I. & Ali H.(2020), Spatial distribution and locational implications of public conveniences in Kano metropolis. *FUDMA Journal of Sciences (FJS)* 4 (3), 382 – 388. DOI: <https://doi.org/10.33003/fjs-2020-0403-400>

Afolabi Aribigbola (2008), Housing policy formulation; evidence of programme implementation from Akure Edo State Nigeria. Department of Geography and Planning Science. *Adekunle Ajasin University. Journal of Human Ecology Vol* 23(2): 125-134 (2008).

Asthana, D. K. & Asthana, M. (2013). *Environment: Problems and solution* (2nd ed.) New Delhi: S. Chand & Company Limited.

Brundtland Commission (1987). *Our common future: the World commission on environment and development*.

Coenraads, R. (2009). *Natural disasters and how we cope*. Australia: Millennium House Pty Ltd.

Geoffrey I.N (2005), Urban informal sector In Nigeria; Toward economic development, environmental health and social harmony. *Global Urban Development. Vol. 1*, issue 1. May 2005

Joseph B. (2009). *Environmental studies* (2nd ed.) New Delhi: McGraw-Hill.

Miller, T. G. Jr. & Spoolman, S. E. (2011). *Living in the environment: Concepts, connections and solutions* (16th ed.). Belmont, C. A.: Brooks/Cole

Marcuse, P. (1998). “Sustainability is not enough” *Environment and Urbanization* , 10:2; 103-111.

Muoghalu, L.N. (2004). “Environmental problems and their effects on human life: From awareness to action.” In H.C. Mba et al (eds.), “ *Management of Environmental Problems and Hazards in Nigeria* ” , Hants: Ashgate Publishing Ltd.

Nabegu, AB (2008a). An assessment of refuse management and sanitation board (REMASAB)’s waste management in Kano metropolis. *Techno-science Africana Journal, 1*: 101-108.

Nura, I.B., Ibrahim, K.A.,(2014). Water supply situations in Kano metropolitant prospect and challenges. *International Journal of Research in Earth and Environmental Sciences(IJREE)*, Vol. 1, No 4, Feb, 2014. ISSN 2311-2484, Pp. 25-32

- Nura, I.B., Tuna, F., (2014). *Evaluation of potable water demand and supply in Kano state, Nigeria*. Lap Lambert Publishing Academic, ISBN:978-3-659-23150-6.
- Nwafor, J.C. (2006). *Environmental impact assessment for sustainable development: The Nigerian Perspective*. Enugu: EDPCA Publication.
- Santra, S. C. (2011). *Environmental science* (2nd ed.) Kalkata: New Central Book Agency.
- Uche, S. C. (1995). Education and sustainable development. In M. B. Lawal et al. (eds.). *Education for sustainable development* (pp 1-21). Lagos: Nigerian Conservation Foundation.
- World Bank, (2003). *Thailand environmental monitor 2003. A joint publication of the pollution control department, royal Thai government*. The World Bank, US Asia Environmental Partnership.

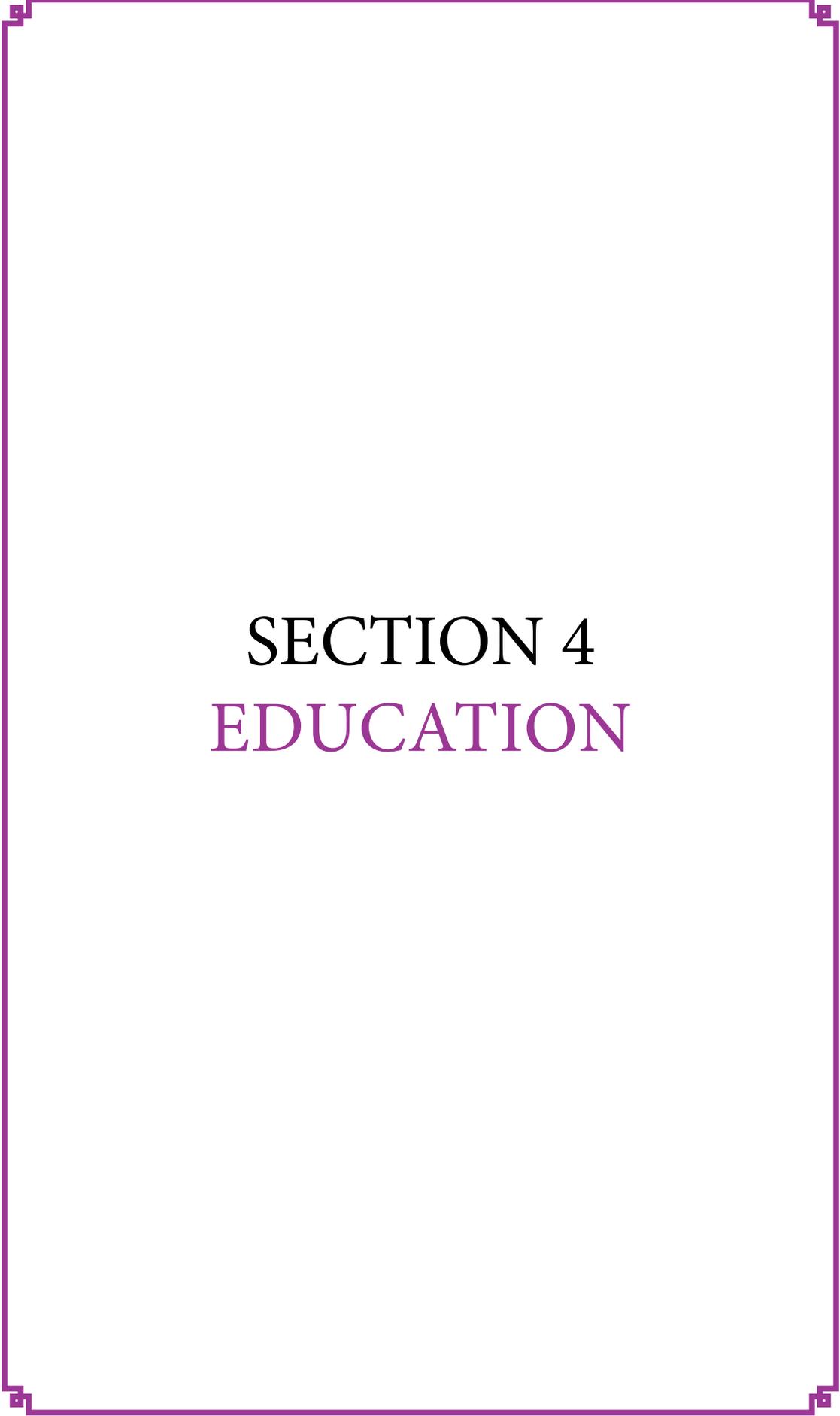
About The Author

Nura Isyaku BELLO is an academician currently working with Kano University of Science and Technology, Wudil. With research interest in water resources management and contemporary environmental issues. Currently, pursuing Ph.D in Geography department, Kano University of Science and Technology, Wudil.

ORCID: 0000-0001-8186-5839

To Cite This Chapter:

Bello, N. I. (2021). Environmental problems as a threat to sustainable urban development in kano metropolitan- a review. In A. Csiszárík-Kocsir & P. Rosenberger (Eds.), *Current Studies in Social Sciences 2021*(pp. 124–133). ISRES Publishing.



SECTION 4
EDUCATION

Implementing Innovations in Student-Centered Teaching

Albana TAHIRI
Albanian University

About Didactic and Pedagogy in Pre-University Education, in the Field of “Native Language”

In the field of teaching didactics, schools and practices emerge every day that bring innovations and new research fields. In general, nowadays, in the field of language learning around the world, there are endless organizations, which promote innovations that come from the successful experiences of language teachers wherever they are.

Knowledge of didactic principles in the field of language learning is a very important topic, as it orients all actors dealing with the field of curriculum planning and implementation towards new trends and appropriate solutions for language learning towards continuous improvement of the quality of learning for student.

It would be insufficient to dwell only on issues related to principles, criteria and other attitudes related to decision-making or drafting curricular frameworks for the field of language communication, meanwhile, not to find the right track where these principles, philosophy, criteria should be placed, which relate to areas of application and implementation of such as methods, strategies, techniques and everything that is related to the teacher and teaching process.

According to Professor Gjokutaj ‘*The totality of the components of teaching and learning the subject, theories of organizing the learning process as a whole, methods and forms of organizing the learning process, which comes from the field of teaching and finding functional spaces for language learning in school and beyond it, are didactic aspects of teaching.*’ (Gjokutaj, 2009 p. 134)

Being a field of research, which addresses the problems of content, the study of the teaching process, the acquisition and application by students of knowledge, skills and habits, principles and organizational forms of learning and teaching methods, the role of the teacher in the learning process is instrumental.

Piaget, the Swiss psychologist, states: “*The role of the teacher is to form in the student’s mind a tool, a method that allows the latter to understand the world. Pedagogy is like medicine: an art that relies, or should rely, on certain scientific knowledge.*” (Piaget , 2005, p.9)

Based on the above statements, we must accept that one of the keys to the proper

achievement of active learning in the classroom is the joint teacher-student activity where the effectiveness of the teacher's activities in motivating students, engages them and makes them more active. According to Piaget *"finding creative, exploratory ways is a matter of today's education to enhance the quality and performance of every student. It should be known that the main purpose of education is to create people who are capable of doing new things, not just to repeat what other generations have done, people who are creative, explorative and inventive."* (Piaget, 2005, p.14)

Increasingly, the teaching process is oriented towards a contemporary, student-centered teaching. In order to achieve an effective lesson, the teacher must, in determining the subject competencies, take into account the composition of the class, know well the affective side of the students, their psychomotor field, so that teaching and learning is oriented towards lifelong learning.

According to psychologists, *"The teacher must know clearly and well each of the three areas: cognitive, affective and psychomotor. The cognitive field taxonomy prepared by Benjamin Bloom, consists of 6 levels: recognition, understanding, application, analysis, synthesis and evaluation. The taxonomy for the affective domain, prepared by David Krathwohl and others, consists of 5 levels: receiving, responding, evaluating, organizing, and characterizing a value or set of values. The taxonomy for the psychomotor field developed by Elizabeth Simson consists of 7 levels: perception, position, directed reaction, mechanism, complex reaction, adaptation, and starting point."*(Biehler & Snowman, 1998, p.263)

Whatever the taxonomy applied by the teacher during the learning process, it should be used for the benefit of acquiring knowledge, habits, skills, creating values which, all together build the competencies that enable the student to continuously learn. In this context, learning the Albanian language is of special importance as it enables the realization of all communications relations in all fields of knowledge, gives and opens spaces for research in the great world of knowledge. For the achievement of this mission, relations must be realized with other fields of knowledge. In different subjects and fields, the general scientific didactic principles are closely related to each other.

The specific principles that make changes and innovations in teaching possible are certainly not lacking in other areas where we can study them. Areas related to mind studies (psychology), brain studies (neurology and biology) and culture studies (anthropology) help us here. Gardner states: *"Indeed, the part that has changed in the recent past is our understanding of some of these areas of study. We are now able to take advantage of this knowledge as something sure to change the educational landscape and come to understand the truth, the beautiful and the good, but it would be unforgivable not to pay due attention to computer resources, as it would be a great sin to pay attention to only one, excluding the others."*(Gardner, 2006, p.53)

The teacher should be aware that in the teaching process, in addition to scientific knowledge, he/she should use different tones of voice, gestures, movements, etc., which in the teacher's performance are included in what we call warmth and enthusiasm, which the teacher must possess during the learning process. *"Respecting and promoting the dignity of the child is one of the main values in our school. This is for us also the starting point from which we can build a common vision and where we can focus our staff training program."* (Gardner, p.149)

From Traditional Teaching to Student-Centered Teaching

Teaching before 1994 in Albania was conducted according to the traditional classical method. The students listened to the teacher and reproduced what they had heard from the teacher. In this way the class was a lot of individuals where the student was forbidden to have a spirit of cooperation with his peers, where the main criterion was the transmission of information included in a synopsis, unique text or other source.

Teaching today offers students to create something deeper, a general spirit entirely oriented towards global collaboration and education, which requires a renewal of the teaching process. According to the Canadian leadership, *"The most important influence of teaching is in the attitude and vision of the student for his future, to feel himself (or not) part of the society where he lives! Educational change, above all, is a student-related phenomenon, associated with each of the individuals. Any educational change, even education in general, will fail if (for them) there is no meaningful role in this enterprise."* (Fullan, 2001)

Student-centered teaching has as its criterion, the quality of learning, where a combination of two aspects is made in a single process, teaching and learning, according to Professor Gjokutaj. *"The process is well expressed, first the teacher creates situations and the teaching perspective starts at the student's initiative and then becomes collective, creating a closely linked social life. Second, in these learning situations, the teacher is sensitive to what the students are doing, increasing the quality of learning. He enables, motivates, and helps students to achieve clear, tangible, concrete results."* (Gjokutaj, 2009, p.303)

Different teaching approaches are occasionally highlighted by education representatives. In each approach there are new dimensions, principles and criteria of sustainability to knowledge management, which we want to convey to students in order to turn knowledge into values for life. Although these attitudes are generally addressed to teachers of different subjects, it seems that the responsibility of language teachers is of particular importance when we talk about teaching, as through language students enable logical schemes of learning, acquire terminology and concepts, arguments and think critically.

The teaching process is one of the most important and influential factors in achieving learning goals. Teaching helps students learn, when students are active, understand what is expected of them, when their work is recognized, learn quickly about their mistakes and receive guidance for improving their work.

Teaching has been hailed as a process that unites art with science. *“Teaching as an art relies on the intuition of the teacher and his/her action during the process to make the curriculum flexible, usable, lively, and interactive. Teaching as a science is dictated by the attitudes of the authors of the curricula and by the direction they have given to the subject content in certain subjects”*.(Gjokutaj, 2009, p.263)

According to Jean Piaget *“If the purpose of education is to form autonomous human beings, then teaching based on oral transmission and authority must disappear. It is through methods of active school that emphasize the importance of the principles of freedom, activity and interest of the child, in order to favor his development.”*(Piaget , 2005, p.10)

If we were to use active methods, the behavior of the relationship that is created between the teacher and the student becomes interactive and affects the student’s personality by placing him at the center of the process. The teacher is important in the education of children, the progress of the learning process depends on the how he will think during the interpretation of the lesson, where the student is an active experimenter, seeking and finding solutions, the teacher helps with counter suggestions and leads in problem solving.

The teacher should no longer be a lecturer of the traditional method giving ready-made solutions, but stimulate scientific research to fulfill the idea that in order to understand, authors and actors must be created at the same time to fulfill a process. *“To become a better teacher means to have more faith and confidence, having the commitment to improve further ...”* (Fullan, 2001 p. 230)

The teacher as a good director creates scenarios that provide the necessary conditions for the transition of students from passive to active learning based on competencies. Student learning based on competencies and levels of learning are increasingly emerging in the vast global education area. For students, learning is already an architecture, which must be set up step by step and must pass from one level of learning to another through contemporary schemes, strategies and techniques that offer concrete standards of achievement.

Working with levels allows the effectiveness of teaching and learning strategies to fit to the individual needs of students by turning the lesson into a student-centered teaching. The teacher already forms a different student, making him an active participant in the

teaching and learning process where everything in this lesson is developed and done due to the needs and interest of the student.

Effective teaching also comes as a result of positive emotions. Recent studies have shown that teaching is an emotional practice, which involves the emotional understanding of students and the emotions of teachers that are an integral part of their work. This shows that effectiveness increases greatly if the work of the teacher is well combined with what the students can do. *“This kind of thinking affects the way we communicate with students, the use of several different teaching techniques (to suit different types of students) makes you create new challenges and difficulties that students will face, to exceed their limits. Through these methods students also come to understand what their strengths and weaknesses are. As a result of this way of teaching, the school system constantly communicates with the student.”* (Senge, 2005, p.149)

We must emphasize that learning objectives are not achieved just because the teacher has them in mind, or has written them in the diary. The issue of being accurate and successful in terms of perceiving learning objectives, is an important issue which enables the achievement of certain expressive skills and learning competencies in each student. Clearly defining objectives is not easy, as they must first be adapted to the grade level and secondly must be adapted and reflect the requirements of the curriculum.

In the subject of Albanian language, the precise definition of the objectives or competencies of the program is more effective than a formal finding for the achievement and acquisition of scientific concepts. The Albanian language course requires that these competencies include the emotional aspect, the communicative citizen where a correct attitude is given by the students at the time when they will speak, read and write.

Regarding the definition of teaching competencies, we have many attitudes and comments which show the teacher the way in which he/she must walk to be successful in daily teaching planning. Fullan in his book quotes Robert Mager as saying that *“learning objectives should be well written, specifying exactly the type of behavior that the student will display to demonstrate learning skills”* and that Norman Gronlund believed that *“learning complex and advanced does not work with Mager-type objectives.”* *The complex conclusions are so broad and lead to a goal that it is impractical to ask students to demonstrate everything they have learned. Instead, Gronlund suggests that teachers should first set a general goal and then specify some specific outcomes.”* (Fullan, 2001 p.236, p.408)

The correct achievements of learning competencies come as a result of the combination of a number of factors such as; the research and updating that the teacher does to himself to create a new approach, where he perfects himself with creative and new ideas. How innovative he is in creating inclusive environments that he creates for teaching

(definitively the key to his success) is based on the reflection that the teacher makes from life experience. He/she knows better than anyone else where he needs an activity of a higher quality than the previous one, adapting it to the conditions and level of the students. Not to mention the fact that the modern teacher knows the spirit of collaboration with his colleagues, where group collaboration is the key to success that re-generates ideas.

According to Professor Bardhyl Musai, *“A model teacher is a ‘student’ who learns with students. The model teacher assumes responsibilities and assigns tasks while monitoring student progress and provides re-teaching when needed. The teacher is the main link of the class activity. It should be known that there are many elements that excite the act of teaching.”*(Musai, 2003, p.93)

Given the above context, many of the teacher’s behaviors reflected through preparation and experience show an inner part closely related to his/her personality, which inspires students later. That is why young teachers need to highlight their most positive sides. Enthusiasm and interest in the subject, patience and sense of humor would be definitive factors in achieving a successful teaching. The care and effort that the teacher shows for his scientific preparation, has a positive impact on the students. The more time spent on preparing and planning the lesson structure, the greater the chances for successful and quality work in the teaching and learning process. On the other hand, imaginative methods must be developed for students to take on roles and change the way they learn, to be active and to give them the opportunity to clearly structure the future.

The teacher should be attentive in determining the activities that he will design or carry out during the learning process. They should be appropriate to the students and closely related to the degree of difficulty of the subject. The teacher should plan in advance a set of intentional activities according to a certain logic which he/she will apply in the classroom during the teaching process. So, the teacher should not confuse the objective, competence with activities, but the activity should be in function of achieving the competence. The objective of the lesson specifies the final results of the lesson, learning activities are the means by which the goal is achieved. The activity the teacher chooses is an instrument that leads the student to self-confidence, and the development of self-control skills.

Critical Thinking and Teaching

Critical thinking is a complex process of incorporating ideas and resources creatively, re-conceptualizing and restructuring concepts and information. Psychologists and respective authorities covering critical thinking express that; *“Critical thinking is the ability to think clearly and rationally, including the ability to engage in reflective and independent thinking. A person with critical thinking is able to understand the logical connections between ideas, identify, construct and evaluate in arguments, detect common mistakes*

and lack of consistency in reasoning; to solve problems, to reflect on the justification of one's beliefs and values, etc." (Paul & Elder, 2008).

It can be stated that clarity and rationality form the core of different conceptions on critical thinking. Critical thinking has not to do with "accumulating information".

Referring to psychologists, critical thinking should not be confused with having arguments, or being critical with other people. Although the ability of critical thinking can be used to highlight the handicap of a bad reasoning, it can play an important role in collaborative reasoning and constructive tasks.

"This way of thinking affects the way we communicate with students. Critical thinking can help us to acquire knowledge; can help us to create new challenges and difficulties which students will face, to overcome their limits." (Senge, 1997)

For people who think critically, the basis of understanding information is more the starting point than the end of learning. Developing critical thinking in a critical way involves absorbing ideas and examining their impact.

"Critical thinking is a cognitive, active and interactive process, which occurs simultaneously under many levels of thinking. Quite often, critical thinking is driven toward the goal, but it can also be a creative process, where goals can be less clear. Critical thinking is a very sophisticated way of thinking." (Senge, 1997)

Education specialists have had long discussions about the improvement of factual knowledge learning over practical learning and conceptual knowledge. They suggest that factual knowledge is typically more important, believing that there are a number of facts which, when properly taught, prepare students to become fully productive in the social life.

They believe that knowledge in itself is not enough. Moreover, they think that knowledge is valuable only when it is useful and that this knowledge is useful when understood in conceptual terms, which can be practically applied creatively and critically.

In everyday life, people strive to be successful; obviously educators strive to provide knowledge to prepare students on a daily basis for their future. With the expansion of electronic communication, in almost all cultures, all over the world, schools and families are becoming centers that have the ability to exchange information anywhere and anytime.

'In order to be successful and change the world, it will be required for students to be able to select information in such a way that decisions are made about what is important or not to them and how much they will be able to understand how different pieces of

information fit together. It is necessary for them to be able to give content to new ideas and knowledge, to determine the meaning whenever they encounter new information, and to set aside inappropriate and invalid information.” (Senge, 1997)

In order to properly manage information, students should be able to apply a range of thinking skills that enable them to deconstruct information accurately, into meaningful ideas, which can then be turned into practical skills, thus becoming thoughtful and critical students.

“They have to deal with information, its processing and the generation of new information and personal ideas. They have to pass through a very deep system and process of critical analysis and reflection. This process not only guides them through information in school, but also serves as a framework for later critical thinking and independent reflection.” (Paul & Elder, 1997)

Teachers need to provide a teaching structure for thinking and learning that is both systematic and visible. Only then, students will exactly know where they stand with their thinking, in order to observe and direct the thought processes when learning independently.

A clear teaching structure would involve students in developing critical thinking. Thus, they would be willing to engage in complex problem-solving tasks and display high levels of thinking on decision-making issues.

The methodology and use of critical thinking related to teaching and learning, used in the wide practice of the Albanian school is going through a deep process of reform, which is supported day by day to highlight the work and the expected result.

Development of Critical Thinking through Activities, in the Structure of Daily Preparation, in The Elementary Cycle: The Subject of Albanian Language.

After the 1990s, many projects implemented in the learning process were organized, such as: “Development of critical thinking through literacy” (SOROS 1997-2004), Global Education (UNICEF 1994-continued), “Interaction in the classroom” (Save the Children 2004-2013) etc. Through these models, new teaching and learning practices have been offered, which have led to different results by becoming part of teachers’ work.

Within each model, strategies for achieving objectives based on the philosophy of critical thinking through reading and writing, are generally applied. To achieve a practical understanding of a learning structure, we will take a look and analyze it in all the benefits it can bring to the organization of the teaching process during a lesson in many ways, such as: Formulation of competencies; finding appropriate techniques for each competence; as a result, the combination of communication skills within the subject

and inter-subject fields, the extension in time and finding the appropriate resources for each step of this structure.

A clear structuring of the class would provide solutions to the problems that the teacher fairly raises before drafting his daily plan, otherwise called “the class diary” such as: What kind of emotional state would we provide to children at work? Will they have the pleasure of getting involved in this work and easily master the right concepts? Is the use of competencies functional? Can the student enter into a wide interaction of concepts and activities after acquiring these competencies? What learning resources are or need to be available to accomplish the given tasks? These and many other questions are part of teachers concern for the student learning process.

In our education system the teaching structures have been numerous. After the ‘90s we worked with the A94 model, then ERR, PNP then step by step with objectives and today with competencies. The structure of ERR or PNP with objectives was used until 2013, and then the curriculum implemented with competencies was used, as a progressive movement in the teaching practice of the Albanian school.

In order to achieve a practical understanding of a teaching and learning structure, it must be proven in the context of a real lesson. Thus, by following this experience and direction structure toward teaching for reflective learning, we will be able to have a clear idea about the work we need to do to develop critical and creative thinking to our students by addressing and illustrating two models of lesson’s structure (with objectives and competencies).

After 2013, the structuring of a lesson that encourages and develops critical thinking through activities and techniques found in line with the objectives is reflected in Table 1. Subject: Albanian language. Topic: The declension of noun

Table 1. Subject: Albanian Language; Topic: The Declension of Noun

Structure’s phase ERR or PNP	Objectives	Strategies/ techniques	Combination	Habits to be developed	Key words	Time	Resources
Entry/ evocation; preparation for learning	E.g.to distinguish the nouns in a text with 5 sentences	Think/ work in team/ share with others	Reading with language	Writing, reading	Noun, gender, declension	10’	Text, notebooks, tabs
The realization of comprehension/ knowledge building, content’s processing	To analyze nouns characteristics during declension	Insert, table of concepts	Reading with language	Reading, writing	Noun, gender, declension	25’	Text, video projector
Reflection or reinforcement process (Learning consolidation)	To compare masculine nouns declension with feminine ones	Charts	Reading with language	Reading, writing	Noun, gender, declension	10’	Tabs

It should be taken into account that for each stage, the objective to be achieved is clearly defined and the definition of an objective of an increasing level for each step should be regularly followed. (Bloom taxonomy) In the moment when an objective becomes achievable by everybody, it means that it is extinguished and the ongoing target remains minimal.

For each objective it is required to find one or more techniques, or strategies which the teacher finds appropriate related to the respective objective. The same path should be followed for each step of the table's structure by breaking down the objectives, strategies, techniques, combination, habits to be developed, key words, time and resources, etc. The preparation of and Albanian language teacher for a daily lesson, according to this model, does not end here. Once the table above has been prepared, they need to break down all the activities to be performed in Table 2.

Table 2. Procedural Steps of a Learning Activity

Steps	What will the teacher do?	What will the student do?	Time
Step nr. 1 Think/ work in pairs/ share with others	<p>Here will take place all the activities that the teacher will do for the realization of objective 1:</p> <p>-Decomposes the target through the used technique, which gives the opportunity for thoughts combination. For the realization of this technique, the teacher writes or prepares some opened questions and asks students to give written answers about them.</p> <p>The teacher puts the students in pairs (desk mates).</p> <p>This technique makes students reflect on the text and shapes their thoughts. The teacher directs, orients, guides.</p> <p>This step should be related to the relevant objective. If not related, the class is failed.</p>	<p>Students should follow the right steps, based on the teacher's instructions.</p> <p>Students in small groups, on pairs, prepare questions and seek answers.</p> <p>Students are involved in learning action. To achieve the most correct answers, students work in pairs and together they try to do the best. At the end, each group of two is represented by a discussion where they present their ideas about the given questions.</p>	10'

<p>Step nr.2 Insert Concept's map</p>	<p>It is clearly defined what the student will do.</p> <p>-The teacher distributes white sheets to the working groups, explaining what the students will do.</p> <p>It is a technique that encourages analysis around concepts, facts, phenomena and serves on learning the Albanian language.</p> <p>Also, in sections related to this subject such as: speaking, writing, grammar, etc.</p> <p>The teacher talks, discusses, exchanges ideas by checking the working groups.</p> <p>-The teacher manages, organizes and coordinates, encourages, stimulates, supports.</p> <p>This step should be related to the relevant objective. If not related, the class is failed.</p>	<p>The groups work in an individual way, they discuss among each other, analyze, and argue about their topics in front of the class.</p> <p>25'</p>
<p>Step nr.3 Chart</p>	<p>The two questions, where the chart is based on, are: What are the commons between...? What about its differences?</p> <p>During this stage, the teacher listens carefully every single answer of the students, kindly welcomes every idea, approved or objected by the students themselves, using the encouragement.</p> <p>The teacher manages, organizes, supports, and gives homework.</p> <p>The teacher includes students in the assessment process as well as in the self-assessment one.</p>	<p>The students draw the chart, emphasizing the commons and differences of the topic. They present, argue, demonstrate, and compare their works.</p> <p>The intensive inclusion into this process brings a spirit of cooperation among students.</p> <p>10'</p>

After 2013, the dilemmas that Albanian language teachers had in determining situations were not only related to the degree of clarity of their description, but also how understandable and important they would be for students. How could those situations be treated in class, so that students already develop the competencies to handle life issues?

Based on the curricular framework, compiled by the Institute for Educational Development, the new Curriculum brings the matrix of competent treatment of the situation in competency learning.

For planning a learning situation, the teacher considers:

1. Learning outcomes (learning outcomes of the program that are realized through this situation).
2. Name of the situation (title of the situation).
3. Contextual description of the situation (content of the situation in the context of the realization of learning outcomes).
4. Actions taken to address the situation.
5. Resources (tools, equipment, various resources, students' prior knowledge and skills).
6. Assessment (when the situation is realized). (IZHA, 2014)

Table 3. Structuring a Lesson that Fosters and Develops Critical Thinking of Learning with Competencies

The result of learning	Competencies that student gains	Realization of competencies	Actions about the situation. Teaching strategies	Resources	Assessment	Key words	Time	Notes
Learning outcomes according to competences	Results: Learning according to competencies	Key competencies: related to another field	Categories of actions that allow competent handling of these situations. Examples of actions related to dealing with these situations.	Various resources needed, to deal with these situations, through described actions, tools, equipment, students prior knowledge and skills.	The expectation of dealing with these situations, that leads us to the acquisition of competencies by students.	Speaking Reading Critical thinking	90'	The teacher completes the lesson's plan, shortcomings and issues observed during the teaching process.
Learning outcomes from the program that are realized through situations								
e.g., Learning situation	e.g., Speaking for communicating and learning.	e.g., This topic is related to key competencies.	e.g., question-answer presentation working groups, idea design	e.g. Textbook, children's book with stories and fairytales.	Examples of criteria; the situation is completely realized, so is the assessment. Praising students, without neglecting anyone of them.			
Speaking subject Topic: Reading test	The student chooses the appropriate form to share his information, ideas, feelings, point of views, regarding his reading skills and interest	Competences in the field: Relates to the competences in the speaking field						

The above table 3 is presented below through competencies teacher's diary model.

Learning structure Speaking: The Reading text																				
Learning outcomes according to competencies Speaking for communication and learning Student: <ul style="list-style-type: none"> - chooses the appropriate form to share his/her information, ideas, feelings and views, regarding his/her reading skills and interests, - participates in group conversation with peers about different aspects of reading - understands, compares and makes generalizations, comparisons about other students' situations with himself/herself, - gives his/her opinions, ideas and judgments about his/her personal interests, - -expresses his/her preferences and makes his/her comments about the answers given at his/her writing exam, - analyzes the way of his/her friend's communication, voice tone, pauses, certainty, clarity etc., - takes notes for every point of the exam and for every student 				Resources: <ul style="list-style-type: none"> - students' knowledge and prior skills - lesson's text - artistic books Key competencies: The relation with other fields of study, critical thinking Field competencies: Speaking Activities (Teaching strategy) Presentation, discussion, answer and question, team work, designing ideas																
Situation's Contextual Description																				
Preliminary activity (completion of model exam of the book) The lesson is related to the competencies of the field of speaking with students' knowledge and skills in reading. The introductory activity is the completion of an exam which will be the basis for stimulating discussions about students' interests, habits and skills in reading. (Individual exam, reading of words in a minute) Situation development (presentation, discussion, answer and question) Presentation of the completed exam by all students. Each student introduces their exam and the others listen, asking further about what everyone says about themselves related to reading. Through the presentations, which they pay close attention, the students get to know each other's experiences in reading and their speaking skills related to the topic of reading. More interesting are the provocative questions that students ask to learn more about each other, which certainly stimulates learning. Working on teams also brings productivity on how reading can be realized in the school environment. So, the students fulfill the competence of decision making for a simple takeover, concretely, the use of school's library, its maintenance and enrichment (realizing the desire for reading). Step Three (Team Work) - Measuring Reading Speed (120 words per minute) The teacher divides the class into groups of 5 students (but also in pairs) and gives them a part of the story from a text book and asks them to measure the speed of reading of each other in the group. Each group then presents the reading speed, the group average, and finally the class average is measured. The teacher gives the task that by the end of the year, everyone will increase the speed of reading that above this average eg 10-15 words per minute (but this can be set differently according to the class situation.) Students' appreciation for each other The teacher asks the students to make a list and put the names of the peers by rating each rubric from 1-10 for what they read, for the way they speak, for reading skills and interests that each one has related to reading. At the end, conclusions are drawn and evaluations are made according to a ranking, decided by the one who scored the highest. (Table model)																				
<table border="1"> <thead> <tr> <th>No</th> <th>Name/ Surname</th> <th>Letter absence or addition</th> <th>Repeated reading</th> <th>Different reading</th> <th>Words per minute</th> <th>Reading time: 1 min</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>							No	Name/ Surname	Letter absence or addition	Repeated reading	Different reading	Words per minute	Reading time: 1 min							
No	Name/ Surname	Letter absence or addition	Repeated reading	Different reading	Words per minute	Reading time: 1 min														
Actions taken in a situation: <ul style="list-style-type: none"> - Completing the exam individually - Presentation of group test results - Presentation of all test results. - Creating a collaborative environment - Respect each other when speaking by listening attentively, waiting in line for questions and leaving time for full answers to others. - Measuring reading speed - Evaluate student work for each other 																				

Situation's evaluation

This lesson, whose aim was realizing the competence of the field of speaking with students' knowledge and skills in reading, is called fulfilled, if students:

- Have accurate articulation skills in reading the textbook or literary text,
- Design and compile questions for the purpose of the learning process
- They are introduced, or ask to the group members questions that do not hurt and threaten their friendship and cooperation, but manage to choose the appropriate form and language to share information, ideas and friendly feelings.
- They analyze the used language of group activities.
- They are able through calculation, to derive the results of reading speed.

Teaching time: It is suggested that this learning situation/ learning topic takes 2 hours.

There is a common element in reading, speaking and writing and that is knowledge. Knowledge enables us to choose what we like to read, dictates our way of communication in the society, and certainly reflects a person's world when he writes. It is not accidental to place these three words in this order, because I believe that within this order there is a cause-consequence process with the starting point of reading as one of the processes of information accumulation.

“Reading may seem like the most basic thing, as many people believe that the ability to do so has been around since the beginning of their education, but there is a profound difference between reading physically and reading mentally. Understanding what you read is a challenge; understanding is an element that is inextricably related to the intelligence of an individual which is a born gift” (Gjokutaj, 2001).

We must emphasize that the development of teaching methodology, is the art of how the teacher builds activities in the situation, or games that would make the student more active. Good knowledge of didactic innovations in the use of teaching methods, techniques, strategies which would make the learning process innovative. Through this structure, students are required to participate in extensive activities, to carry out the process by using language components such as listening, speaking, reading and writing.

For each step of the table structure the teacher must first decompose the competencies, didactic activities, the combination, the ability to express that develop, the key words, the time and resources and then he/she has to model it in front of the students. The class is called realized when the competence designed according to the level becomes feasible by all, it means that it is extinguished and the ongoing competence remains minimal.

As a conclusion for this paper, we would like to refer to Fullan and Gardner: *“The ultimate goal of change in education is when teachers see themselves as “shareholders”, who have risked something of their own for the sake of education system's success, as a whole, by seeking understanding for change, as an inevitable key of this success.”* (Fullan, 2001, p.408)

“The educator must be attentive and follow the scientific, technological, political,

economic, social, cultural and personal changes in a global scale and must respond to them. The educator must also be vigilant about academic signals and must adapt his work to the context.” (Gardner, 2006, p.52)

References

- Biehler, R.F. & Snowman, J. (1998). *Developing critical thinking*. p.263. AEDP, Tirana.
- Fullan, M. (2001). *New understanding of education changes*. Third editon, p.194, p.230, 236, 408. Edualba, Tirana,
- Gardner, H, (2006). *Multiple intelligence*. p.52, p.53. New horicon N U: Basic Books.
- Gjokutaj, M. (2001). *Përvojë për mësimin e gjuhës amtare. -Kurrikula dhe shkolla, Albanian language and literature*, p.112-134. ISP edition. Tirana.
- Gjokutaj, M. (2009). *Didaktika e gjuhës shqipe*. p. 134,263, 303. SHBLU, Tirana.
- IZHA, (2014). *Programs of Albanian language curriculum*, Tirana, website: www.arsimi.gov.al.
- Musai, B. (2003) *Metodologjia e mësimdhënies*, Albgraf, Tirana, 2003, p.93
- Paul, R.& Elder L. (2008). *The international critical thinking reading & writing test*. ISBN 0944583210.
- Paul, R. & Elder L. (2014). *How to improve student learning: 30 practical ideas*. ISBN 978-0944583555.
- Piaget, J. (2005). *About pedagogy*, p.9-14. ISP, Tirana,
- Senge, P. M. (1997). *The fifth discipline*. Measuring Business Excellence.
- Senge,P. (2005). *Schools of learning – ‘5th discipline* , p. 148,149. ISP, Tirana.
- Senge, P. M., Cambron-McCabe, N., Lucas, T., Smith, B., & Dutton, J. (2014). *Schools that learn (updated and revised): A fifth discipline fieldbook for educators, parents, and everyone who cares about education*. Currency. Art Kleiner. Fifth discipline, Learning school, ISP, Publishing House: Kristalina-KH, Tirana, 2014,page 33, 149,

About Author

Albana TAHIRI . Degree Doctor. University of History - Philology Tirana, subject Language -Literature. With 20 years of work experience as a leader in Pre-University Education and then as a specialist in the Ministry of Education in the diaspora sector. Has been a lecturer at the University for 8 years. Certified in the School "Trainers in Education" organized by IZHA and MES. Contribution to the training of teachers not only within the country, but also for teachers of MPGJSH in the Diaspora (Complementary Lesson of Albanian Language).Lecturer of Albanian language at the Department of Education at Albanian University. Lecturer (part-time) of the Albanian language at the Department of Albanian Language at the Faculty of History and Philology in Tirana. Participated in high level roundtable events to reflect progressive changes in improving existing curricula. Author and co-author of many articles, published in scientific journals and research books.

ORCID: 0000-0002-0333-7675

To Cite This Chapter:

Tahiri, A. (2021). Implementing innovations in student-centered teaching. In A. Csiszárík-Kocsir & P. Rosenberger (Eds .), *Current Studies in Social Sciences 2021*(pp. 135–150). ISRES Publishing.

The Importance of Teachers' Wellbeing and Resilience in Challenging Circumstances

Lali TAVADZE

Batumi Shota Rustaveli State University

Ivdit DIASAMIDZE

Batumi Shota Rustaveli State University

Natia KATAMADZE

Batumi Shota Rustaveli State University

Introduction

Life is full of surprises, unexpected things, challenges. It is worth noting that every aspect of our personal or professional life is full of challenges. Meeting these challenges, facing problems, overcoming difficulties, results in getting experience.

One of the biggest challenges that the whole world faced and that came like the bolt from the blue was teaching online! Covid-19 plans required all Universities finish the terms online leaving hundreds of teachers, professors, university support staff in a maze searching for the answer to the question "How to teach online?"

Decisions were made quite quickly. A traditional class was transformed into an online class. Online teaching showed both, advantages and disadvantages. A deep breath was taken. Problems, obstacles, challenges met. All of us were found in the same boat, more precisely, a lifeboat, meaning to keep everyone safe till reaching our destination.

Teaching online and moving everything to an online platform was a little bit devastating and overwhelming due to the fast transition in the middle of the term, but that was the best option and the only way to go on with the courses and the process of education in general.

In fact we can differentiate between: Emergency Remote Teaching (ERT), Online Teaching/Learning, Resilient Teaching.

The period of going online can be recalled as the process of fast changes and quick decisions. When classes took place online it still could be felt that it was not the same as typical online course. Facilitation, planning in a hurry was closer to emergency teaching idea. "In fact, the COVID-19 crisis has fundamentally changed the field of online learning by adding the concept of "Emergency Remote Teaching" (or ERT, also sometimes called "panicgogy") to describe what happened when faculty were given an incredibly short amount of time to learn and teach as much as possible about teaching online." (<https://onlineteaching.umich.edu/online-teaching-emergency-remote-teaching/>)

Emergency Remote Teaching is defined in the following way: “The rapid transfer of some portion of a course to the online environment to ensure continuity of instruction during unpredictable emergent situations that threaten the ability to teach on-campus.” (<https://onlineteaching.umich.edu/online-teaching-emergency-remote-teaching/>)

As it is clear from the above mentioned idea, emergency remote teaching is connected with sudden and unexpected changes or transitions. Pandemic was the reason of emergency remote teaching this time, but there can be other things leading to this type of teaching such as weather, sudden illness or even intense crisis. So, the situation threatening not only instructional environment but the health and well-being of both students and teachers alike might result in emergency remote teaching.

Another form of teaching mentioned above is online teaching. It can be defined as: “The transformation of teaching practices to include thoughtful and well-planned instructional strategies that effectively engage the unique affordances of online technologies and pedagogies to support learning.” (<https://onlineteaching.umich.edu/online-teaching-emergency-remote-teaching/>)

Online teaching is well-structured, precisely planned in advance and thoroughly thought. It is not necessarily one person involved in the planning of the course but the whole group of faculty members can be assisting in the process. It is worth noting that there is no difference in the objectives and the results of online and face-to-face course. Thus, the expectations for learning outcomes are similar to face-to-face course expectations, but the way students come up with these results may differ, for sure. Different type of teaching methods can be employed, even the ones we have never used while teaching face-to face in a typical classroom environment.

And little by little, based on current development and situation we are moving to Resilient Teaching. Resilient Teaching is defined in the following way: “Intentionally integrate methods of teaching that easily adapt to rapidly changing contexts, to be capable of leveraging technology to move fluidly between environments.” (<https://onlineteaching.umich.edu/online-teaching-emergency-remote-teaching/>)

Resilient teaching involves choosing teaching methods and strategies appropriately, integrating methods that might fit various and multiple environments thus keeping effective in any circumstances. As becoming ineffective is the dead-end for the educational system and what is more, it is a direct way to failure, teachers should do their best to integrate strategies and teaching methods that are capable of bending in a number of conditions and different situations smoothly and easily.

The importance of teacher wellbeing and resilience had been acknowledged long before the coronavirus pandemic struck the world. We believe that positive education

is focused on well-being and flourishing both in students and their teachers. One of the biggest issues, however, is that building well-being and resilience in students necessarily requires teachers with resilience and well-being. When students benefit owing to teachers functioning at their optimum levels, it results in positive education to grow and flourish. Just as the concepts of “broadening and building” (Fredrickson, 2013) apply to the individual, so too can they contribute to the emotional wellness and growth of the children who are taught by a resilient teacher. Incorporating positive psychology in education is the way forward. Teaching requires significant psychological stamina, and those who stay in the position cite that they rely on a sense of control and mastery (Hong, 2012).

What is Resilience? Research points to the power of resilience both as a response to stress and as a proactive mindset for well-being and achievement (Reivich & Shatté, 2002). Psychological resilience has been characterized as “the ability to bounce back from negative emotional experiences and by flexible adaptation to the changing demands of stressful experiences” (Tugade & Frederickson, 2004). People with high resilience demonstrate an ability to thrive in the face of adversity (Masten, 2001; 2014). Psychiatrists, psychologists, and sociologists have created models and statistical measures to operationalize resilience and study its components and application toward optimal human functioning (Seligman, 2011; Csikszentmihalyi, 1990). Kelley (2005) describes resilience as a natural and innate human psychological immune capacity, emphasizing that all humans have the multidimensional capacity to be resilient.

In addition to being an innate ability, resilience is a compilation of learnable skills. Resilience matters and it is malleable, even amidst previous and existing external hardship. The research around resilience concurs that it is comprised of several factors: emotional regulation, impulse control, empathy, optimism, causal analysis, self-efficacy, and reaching out. Each has been studied significantly and can be measured to quantify resilience and its improvement (Reivich & Shatté, 2002). Connor and Davidson (2003) have outlined another scale to quantify resilience, the CD-RISC. CD-RISC consists of five factors: personal competence, high standards and tenacity; trust in one’s instincts; tolerance of negative affect and strengthening effects of stress; positive acceptance of change and secure relationships with others; control; and spiritual influences. Masten, Best, and Garmezy (1990) categorize the uses of resilience in three ways, overcoming, stress-resistance, and recovery. Resilience is used to overcome past challenges such as poverty, trauma, and childhood abuse. It is used to resist daily stressors such as classroom conflicts, financial adversity, or co-worker relationships. Resilience is also needed as a tool to recover from significant hardships such as the death of family members, divorce, ill health, or tragic world events. In addition to being used as a reactive tool, resilience can be used proactively.

In a shift away from behaviorism in the field of psychology, resilience research reveals that one of the primary tools to building resilience is thinking style. To clarify, optimism (a resilience competency noted above) is a cognitive disposition toward a positive future (Scheier & Carver, 1985). The instrument that is widely used to measure optimism is the Life Orientation Test (LOT: Scheier & Carver, 1985), which measures generalized expectancies for positive versus negative outcomes.

Studies show that resilience and optimism go hand in hand. More specifically, high resilience individuals have a specific brand of optimism – realistic optimism (Schnieder, 2011). Their thinking is positive, yet grounded. It accurately acknowledges that which cannot be changed and proactively strives for what can be changed, in an effortful and resolute manner.

Resilience involves the capacity to effectively manage stress, and teacher resilience has been linked to retention and quality, and also to higher student achievement. A review of the research shows that personal characteristics such as motivation and self-efficacy are important factors in determining teacher resilience. (Beltman, Mansfield, , & Price, 2011).

Building Resilience There are a range of strategies that help build resilience including the cultivation of grit, defined as passion and perseverance for long-term goals, positive emotions, and the implementation of techniques that develop optimism such as how one explains past events (Duckworth, Quin & Seligman, 2009).

The need for building resilience in today’s teachers and students has been cited in a number of studies (Gu & Day, 2013; Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013; Pearce, & Morrison 2011)

Wellbeing - Discussions about teacher wellbeing are often dominated by ideas related to negative mental health such as stress or burnout.

What is teacher wellbeing? Wellbeing is not only about coping with negative situations – it also includes ideas about what it means to live a good life. Perspectives on wellbeing are often divided in their approach. For example, subjective wellbeing encompasses ideas such as life satisfaction and the presence of positive emotion more frequently than negative emotion, while psychological wellbeing is concerned with ideas such as purpose in life and positive relationships with others. The understanding of wellbeing is further complicated by the fact that terms such as life satisfaction are sometimes used synonymously with wellbeing in the research.

There is no single agreed-upon definition of wellbeing in the literature, it can encompass a range of ideas from positive emotions to purpose in life, but most definitions agree that

wellbeing is multidimensional, comprising physical, mental, emotional, and spiritual aspects. This resource defines wellbeing in terms of the broad concept of ‘feeling good and functioning well’¹: in other words, a state where teachers perceive job satisfaction, experience positive emotions more frequently than negative emotions, and function well both as a teacher and in their other roles in life (as a parent, spouse, family member, friend and so on). Functioning well includes supportive professional relationships, professional growth and a feeling of self-efficacy.

Models of wellbeing - There are several models that are useful in order to understand the complex concept of wellbeing. These definitions and models demonstrate varied interpretations of wellbeing. Individuals may interpret wellbeing differently depending on their culture, their character and their situation.

The PERMA model - The PERMA model derives from the field of positive psychology, which seeks to understand and build the ways in which individuals, communities, and societies flourish by possessing high levels of wellbeing. It comprises the five elements that are the foundation of wellbeing:

Positive Emotions

Engagement

Relationships

Meaning

Accomplishments

The Mental Health Foundation of New Zealand: Five Ways to Wellbeing This is a well-known model within New Zealand and comprises five elements:

1. Connect - me whakawhanaunga
2. Give - tukua
3. Take notice - me aro tonu
4. Keep learning - me ako tonu
5. Be active - me kori tonu

Te Whare Tapa Whā - The *te whare tapa whā* model is based on the work of Mason Durie and is used in the NZ curriculum. *Te whare tapa whā* compares health to the four walls of a house, where all are necessary for the strength of the house, and each represents a different dimension: • taha wairua (the spiritual side) • taha hinengaro (thoughts and

feelings) • taha tinana (the physical side) • taha whānau (family) (Durie, 1998).

Why is it important to prioritize teacher wellbeing? Teacher wellbeing has a significant impact on universities, schools, teachers and students. Many of the negative effects of low wellbeing are well publicized, with stress or burnout being linked to attrition and the resulting teacher shortages worldwide. Teacher workload is often cited as a main cause of stress, due to the volume and complexity of the workload. It could be increased workload due to taking on management responsibilities, and challenges due to work-life balance. However, it is worth considering how the allocation of time to different tasks correlates to stress; for example, when teachers take on extra tasks in an area of work they value, stress may not increase and job satisfaction may improve. It is not only teacher attrition that is a concern - low teacher wellbeing can negatively affect students. Stressed or burnt-out teachers have poorer relationships with students and the quality of their teaching decreases. When teachers suffer from poor mental health, burnout, or depression, this has been linked to poor performance, absenteeism and attrition. Stressed or burntout teachers also negatively affect students due to diminished relationships with students, a lack of empathy, poorer preparation for lessons, and low-quality teaching. Hence, prioritizing teacher wellbeing and help to ensure teachers can flourish, this can promote better classroom climates and enable high quality teaching that leads to success for students. Teacher wellbeing is also linked to student wellbeing.

Teacher emotional intelligence - A review of almost 100 studies concluded that teacher emotions have significant effects on job satisfaction, morale, stress, and teacher engagement (Leithwood, 2006). Emotional intelligence (EQ) has been defined as knowing and managing one's emotions, recognizing emotions in others, motivating oneself, and managing relationships, and is linked to increased wellbeing. Studies show that teachers with higher EQ experience less burnout (Mérida-López , & Extremera, 2017). The concept of social and emotional competence is closely related to EQ, and teachers' social and emotional competence has been identified as a key influence on students' social, emotional and academic outcomes.

How can teachers promote their own wellbeing and boost their resilience? In addition to the whole-school approach to improving wellbeing, individual teachers need to take charge of their own wellbeing in order to flourish. A positive sense of identity is also an important factor in preserving self-efficacy and is linked to wellbeing. A teacher's identity comprises both their professional and personal selves, and maintaining a balance between these is important. For example, it has been shown that levels of wellbeing are reduced when school demands dominate a teacher's identity. Teachers can also support each other to enhance their wellbeing: for example, performing random acts of kindness has been shown to be beneficial to the giver's wellbeing as well as the receiver's. Moreover, they need to feel connected through shared experiences and struggles.

As previously noted, teacher resilience and wellbeing is inevitably linked to student resilience and wellbeing. The coronavirus pandemic has outlined the pressing need to build teacher resilience and promote their wellbeing.

References

- Beltman, S., Mansfield, C., & Price, A. (2011). Thriving not just surviving: A review of research on teacher resilience. *Educational Research Review*, 6(3), 185–207. <https://doi.org/10.1016/j.edurev.2011.09.001>
- Cann, R. (2019). The importance of teacher wellbeing. The Education Hub 2019. Retrieved from theeducationhub.org.nz
- Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: the ConnorDavidson Resilience Scale (CD-RISC). *Depression and Anxiety*, 18, 76e82. doi:10.1002/da.10113.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper Perennial.
- Durie, M. (1998). *Whaiora: Māori health development* (2nd ed.). Oxford University Press.
- Duckworth, A. L., Quinn, P. D., & Seligman, M.E.P. (2009). Positive predictors of teacher effectiveness. *Journal of Positive Psychology*, 19, 540–547.
- Fredrickson, B.L. (2013). Positive emotions broaden and build. In P. Devine, & A. Plant, Editors: *Advances in Experimental Social Psychology*, Vol. 47. Burlington: Academic Press.
- Gu, Q. & Day, C. (2013). Challenges to teacher resilience: conditions count. *British Education Research Journal*, 39 (1). pp. 22–44.
- Hong, J.Y., (2012). Why do some beginning teachers leave the school, and others stay? Understanding teacher resilience through psychological lenses. *Teachers and Teaching*, 18 (4).
- Johnstone, A., Jones, A., King, J., & Kokores, S., (2017). Teacher well-being and resilience: Podcasts as a tool for global reach. Service Learning Project MAPP 702: Applied Positive Interventions University of Pennsylvania May 1, 2017 Retrieved from repository.upenn.edu
- Jennings, P. A., Frank, J. L., Snowberg K. E., Coccia, M. A., & Greenberg, M. T. (2013). Improving classroom learning environments by cultivating awareness and

resilience in education (CARE): Results of a Randomized Controlled Trial. *School Psychology Quarterly* 28 (4), 374–390.

Kelley, T.M., (2005). Natural resilience and innate mental health. *American Psychologist* 60 (3), 265–271.

Krause, S. (2020, March 11). Help! I have to suddenly teach online! What should I do? [Blog post]. Retrieved from <http://stevendkrause.com/2020/03/11/help-i-have-to-suddenly-teach-online-what-should-i-do/>

Leithwood. (2006). *Teacher working conditions that matter: Evidence for change*. Elementary Teachers' Federation of Ontario.

Masten, A.S., Best, K.M., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology*, 2(4), 425.

Masten, A. S. (2014). Global perspectives on resilience in children and youth. *Child Development*, 85, 6-20.

Mérida-López, S., & Extremera, N. (2017). Emotional intelligence and teacher burnout: A systematic review. *International Journal of Educational Research*, 85, 121–130. <https://doi.org/10.1016/j.ijer.2017.07.006>

Online teaching & emergency remote teaching. (2020, May 21). Retrieved from <https://onlineteaching.umich.edu/online-teaching-emergency-remote-teaching/>

Pearce, J., & Morrison, C. (2011). Teacher identity and early career resilience: Exploring the links, *Australian Journal of Teacher Education* 36 (1).

Reivich, K., & Shatté, K. (2002). *The resilience factor: 7 keys to finding your inner strength and overcoming life's hurdles*. New York: Broadway Books.

Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and wellbeing*. New York: Simon & Schuster.

Schneider, S. (2011). In search of realistic optimism. *American Psychologist* 56(3), 250-263.

Scheier, M.F., Carver, C.S., (1985). Optimism, coping, and health: assessment and implications of generalized outcome expectancies. *Health Psychology* 4, 219–247.

Tugade, M.M., Frederickson, B.L., 2004. Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology* 86 (2), 320–333.

About Author

Lali TAVADZE is an associate professor at Batumi Shota Rustaveli State University. She holds a Ph.D. degree and works at the Faculty of European studies. Her fields of interests are: Linguistics; Stylistics of the English language; English language teaching methodology. She is the author of various research articles that are published in journals indexed in Web of Science; Google Scholar. She has participated in the Erasmus+ teaching mobility programme. She has taken part in lots of international forums and professional development courses. She is the author of three books: 1. “Reading Fiction”; 2. “Text Interpretation”; 3. “Communication Theory and Practice”.

E-mail: lali.tavadze@gmail.com

Ivdit DIASAMIDZE is an associate professor and head of quality assurance service of the faculty of Humanities at Batumi Shota Rustaveli State University. She holds a Ph.D. degree and works at the Faculty of European studies. Her research fields of interests are: Stylistics of the English language; Text linguistics; English language teaching methodology. She is the author of various scholarly works that have been published in journals indexed in Web of Science; Google Scholar. She has participated in lots of international forums and professional development courses. She has completed three teaching motilities under the ERASMUS + programme.

Natia KATAMADZE is a lecturer, Assosiate Professor, at Batumi Shota Rustaveli State University. She is an approved British Council /ETAG (English Teachers’ Association of Georgia) teacher trainer. She has participated in the following projects: Erasmus Mundus Action 2 - Humeria –Post Doc Exchange program , Duration 6 months, Masaryk University, Brno, Czech Republic, 2016-2017. ERASMUSMUNDUS ACTION 2 (Euro east), 2012- 2016. TEMPUS-JPCR Innovating Teaching and Learning of European Studies (INOTLES), 2012-2018. She is the author of more than 30 scientific articles. Her primary interests are research methods, student autonomy and creativity in a language classroom.

E-mail: natia.katamadze@gmail.com

To Cite This Chapter:

Tavadze, L., Diasamidze, I., & Katamadze, N. (2021). The importance of teachers’ wellbeing and resilience in challenging circumstances. In A. Csiszárík-Kocsir & P. Rosenberger (Eds .), *Current Studies in Social Sciences 2021*(pp. 151–159). ISRES Publishing.

Contextual Learning and Teaching Approach in 21st Century Science Education

Sema AYDIN-CERAN
Selcuk University

Introduction

What is the purpose of school? A student may respond, “to get good grades.” A parent may say, “to educate.” A teacher may add, “to prepare students for their futures.” The purpose is an intertwined expectation of all three, with a focus on contributions to society. In many countries today, people believe that improving and maintaining a high-quality offering of education is the key to unlocking the society’s economic and creative potential (Kaufman, 2013, p.78).

The role and importance of science education in school is undoubtedly indisputable in revealing the economic welfare and creative potential of a society. Science teaching is a strategic necessity for a country to meet the basic needs of its people (UNESCO, 2014, p.47). Children need to be equipped with 21st century skills in order to overcome the challenges of the new century in science and technology, learn deeply to understand life, solve real life problems, and be individuals who can take responsibility in society. It is important to understand the role of science education in providing a qualified education that can provide 21st century skills and shaping the new world people. In today’s world, where the role and power of science is an undeniable fact in the economic development and development of countries on the axis of the formation of productive societies, the value that individuals attribute to science is also important. Therefore, there is a need for an understanding that will distract students from the idea of “why do I learn science students, where will this information be useful for me?” This understanding should aim that the child can use science to make sense of life, see science as a tool in transferring it to the situations he encounters in life, and should have the nature of developing 21st century skills. From this point of view, nations are reconstructing science curriculum and practices, which aim to close the gap between science and real life in the best way possible, based on real-life contexts.

Real-Life Contextual Learning and Teaching Approach

Real-Life Contextual Approach is a learning-teaching approach in which teaching is carried out on the basis of the need to know (Bulte et al.,2006) and is based on shaping the teaching process with a context that includes daily life situations familiar to the student. This approach is based on social constructivism and situational cognition approaches

(Berns & Erickson, 2001; Crawford, 2001; Nentwing et al., 2007; Taasobshirazi & Carr, 2008). According to Finkelstein (2001), students develop an understanding of the content in context, and this context mediates the student's understanding of the content. It is impossible to separate learning from its context. Context does not provide a basis for learning. Rather, the context shapes learning and is shaped by both the learner and the content. The Real Life Based Learning Approach is based on the principle of choosing an event, situation, a living entity or an inanimate object that the student is familiar with in daily life as a context and starting and shaping the learning process around this context (Aydin-Ceran, 2018). According to Whitelegg and Parry (1999), people are more successful in daily life than the problems they encounter in formal settings, and they cope better with problems in daily or familiar content than scientific ones. According to King (2011) in her study, context-based learning has been successful in increasing student interest, making science lessons more enjoyable, making learning knowledge a necessity in order to interpret the context, and associating the student's daily life with science. To support this situation, Gilbert (2006) emphasizes that science lessons should be conducted with a Life-Based Approach in order to develop students' science literacy and high-level thinking skills and to overcome the problems encountered in the teaching process.

Context is the basic and organizational structure that forms the core of the life-based learning approach and the backbone of the teaching process. Teaching starts with a context that the student is familiar with from his/her socio-cultural environment, concepts are taught within this selected context, and the effectiveness process is increased by associating the taught concepts with other contexts (Aydin-Ceran, 2018). McDermott in his article in 1993 "Guest comment: How we teach and how students learn—A mismatch?" He likens the context to an empty slot in which other things are placed, such as a soup bowl. For this reason, he states that the context shapes the boundaries of the content and its effect is only within the boundaries of the examined phenomenon. Another analogy that can be offered for context is Birdwhistell's rope analogy. A rope consists of fibers. The rope is not something that surrounds the fibers, but rather the collection of fibers and their interrelationships. It is not possible to remove all fibers from the rope and examine the rope and fibers separately. Similarly, learning and context shape each other; neither can exist without the other (cited in McDermott, Finkelstein, 2001). Gilbert (2006, p.958) stated that the education model that embodies the meaning of the context should be such that it provides an effective response to the relevant curriculum and social problems. The context triggers a "need to know" necessary to explain the scientific phenomena the students are studying (Bulte et al. 2006; Gilbert 2006; Gilbert et al., 2011). The students "need to know" the concepts and underlying principles in order to clarify questions triggered by the context. The "need to know" promotes that the students are actively engaged in their learning process (Vogelzang & Admiraal, 2017).

Real-Life Contextual Approach in 21st Century Science Lessons

The contextual approach is more than just including real-life contexts in a lesson. Considering the contextual dimension of physics in determining a curriculum is not the same as the implementation of physics concepts. Including the contextual dimension of physics in the program requires seeing the context as the center for learning related concepts. Using contexts is to start teaching with a reality, and then to provide a launch pad for teaching the concepts in the curriculum by using the aspects of this reality (Wilkinson, 1999 as cited in Gunstone). It is clear that the harmony of the quality and nature of the context with the content is an important element in the Real-Life-based learning approach. However, preparing a suitable teaching environment in which the context will act as a launching pad is as important as the function of the context. In the Real-Life-based learning approach, learning happens when students need information to better understand real-world context. The framework of teaching should prioritize learning with students' questions/research/inquiries, and the context should be shaped to be associated with the concept learned and other contexts by employing the "need-to-know" principle, which makes learning meaningful (Beasley & Butler, 2002; Bulte et al., 2006; King, 2009). It is seen that establishing a concept-context relationship and transferring the learned concept-context to other contexts is one of the aims of a teaching environment based on Real Life-based learning approach. As a matter of fact, Gilbert et al. (2011) state that the main idea of Real-Life Based Science Education is to deal more clearly with the relationships between concepts and contexts. When the studies conducted with the Life-Based Learning Approach are examined, it is seen that the researchers use different methods or strategies. For example, King (2009b) chose a creek near the school as the context for the teaching of the "Water" unit and developed a lesson plan that aims to teach the water unit in the context of "Water Quality in Yabbie Creek". King (2009) revised and used the model that shows the stages of a life-based lesson developed by Beasley and Butler (2002) in context-based lesson plans. This model is presented in Figure 1. In the lesson plans, especially the context is at the center of the teaching, laboratory activities based on open inquiry, reports written by the students to establish the concept-context relationship, and student-student interaction.

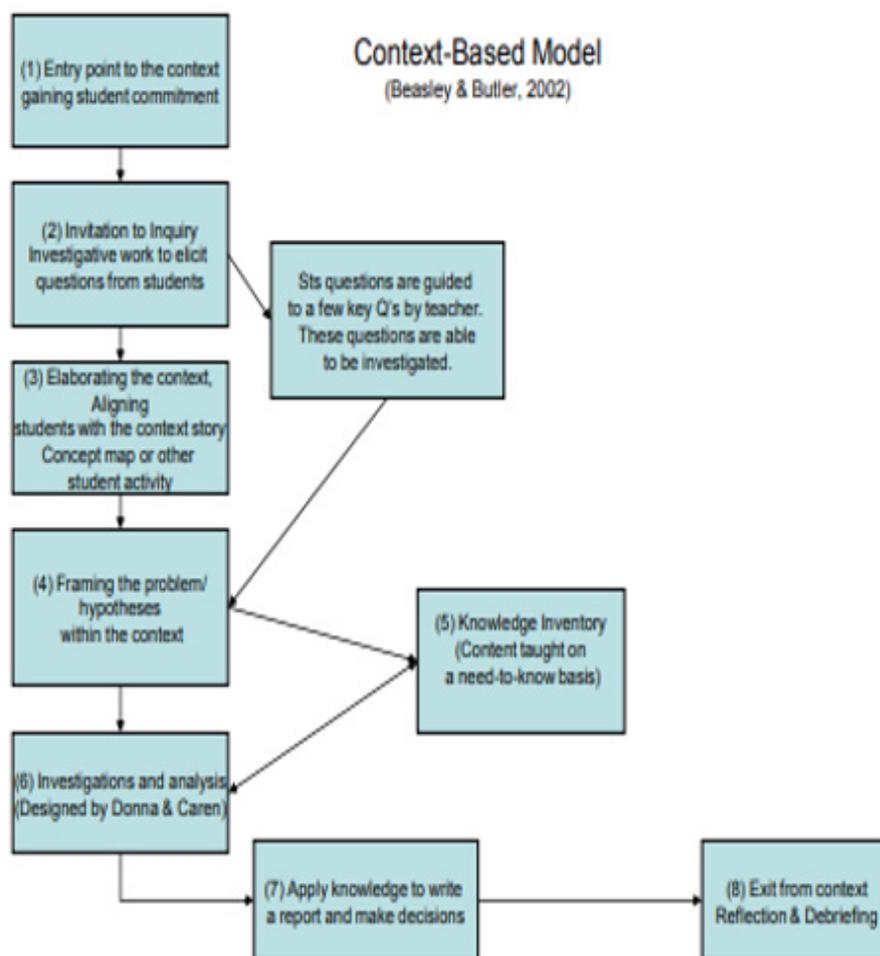


Figure 1. The Model Showing Possible Steps of a Context-Based Unit

Another implementation for the real-life contextual teaching and learning approach to be used in lessons is the ChiK Project, which was developed by being influenced by the Salters Approach in England, in order to re-evaluate Secondary Education Chemistry programs in Germany in line with Trends in International Mathematics and Science Study (TIMSS). results. The project brought together teachers and field educators in the conduct of Life-Based Science Education (Parchmann et al., 2006; Pilot & Bulte, 2006) and developed a method for how a unit should be conducted with this understanding. The cyclical process in teaching a unit in ChiK (Nentwig, et.al., 2007 p., 1442) is presented in Figure 2.

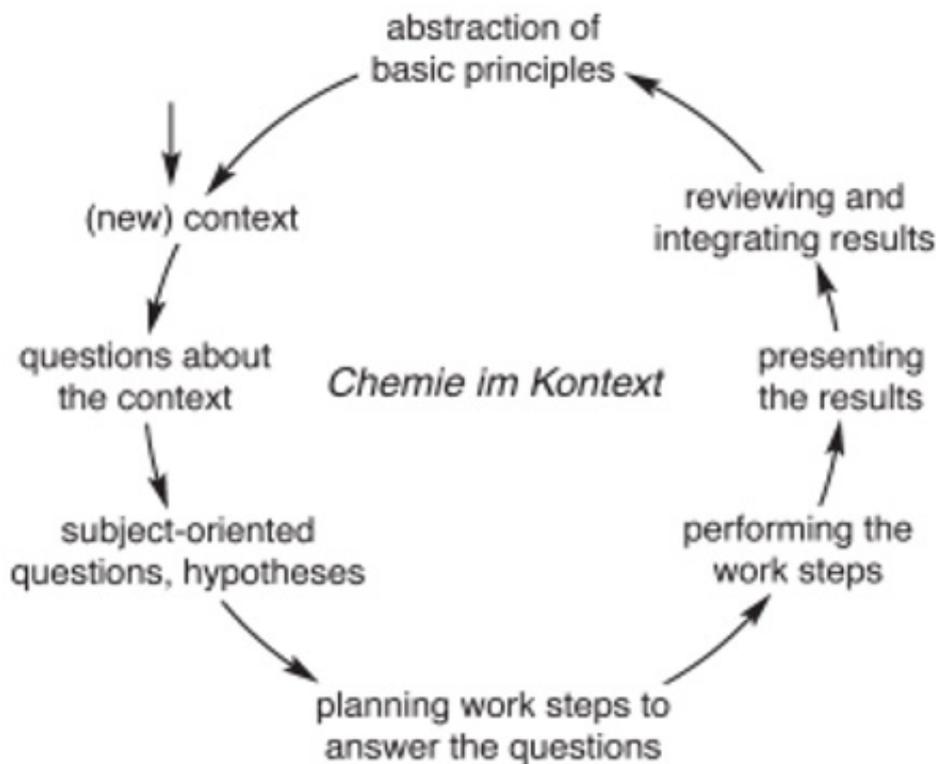


Figure 2. The Process Circuit of Chemie im Kontext

Another example is ChemCom from the USA. A model similar to the ChiK Model was used in the teaching of Life-Based Science courses with ChemCom. According to this model (Ware & Tinnesand, 2005, p.99);

- Introduce students to a social theme involving chemistry;
- Lead students to realize that need to understand chemistry in order to evaluate ways of addressing the issue in an informed fashion;
- Develop the relevant chemistry showing its connection to the issue; and,
- Use chemistry knowledge in decision-making activities related to the scientific technological aspects of the theme.

Another method preferred by researchers in teaching science lessons with the Real Life Based Learning approach is the REACT strategy (Coştu, 2009; Crawford, 2001; Demircioğlu, et al., 2012; Deveci & Karteri, 2020; Ingram, 2003; Karşlı & Yiğit, 2016; Ültay & Çalık, 2011). REACT, one of the implementation strategies of the Real Life Based Approach; It consists of five basic stages: Relating, Experiencing, Applying, Cooperating and Transferring (Crawford, 2001). REACT strategies become the method based on students' daily life experiences and create a lively classroom atmosphere (Rohayati, 2013). Another model used in teaching science lessons with Real Life Based Learning approach is 5E (Aydin-Ceran, 2018; Sunar, 2013). 5E is a learning-teaching

model based on the Constructivist Approach. The model consists of five stages. These stages are; They are Entry-Participation (Engage), Discovery (Explore), Explanation (Explain), Elaborate and Evaluate (Carin & Bass, 2005). Aydin-Ceran and Ates (2019) developed the Life-based 5E Model on a research-inquiry basis by reflecting the stages of contextual constructivism (Finkelstein, 2005) and King's (2009) model to the steps of the 5E Method. In addition, a diagram containing the organization of the context in the stages of 5E has also been developed by Aydin-Ceran (2018). The diagram is presented in Figure 3.

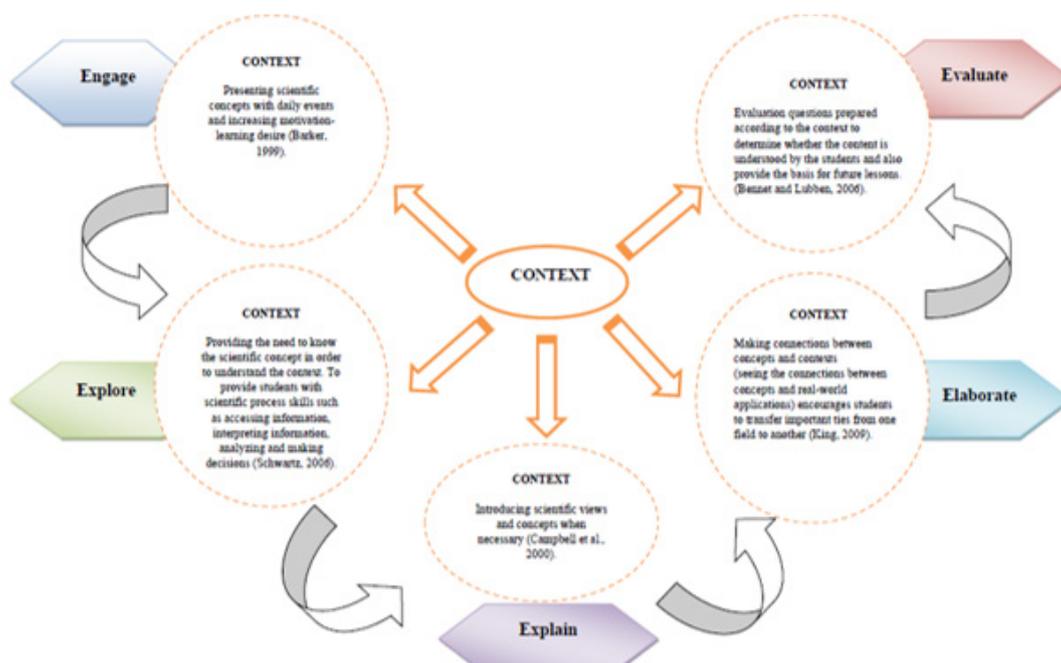


Figure 3. Organization of the Context in the Stages of the 5E Method

As stated by the studies in the literature, real-life contextual approach is a teaching and learning approach. Teaching begins with a context from the real life of the student. The role of context in the lesson's organization is important. Context is not given as an example of concept. Concepts are taught in context. Studies show that science teaching practices based on real-life contextual approach are effective in students' learning of scientific concepts (Bennet & Lubben, 2006; Stolk et al., 2016; Finkelstein, 2005; King et al., 2007; King, 2012; King & Henderson, 2018; Nentwig et al., 2007; Podschuweit & S Bernholt, 2018) and students' science achievement, interest, attitudes and motivations towards science (Broman et al., 2020; Glynn & Koballa, 2005; King & Ritchie, 2007; Park & Lee, 2004; Uitto et al., 2006). Briefly, Context-based approaches can bridge the gap between abstract, difficult science concepts and the world students live in (Swirski et al., 2018).

Contextual Teaching and Learning Approach Implementation in 21st Century Science Education

The approach that reveals how science is related to real life with a teaching philosophy can be called real-life Contextual Learning. In order to close the gap between science education and real-life, various projects and curricula in which “real-world contexts” are widely used have been initiated, especially in England and later in many countries, since the 1980s. The most well-known of these projects and programs are; Physics Curriculum Development Project (PLON), The Large Context Problem (LCP), Supported Learning in Physics Program (SLIPP), Victorian Certificate (VCI), Salters Advanced Chemistry Project, Salters’ Science Course, Salters Horners Advanced Physics, Salters Nuffield Advanced Biology , Physik im Kontext in Germany (PiKo), Chemi im Kontext in Germany (ChiK), Chemistry in Community (ChemCom), Chemistry in Practice - ChiP, The Relevance of Science Education - ROSE), Science, Technology, Environment in Modern Society – STEMS is Chemistry in Context: Applying Chemistry to Society - CiC (Aydin-Ceran, 2018). These pioneering studies have contributed to the field in shaping the Real-Life-Based Learning Approach and have contributed to the reform of real-life context-based curricula in many countries (Aikenhead, 2005; Bulte et.al, 2006; Millar, 2006; Sevian et.al, 2018) have been a source of inspiration. For example, Physik im Kontext (PiKo) was established in Germany in 2004 with the aim of increasing science literacy, developing a new learning-teaching culture (constructivist approach), developing skills of working and thinking like a scientist, using physics in daily life contexts (Duit et al., 2007) was implemented. Another project, Chemistry in Practice (ChiP), is context-based chemistry education practices developed in the Netherlands-based on the need to know principle in response to the understanding of teaching chemistry without being associated with the abstract and real world (Bulte et al., 2006). With these practices, a curriculum understanding that includes real-life practices on the basis of the need to know has developed and it has been tried to ensure consistency between real-life contexts and concepts encountered in society (Pilot & Bulte, 2006). From this point of view, a reform was made in the chemistry curriculum in the Netherlands in 2015 and a curriculum based on the real life-contextual learning approach was developed (de Jong, 2015).

The science literacy dimension of the PISA research conducted every three years by the Organisation for Economic Co-operation and Development (OECD), which is an international education indicator, gives important clues about the science education understanding of countries. When the science education programs of the countries that were successful in the PISA research are examined, the existence of the understanding of “using science in real life and adopting it as a key in solving real life problems” draws attention. As a matter of fact, the PISA research explains its perspective on this issue as follows;

In contemporary societies, an understanding of science and of science-based technology is necessary not only for those whose careers depend on it directly, but also for any citizen who wishes to make informed decisions related to the many controversial issues debate under today – from personal issues, such as maintaining a healthy diet, to local issues, such as how to manage waste in big cities, to global and far-reaching issues, such as the costs and benefits of genetically modified crops or how to prevent and mitigate the negative consequences of global warming on physical, ecological and social systems (OECD, 2019, p.112).

When South Korea, which is one of the most successful countries in PISA science literacy dimension, is examined, it is observed that the general framework of the program emphasizes “to use the ability to determine the basic rules of science and scientific nature in solving problems in daily life and to develop a scientific behavior to solve problems in daily life” (Güneş & Aksan, 2015). According to the Hong Kong PISA research, the reason why they changed the Science curriculum with a new reform despite being the second in “science success” in the world in 2012 and the third in 2018 is “Our students are successful in exams, but they do not know how much science and mathematics are relevant to their lives” announced (Kwok, 2018, p.533). The contextual learning philosophy of science for science literacy on the basis of 21st century skills of PISA research also inspires curriculum reforms in many countries. For example, Hungary made a reform in the Physics Education Curriculum in 2020 (primary-secondary education). Hungarian Curriculum (NCC2020) follows the principles by the OECD. The areas of development and the learning outcomes of the new NCC2020 in physics have been developed in support of the introduction and implementation of novel methods including active, context based, and phenomenon-based learning. It’s aim was to create a curriculum that ensures Hungarian pupils to have an up-to-date knowledge and the possibility to improve the important skills for a successful life in the 21st century, like collaboration, communication, creativity, critical thinking (Egri et al., 2021).

In recent years, different studies on the implementation of real-life context-based learning approach in science lessons continue. For example, Kang et al. (2019) aimed to develop a measurement tool of scenarios and validate it in order to design relevant scenarios for context based learning in science education. They aimed to develop and validate a scenario evaluation instrument to examine students’ perspectives on science career-related scenarios through the lens of relevance and interest. For this purpose, 25 career-related scenarios and a measurement tool, Scenario Evaluation with Relevance and Interest (SERI), were developed by a team of researchers for the EU funded MultiCO project. Then, lower secondary school students from three different countries, Estonia, Finland, and the UK, were asked to respond to the newly developed instrument after reading the scenarios. These international participatory researches are promising in terms

of developing and disseminating the real-life contextual approach in line with the needs of the 21st century. A research conducted by The World Economic Forum (WEF) in the "Schools of the Future" report in 2020 offers ideas about the applications and importance of the contextual approach in the 21st century. WEF launched a global crowdsourcing campaign in the second half of 2019 to find inspiring examples of Schools of the Future (2020, p.12). In this context, when the selected 16 schools are examined; It is noteworthy that these schools, which aim to develop key skills in the 21st century, essentially establish an important link between school and real life. For example, one of these schools is the Green School. Students at the Green School apply learning to the real world through a global citizenship and sustainability lens, and truly take advantage of the natural world to tap into their curiosity, empathy, and creative thinking skills. And the other one is Kabakoo Academies. Kabakoo's curriculum focuses on ensuring employability among their students and immediate applicability of content to the local context. Part of their approach is to help students rapidly develop market-ready prototypes to solve relevant local problems through a sustainability lens. Students freely choose the local issues that most resonate with them, and then take part in courses and group projects to develop innovative solutions to those issues. Students are currently developing, for example, West Africa's first citizen platform to fight ambient air pollution and have designed and prototyped a low-cost tool for monitoring air quality (WEF, 2020, p.17). These are just two of the 16 schools presented in the report. From this point of view, it is correct to state that; Today, schools that provide the skills of the future should have the perspective of "knowledge is meaningful if it works in real life".

According to Avargil et al. (2012) Two of the major goals of science education are to develop students' scientific literacy and their higher order thinking skills. Achieving these goals should account for learning science in context (Gilbert, 2006) as well as learning scientific concepts and processes through dealing with real-world problems and adapted scientific articles. The OECD Scenarios for the Future of Schooling report has stated that "In a complex and quickly changing world, this might require the reorganization of formal and informal learning environments, and reimagining education content and delivery. In an aging world, these changes are likely to apply not just to basic education, but to lifelong learning as well " (OECD, 2020). Correctly structuring science education is an important mechanism for societies in being ready for or building a future that we cannot foresee. In many industries and countries, the most in-demand occupations or specialties did not exist 10 or even five years ago, and the pace of change is set to accelerate. By one popular estimate, 65% of children entering primary school today will ultimately end up working in completely new job types that don't yet exist (World Economic Forum [WEF]), 2016). In such a rapidly evolving employment environment, the ability to anticipate and prepare for future skill requirements is increasingly important. Considering the power of science education to direct and shape the jobs of the future,

the Context Based Learning Approach can be an important driving force for 21st century science education with its solid foundation, both conceptual and practical.

References

- Aikenhead, G. S. (2006). *Science education for everyday life: Evidence-based practice*: Teachers College Press.
- Avargil, S., Herscovitz, O., & Dori, Y. J. (2012). Teaching thinking skills in context-based learning: Teachers' challenges and assessment knowledge. *Journal of science education and technology*, 21(2), 207-225. <https://doi.org/10.1007/s10956-011-9302-7>
- Aydin Ceran, S. & Ates, S. (2019). The effects of 5E model supported by life based contexts on the conceptual understanding levels measured through different techniques. *Journal of Education in Science, Environment and Health (JESEH)*, 5(2), 227-243. <https://doi.org/10.21891/jeseh.557999>
- Aydin Ceran, S. (2018). *The effects of 5e models supported life-based contexts on the conceptual understanding level and scientific process skills* (Doctoral dissertation, Doctoral dissertation). Gazi University, Ankara. Retrieved From <https://tez.yok.gov.tr>.
- Beasley, W., & Butler, J. (2002). *Implementation of context-based science within the freedoms offered by Queensland schooling*. Paper presented at the annual meeting of Australasian Science and Education Research Association Conference, Townsville, Queensland.
- Bennett, J., & Lubben, F. (2006). Context-based chemistry: The Salters approach. *International Journal of Science Education*, 28(9), 999-1015. <https://doi.org/10.1080/09500690600702496>
- Berns, R. G., & Erickson, P. M. (2001). *Contextual teaching and learning: Preparing students for the new economy* (Vol. 5). Columbus, OH: National Dissemination Center for Career and Technical Education.
- Broman, K., Bernholt, S., & Christensson, C. (2020). Relevant or interesting according to upper secondary students? Affective aspects of context-based chemistry problems. *Research in Science & Technological Education*, 1-21. <https://doi.org/10.1080/02635143.2020.1824177>
- Bulte, A. M., Westbroek, H. B., de Jong, O., & Pilot, A. (2006). A research approach to designing chemistry education using authentic practices as contexts. *International Journal of Science Education*, 28(9), 1063-1086. <https://doi.org/10.1080/09500690600702520>
- Carin, A. A., Bass, J. E., & Contant, T. L. (2005). *Teaching science as inquiry*: Prentice Hall.
- Coştu, S. (2009). *Matematik öğretiminde bağlamsal öğrenme ve öğretme yaklaşımına göre tasarlanan öğrenme ortamlarında öğretmen deneyimleri*. (Master thesis) <https://tez.yok.gov.tr>.

- Crawford, M. (2001). Contextual teaching and learning: Strategies for creating constructivist classrooms. *Connections*, 11(6), 1-2.
- Demircioğlu, H., Vural, S., & Demircioğlu, G. (2012). The effect of a teaching material developed based on “REACT” strategy on gifted students’ achievement. *On Dokuz Mayıs University Journal of Education Faculty*, 31(2), 101-144.
- Deveci, İ., & Karteri, İ. (2020). Context-based learning supported by environmental measurement devices in science teacher education: a mixed method research. *Journal of Biological Education*, 1-26. <https://doi.org/10.1080/00219266.2020.1821083>
- Duit, R., Mikelskis-Seifert, S., & Wodzinski, C. T. (2007). Physics in context—a program for improving physics instruction in Germany. In *Contributions from science education research* (pp. 119-130). Springer, Dordrecht. ISBN-13 978-1-4020-5032-9 (e-book)
- Egri, S., Horányi, G., & Ádám, P. (2021). The future of physics teaching: Features of the new Hungarian National Core Curriculum and curriculum frameworks. In *Journal of Physics: Conference Series*. 1929 (2021) 012066. IOP Publishing. <https://doi.org/10.1088/1742-6596/1929/1/012066>
- Finkelstein, N. (2001, July). Context in the context of physics and learning. In *Physics Education Research Conference Proceedings*. Rochester, NY: PERC Publishing.
- Finkelstein, N. (2005). Learning physics in context: A study of student learning about electricity and magnetism. *International Journal of Science Education*, 27(10), 1187-1209. <https://doi.org/10.1080/09500690500069491>
- Gilbert, J. K. (2006). On the nature of “context” in chemical education. *International Journal of Science Education*, 28(9), 957-976. <https://doi.org/10.1080/09500690600702470>
- Gilbert, J. K., Bulte, A. M., & Pilot, A. (2011). Concept development and transfer in context-based science education. *International Journal of Science Education*, 33(6), 817-837. <https://doi.org/10.1080/09500693.2010.493185>
- Güneş, M. H. & Aksan, Z. (2015). Türkiye ve Güney Kore biyoloji öğretim programlarının karşılaştırılması . *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi* , 1 (33) , 20-41 . Retrieved from <https://dergipark.org.tr/en/pub/mauefd/issue/19406/206296>
- Glynn, S., & Koballa, T. (2005). The contextual teaching and learning instructional approach. *Exemplary science: Best practices in professional development*, 75-84.
- Ingram, S. J. (2003). *The effects of contextual learning instruction on science achievement of male and female tenth-grade students*. University of South Alabama, 2003.; Publication Number: AAI3106426; ISBN: 9780496539925.
- Kang, J., Keinonen, T., Simon, S., Rannikmäe, M., Soobard, R., & Direito, I. (2019). Scenario evaluation with relevance and interest (SERI): Development and validation of a scenario measurement tool for context-based learning. *International Journal of Science and Mathematics Education*, 17(7), 1317-1338. <https://doi.org/10.1007/s10763-018-9930-y>

- Karşlı, F., & Yiğit, M. (2016). 12 th grade students' views about an Alkanes Worksheet Based on the REACT Strategy. *Necatibey Faculty of Education Electronic Journal of Science & Mathematics Education*, 10(1), 472-499. <https://doi.org/10.17522/nefemed.76347>
- Kaufman, K. J. (2013). 21 ways to 21st century skills: why students need them and ideas for practical implementation. *Kappa Delta Pi Record*, 49(2), 78-83. <https://doi.org/10.1080/00228958.2013.786594>
- King, D., & Henderson, S. (2018). Context-based learning in the middle years: achieving resonance between the real-world field and environmental science concepts. *International Journal of Science Education*, 40(10), 1221-1238. <https://doi.org/10.1080/09500693.2018.1470352>
- King, D. (2012). New perspectives on context-based chemistry education: Using a dialectical sociocultural approach to view teaching and learning. *Studies in Science Education*, 48(1), 51-87. <https://doi.org/10.1080/03057267.2012.655037>
- King, D. T. (2009). Context-based chemistry: creating opportunities for fluid transitions between concepts and context. *Teaching Science: The Journal of the Australian Science Teachers Association*, 55(4), 13-19.
- King, D., Bellocchi, A., & Ritchie, S. M. (2008). Making connections: Learning and teaching chemistry in context. *Research in Science Education*, 38(3), 365-384 <https://doi.org/10.1007/s11165-007-9070-9>
- King, D., & Ritchie, S. (2007). *Implementing a context-based approach in a chemistry class: Successes and dilemmas*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, New Orleans, LA.
- Kwok, S. (2018). Science education in the 21st century. *Nature Astronomy*, 2(7), 530-533. <https://doi.org/10.1038/s41550-018-0510-4>
- Nentwig, P. M., Demuth, R., Parchmann, I., Ralle, B., & Gräsel, C. (2007). Chemie im Kontext: Situating learning in relevant contexts while systematically developing basic chemical concepts. *Journal of Chemical Education*, 84(9), 1439. <https://doi.org/10.1021/ed084p1439>
- Millar, R. (2006). Twenty first century science: Implications from the design and implementation of a scientific literacy approach in school science. *International Journal of Science Education*, 28(13), 1499–1521. <https://doi.org/10.1080/09500690600718344>
- OECD (2020). *Back to the Future of Education Four OECD Scenarios for Schooling*. <https://www.oecd.org/education/back-to-the-future-s-of-education-178ef527-en.htm>
- OECD (2019). *The Future of Education and Skills-Education 2030: A Series of Concept Notes*. http://www.oecd.org/education/2030-project/teaching-and-learning/learning/learning-compass-2030/OECD_Learning_Compass_2030_Concept_Note_Series.pdf
- Parchmann, I., Gräsel, C., Baer, A., Nentwig, P., Demuth, R., & Ralle, B. (2006). “Chemie im Kontext”: A symbiotic implementation of a context-based teaching

- and learning approach. *International Journal of Science Education*, 28(9), 1041-1062. <https://doi.org/10.1080/09500690600702512>
- Park, J., & Lee, L. (2004). Analysing cognitive or non-cognitive factors involved in the process of physics problem-solving in an everyday context. *International Journal of Science Education*, 26(13), 1577-1595. <https://doi.org/10.1080/0950069042000230767>
- Pilot, A., & Bulte, A. M. (2006). The use of “contexts” as a challenge for the chemistry curriculum: Its successes and the need for further development and understanding. *International Journal of Science Education*, 28(9), 1087-1112. <https://doi.org/10.1080/09500690600730737>
- Podschuweit, S., & Bernholt, S. (2018). Composition-effects of context-based learning opportunities on students’ understanding of energy. *Research in Science Education*, 48(4), 717-752. <https://doi.org/10.1007/s11165-016-9585-z>
- Rohayati, T. (2013). The implementation of contextualization in teaching vocabulary to elementary students (React: Relating, Experiencing, Applying, Cooperating, and Transferring). *Journal of English and Education*, 1(2), 115-123.
- Sevian, H., Dori, Y. J., & Parchmann, I. (2018). How does STEM context-based learning work: what we know and what we still do not know. *International Journal of Science Education*, 40(10), 1095-1107. <https://doi.org/10.1080/09500693.2018.1470346>
- Stolk, M. J., Bulte, A. M., De Jong, O., & Pilot, A. (2016). A framework for empowering teachers for teaching and designing context-based chemistry education. In *Teachers creating context-based learning environments in science* (pp. 191-211). Brill Sense.
- Sunar, S. (2013). *The effect of context-based instruction integrated with learning cycle model on students’ achievement and retention related to states of matter subject*. (Doctoral Dissertation). Retrieved from <https://tez.yok.gov.tr>
- Swirski, H., Baram-Tsabari, A., & Yarden, A. (2018). Does interest have an expiration date? An analysis of students’ questions as resources for context-based learning. *International Journal of Science Education*, 40(10), 1136-1153. <https://doi.org/10.1080/09500693.2018.1470348>
- Taasoobshirazi, G., & Carr, M. (2008). A review and critique of context-based physics instruction and assessment. *Educational Research Review*, 3(2), 155-167. <https://doi.org/10.1016/j.edurev.2008.01.002>
- Uitto, A., Juuti, K., Lavonen, J., & Meisalo, V. (2006). Students’ interest in biology and their out-of-school experiences. *Journal of biological education*, 40(3), 124-129. <https://doi.org/10.1080/00219266.2006.9656029>
- Ültay, N., & Çalık, M. (2012). A thematic review of studies into the effectiveness of context-based chemistry curricula. *Journal of Science Education and Technology*, 21(6), 686-701. <https://doi.org/10.1007/s10956-011-9357-5>
- UNESCO (2014). *Education Strategy 2014-2021*. <https://unesdoc.unesco.org/ark:/48223/pf0000231288>

- Vogelzang, J., & Admiraal, W. F. (2017). Classroom action research on formative assessment in a context-based chemistry course. *Educational Action Research*, 25(1), 155-166. <https://doi.org/10.1080/09650792.2016.1177564>
- Whitelegg, E., & Parry, M. (1999). Real-life contexts for learning physics: meanings, issues and practice. *Physics Education*, 34(2), 68. Retrieved From <https://iopscience.iop.org/article/10.1088/0031-9120/34/2/014/pdf>.
- Ware, S. & Tinnesand, M. J. (2005). “Chemistry in the community: Chemistry for future citizens”. In *Making it relevant. Context-based learning of science*. (Eds) Nentwig, P. and Waddington, D. Münster. Germany: Waxmann Verlag.
- WEF (2016). *The Future of Jobs Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*. http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf
- WEF (2020). *Schools of the Future*. https://www3.weforum.org/docs/WEF_Schools_of_the_Future_Report_2019.pdf
- Wilkinson, J. W. (1999). The contextual approach to teaching physics. *Australian Science Teachers Journal*, 45(4), 43.

About Author

Sema AYDIN-CERAN, PhD, is Assistant Professor of Division of Classroom Education at Selcuk University in Konya, Turkey. She holds a PhD in Elementary Science Education from Gazi University of Turkey. Her main area of interest are Real-Life Context Based Learning, different measurement techniques, individual differences, scientific creativity, scientific process skills and conceptual learning in science education. Also, she has interest about studies on primary school science education and carries out projects on parents' education in developing children's scientific research skills.

E-mail: sema.aydinceran@selcuk.edu.tr, ORCID iD, <https://orcid.org/0000-0001-6847-2766>

To Cite This Chapter:

Ceran, S. A. (2021). Contextual learning and teaching approach in 21st century science education. In A. Csiszárík-Kocsir & P. Rosenberger (Eds.), *Current Studies in Social Sciences 2021*(pp. 160–173). ISRES Publishing.

Gamification in Education: An Overview of the Literature

Mustafa Tevfik HEBEBCI
Necmettin Erbakan University

Selahattin ALAN
Selcuk University

Introduction

The concept of gamification, which is defined as the use of game design elements in cases outside the game context (Detering et al., 2011a), was first introduced by Nick Pelling in 2002 (Marczewski, 2013). Gamification was included in the documents in 2008 and popularized in 2010 at the Design, Innovate, Communicate, Entertain conference thanks to Jesse Schell (Birch, 2013; Deterding et al., 2011b; Xu, 2011). Google Trends reports the concept of gamification has a remarkable upward trend after the 2010s (Figure 1). This trend has also affected the gamification market, worth \$10.19 million in 2020, and is expected to reach nearly \$40 million by 2026 (Mordor Intelligence, 2021).

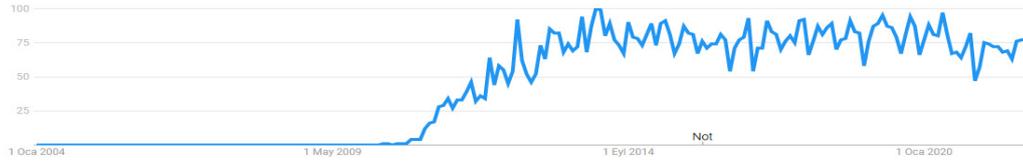


Figure 1. Google Trends Data (Keyword: Gamification)

Gamification as a concept is used effectively in many fields today. It first attracted attention in the marketing, trade, and advertising sectors (Fiş Erümit, 2016). Badges earned through check-ins with social media applications such as Foursquare and Swarm and the points collected on e-commerce sites and awards are examples of this issue (Huotari & Hamari, 2012). Gamification applications, which have gained significant momentum with commercial studies, have also started to be used in educational environments over time (Barna & Fodor, 2017; Kapp, 2012; Luo, 2021; Majuri, Koivisto, & Hamari, 2018; White & Shellenbarger, 2018).

Various websites and mobile applications have been developed for gamification, one of which is ClassDojo, which has a digital badge-based structure. ClassDojo is an in-class communication and digital badge application that brings teachers, parents, and students together. Students can be given badges through the application. Besides, thanks to ClassDojo, students' achievement level, homework performance, activity levels in the classroom can be followed with the virtual characters they create. The platform was used in many studies in the literature (Chiarelli, Szabo, & Williams, 2015; Marouf & Brown, 2021). Another educational example is Khan Academy. It is an online learning environment with free course materials worldwide. In this environment, it has gamification

elements such as points, badges, participation in learning tasks, and progress statistics on completing learning tasks (Simoes Redondo, & Vilas, 2013). Another application is the Web 2.0 application of “Kahoot.” Using Kahoot, students are provided to answer the questions prepared in advance from their devices with internet access. Then, teachers can access detailed reports on the answers given by the students through the website. It is widely used at all levels of education (Basuki & Hidayati, 2019; Correia & Santos, 2017; Licorish et al., 2018).

Gamification

Different definitions of gamification have been made by many researchers (Kapp, 2012; Lee & Hammer, 2011; Sheldon, 2012; Zichermann & Cunningham, 2011). Zichermann and Cunningham (2011) define gamification in their book on gamification as “*the process of game-thinking and game mechanics to engage users and solve problems.*” Kapp (2012) defines it as “*using game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning, and solve problems.*” The most widely accepted definition was made by Deterding et al. (2011a). In their research titled “From Game Design Elements to Gamefulness: Defining Gamification,” they used the concept of gamification and defined it as “*the use of game design elements in non-game contexts.*” This study also emphasized the similarities and differences with productivity games, applied gaming, game layer, fun ware, surveillance entertainment, behavioral games, and playful design, which are often confused with gamification.

Gamification has become a common subject of many fields such as marketing (Hofacker et al., 2016; Huotari & Hamari, 2012; Yang, Asaad, & Dwivedi, 2017), health (Ahmed et al., 2015; McCoy, Lewis, & Dalton, 2016; Sardi, Idri, & Fernández-Alemán, 2017), education (Caponetto, Earp, & Ott, 2014; Dicheva et al., 2015; Fan, Xiao, & Su, 2015; Kim et al., 2018; Nah et al., 2014; Sailer & Homner, 2020), tourism (Negruşa et al., 2015; Xu, Weber & Buhalis, 2013; Xu, Buhalis, & Weber, 2017), and business (Jakubowski, 2014; Kappen & Nacke, 2013; Kumar, 2013). This popularity has led to the emphasis on different aspects of gamification. However, in general, gamification is used to increase the loyalty and motivation of users.

Elements of Gamification

Werbach and Hunter (2012) proposed a pyramidal structure consisting of three categories for gamification (Figure 2). Categories in this structure are dynamics, mechanics, and components. In evaluating this pyramid, it is necessary to start from the upper point. The gamification design process starts with the fundamental dynamics of needs. It continues with determining the mechanisms selected in line with the dynamics and the components connected to them (Bozkurt & Genç-Kumtepe, 2014).

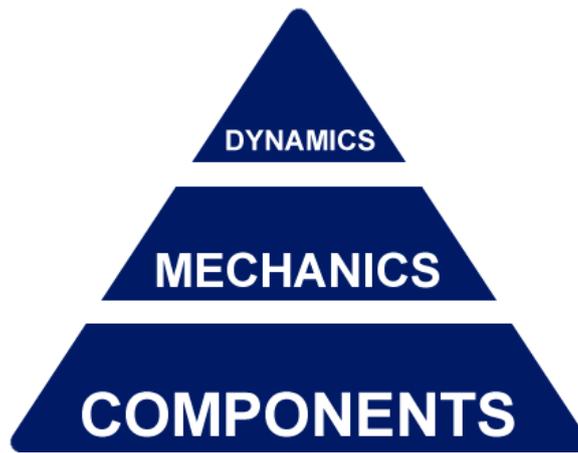


Figure 2. The Pyramid of Elements of Gamification (Adapted from Werbach and Hunter, 2012).

Dynamics is the “big picture” aspects of the gamified system that you have to consider and manage but which can never directly enter into the game.” *Mechanics* is the “basic processes that drive the action forward and generate player engagement.” *Components* is the “specific instantiations of mechanics and dynamics.” (Werbach & Hunter, 2012). It is crucial to use gamification elements in tandem to design a successful gamification system. However, using a few of these elements and insufficient intrinsic and extrinsic motivations are the biggest obstacles to an effective gamification design. (Burke, 2016; da Rocha Seixas, Gomes, & de Melo Filho, 2016; Kapp, 2013; Werbach & Hunter, 2012).

The dynamics, mechanics, and components suggested by Werbach & Hunter (2012) are detailed in Table 1.

Table 1. Elements of Gamification (Werbach & Hunter, 2012)

Dynamics	Mechanics	Components
1. Constraints	1. Challenges	1. Achievements
2. Emotions	2. Chance	2. Avatars
3. Narrative	3. Competition	3. Badges
4. Progression	4. Cooperation	4. Boss Fights
5. Relationship	5. Feedback	5. Collections
	6. Resource acquisition	6. Combat
	7. Rewards	7. Content unlocking
	8. Transactions	8. Gifting
	9. Turns	9. Leaderboards
	10. Win states	10. Levels
		11. Points
		12. Quests
		13. Social graphs
		14. Teams
		15. Virtual goods

Gamification Design Models

For gamification to provide the expected effect, care should be given in the design and implementation phase, and a system configuration should be provided in accordance with the users' expectations (Domínguez et al., 2013). The following three items are critical for an effective and successful gamification design (Berber, 2018):

1. Clarifying the target
2. Knowing the target audience
3. Identifying expected behaviors

It is essential to use a model that will guide the process to realize a successful and effective gamification design. In this context, some models and frameworks have been developed by different researchers regarding gamification processes, which include the following:

1. D6 gamification model (Werbach & Hunter, 2012)
2. Octalysis Framework (Chou, 2014)
3. Hook Model (Eyal & Hoover, 2015)
4. Framework for Sustainable Gamification Impact (Al Marshedi, Wanick Vieira, & Ranchhod, 2015)
5. Gamification Design Model (Marczewski, 2017)

Relevant Literature

Systematic review studies on gamification generally yield positive results (Hamari, Koivisto, & Sarsa, 2014; Nah et al., 2014; Zicherman & Linder, 2010). On the contrary, some researchers criticized gamification (Haque, 2010; Lazzaro, 2011). However, effective and correct gamification design does not cause such problems. To this end, Bozkurt & Genç Kumtepe (2014) argue that gamification criticisms are generally related to design for consumer behavior.

The literature review indicates bibliometric studies, although not as much as compilation studies for gamification. These studies are directly related to gamification (López-Belmonte et al., 2020; Trinidad, Ruiz, & Calderón, 2021; Weiss, 2019; Yoon, 2019), health (Li et al., 2019; Macedo, Reis, & De-Bortoli, 2018), marketing (Nopliardy & Ukwueze, 2021), and education (Grosseck, Malita, & Sacha, 2020; Luo, 2021; Swacha, 2021).

In the bibliometric study conducted by Swacha (2021), WoS, Scopus, and Google Scholar were used as data sets. Some of the results obtained from the research reveal that most of the gamification studies in education originated in the USA, Spain, England, and Germany. Notably, the top 10 countries constitute approximately 50% of the entire data set. In terms of publication types, conference proceedings constitute approximately 60% of the data set. The keywords frequently used in the studies emerged as gamification, motivation, and education. Within the scope of the research, the authors of the most cited and co-cited studies were also reported.

Another study is a bibliometric study evaluating studies between 2010 and 2014 (Martí-Parreño, Méndez-Ibáñez Alonso-Arroyo, 2016). The data set of the research consists of 139 articles collected over WoS. The research results show that the number of studies on gamification is increasing day by day; the journal with the most publications in this field is *Computers & Education* and noted that the institution is the National Taiwan University of Science and Technology.

In a study by Khatibi, Badeleh, and Khodabandelou (2021), researchers focused on gamification trends in higher education. The data set of the research was obtained from WoS, as in many bibliometric studies. 432 documents between the years 2010-2020 were examined within the scope of the research. The research results reported that after 2013, studies on gamification had increased remarkably. A large part of the research consists of conference proceedings, followed by articles. Spain has emerged as the most productive country in gamification, followed by the USA and England. “University of Duisburg-Essen” is among the leading institutions regarding the number of citations. Motivation, e-learning, and game-based learning are among the most used keywords.

Luo (2021) examined 4059 studies in the WoS database. The reason why the number is so high is due to the keywords used by the researcher. The researcher evaluated the studies between 1995 and 2020. The research results indicate that the most productive countries in gamification are the USA, Spain, and England, the institutions are “Coventry University,” “Institution of Technology Carlow,” and “European University of Valencia,” and the journals are “*Computers & Education*,” “*Computers in Human Behavior*,” and “*Games for Health Journal*.”

In addition to these studies, Grosseck, Malita, and Sacha (2020) focused on gamification studies in higher education, Pankiewicz and Abdiomar (2021) studied item-based educational systems in gamification, and Karahan and Gül (2021) conducted bibliometric studies on current trends on gamification of cultural heritage. This research is different and significant in evaluating scientific articles about gamification in educational environments.

Research Objective

This research aims to reveal the scientific research trends within the scope of gamification in education.

Sub-Objectives

1. What is the distribution of articles on the use of gamification in educational settings by year, WoS index, country, and publication language?
2. What is the distribution of the most cited articles and journals in articles on the use of gamification in educational settings?
3. What is the cooperation between the countries of the articles on the use of gamification in educational settings?
4. What is the relationship between the most cited authors and journals in articles on the use of gamification in educational settings?
5. What are the most studied concepts in articles on the use of gamification in educational settings?

Method

This research was designed in a descriptive survey model. In the analysis of the obtained data, bibliometric and descriptive analysis methods were used. There are two primary purposes in bibliometric research: performance analysis and scientific mapping (Cobo et al., 2011; Gutiérrez-Salcedo et al., 2018). Performance analysis describes the publication performance of authors, institutions, and countries. On the other hand, scientific mapping reflects the dynamics and structure of the scientific field through visualization methods (Cobo et al., 2011; Tang, Liao, & Su, 2018).

Research data were collected through the Web of Science Core Collection (WoS). The data were collected by detailed search with keywords for research. The criteria used in filtering the articles are shown in Table 2.

Table 2. Filtering Criteria

Topic	TS=(("gamifi*") and ("education*"))
Documents Type	Article
WoS Categories	Education Educational Research, Education Scientific Disciplines, Education Special
Time Span	All Years
Indexes	SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI

As a result of the search made after the determined criteria, 798 articles were accessed (December 2021). WOS self-developed analysis system, Office programs, and VOSviewer 1.6.16 package software were used to analyze these articles.

Finding and Discussions

Considering the distribution of articles by year, it is reported that the number of studies on gamification is in a systematic increase every year. (Figure 3).

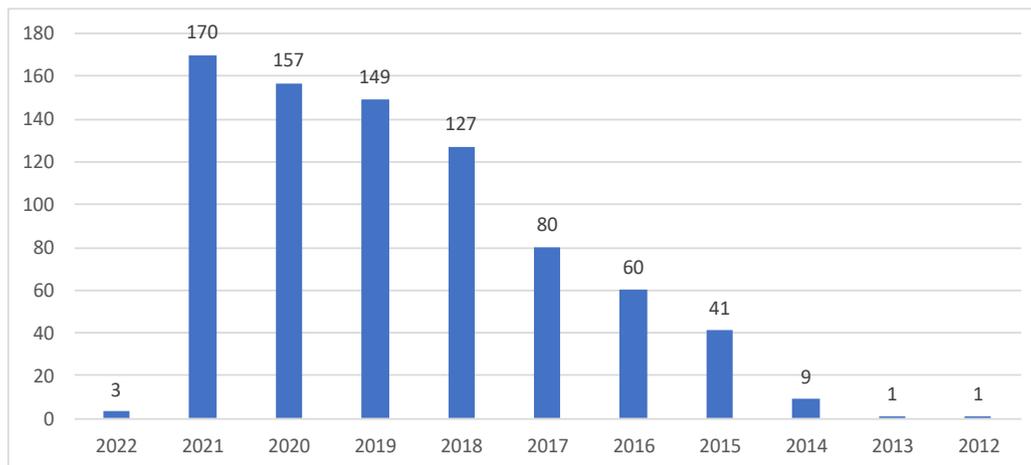


Figure 3. Distribution of Articles by Year

Figure 3 shows that most of the publications on the subject were published between the years 2018-2021. Namely, 170 articles in 2021, 157 articles in 2020, 149 articles in 2019, and 127 articles in 2018. For the year 2022, it is seen that there are three articles as of December 2021. The developments in educational technologies can explain the current situation, teaching and learning strategies (Khatibi, Badeleh, & Khodabandelou, 2021), and the spread of gamification. This finding demonstrates that gamification studies carried out in educational environments will increasingly continue. Studies in the literature also support this result (Grosseck, Malita, & Sacha, 2020; Khatibi, Badeleh, & Khodabandelou, 2021; López-Belmonte et al., 2020; Luo, 2021; Swacha, 2021; Trinidad, Ruiz, & Calderón, 2021).

When the distribution of articles by WoS index is examined, it is noteworthy that most of them were indexed in ESCI (Emerging Sources Citation Index) (n=459), followed by SSCI (Social Sciences Citation Index) with 258 articles, and SCI-Expanded (Science Citation Index Expanded) with 145 articles (Figure 4).

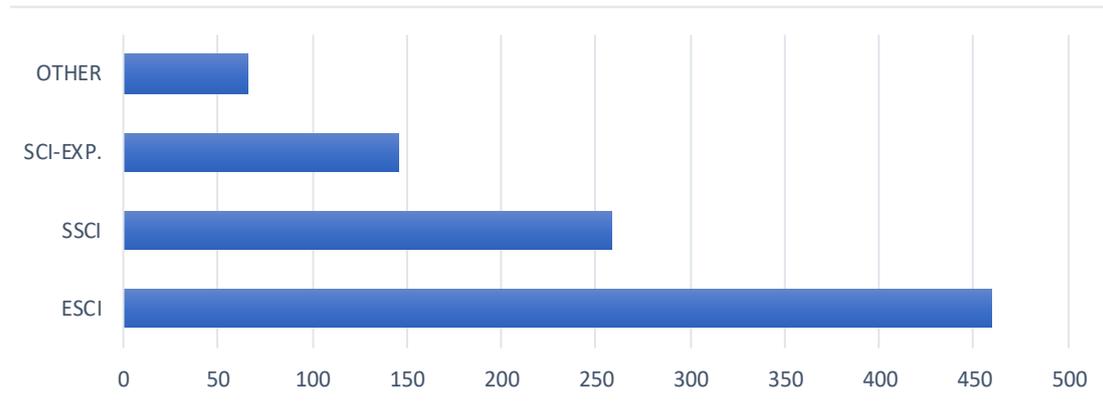


Figure 4. WoS Index Distributions of Articles

Within the scope of the research, the number of articles on gamification that countries have were examined. The ten countries with the most articles are shown in Figure 5.

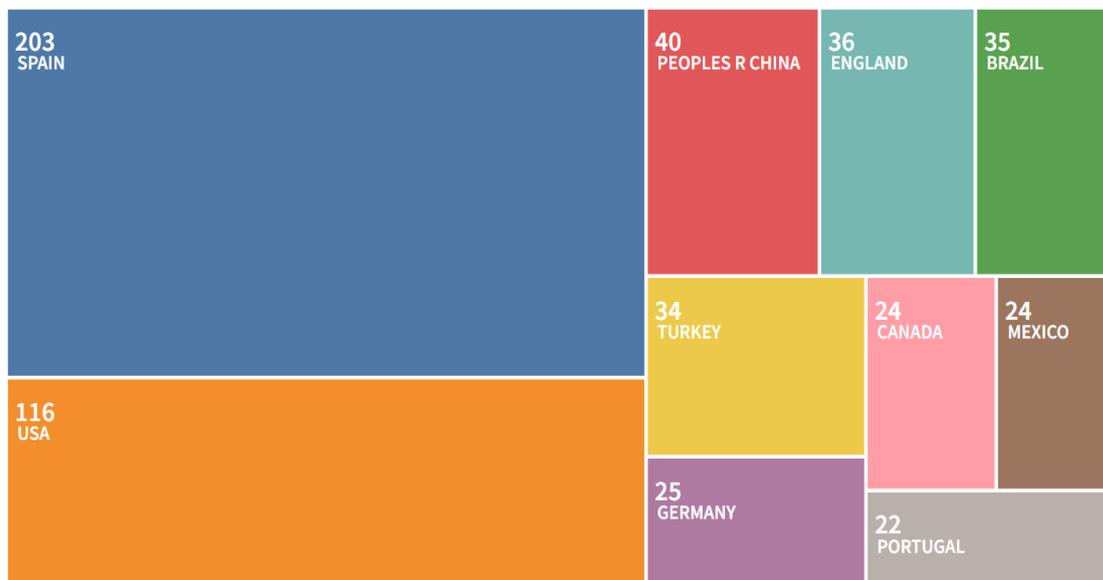


Figure 5. Distribution of Articles by Country

A quarter of the articles on gamification were conducted by Spanish researchers ($n=203$; 25.43%). Spain is followed by the USA ($n=116$; 14.53%), China ($n=40$; 5.01%), England ($n=36$; 4.51%), Brazil ($n=35$; 4.38%), and Turkey ($n=34$; 4.26%), respectively. These six countries published approximately 60% of the total number of articles. It is seen that there are studies with similar results in the literature (Grosseck, Malita, & Sacha, 2020; Khatibi, Badeleh, & Khodabandelou, 2021; López-Belmonte et al., 2020). In the study conducted by Swacha (2021), the USA takes first place. This difference is thought to be due to the difference in the data sets of the two studies because the relevant study data was taken from Scopus. The finding that 81 countries in the world are producing studies in this field is one of the remarkable results of this research. This result is also consistent with the findings of Swacha (2021) and Grosseck, Malita, & Sacha (2020).

In terms of the publication language of the studies, they are generally written in English (639), followed by Spanish (n=125) and Portuguese (n=19) (Figure 6). English is a common language used in international literature, so this is an expected result. The fact that Spanish and Portuguese are at the forefront may be related to many articles in these geographies.

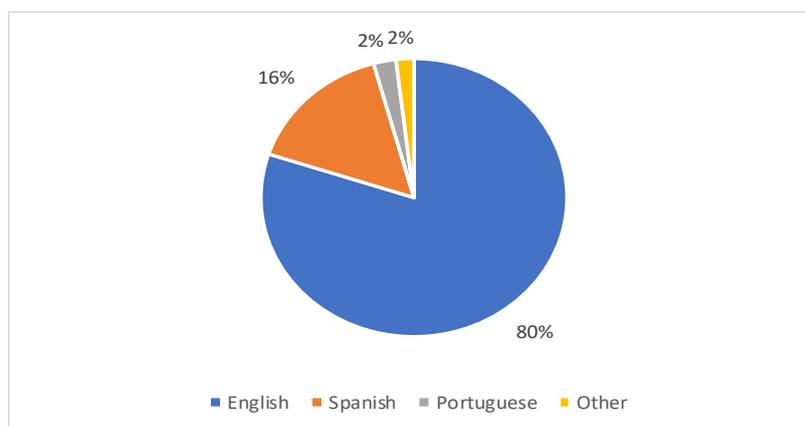


Figure 6. Distribution of Articles by Publication Language

The information on the 10 most cited articles out of 798 articles examined within the scope of the research is shown in Table 3. While creating the data set, no restrictions were made in terms of the number of citations and publications.

Table 3. Top 10 Most Cited Articles

Article	Author(s)	Year	Journal	Citation
1. Gamifying learning experiences: Practical implications and outcomes	Domínguez et al.	2013	Computers & Education	651
2. Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance	Hanus & Fox	2015	Computers & Education	574
3. Gamification in education: A systematic mapping study	Dicheva et al.	2015	Journal of Educational Technology & Society	498
4. An empirical study comparing gamification and social networking on e-learning	De-Marcos et al.	2014	Computers & Education	262
5. Foundations of game-based learning	Plass et al.	2016	Educational Psychologist	220
6. A mobile gamification learning system for improving the learning motivation and achievements	Su & Cheng	2015	Journal of Computer Assisted Learning	184
7. Gamification for Engaging Computer Science Students in Learning Activities: A Case Study	Ibanez et al.	2014	IEEE Transactions on Learning Technologies	164
8. Digital badges in education	Gibson et al.	2013	Education and Information Technologies	142
9. Gamification in assessment: Do points affect test performance?	Attali & Arieli-Attali	2015	Computers & Education	136
10. A multilevel analysis of the effects of external rewards on elementary students' motivation, engagement and learning in an educational game	Filsecker & Hickey	2014	Computers & Education	125

Table 3 shows that the most cited article is Domínguez et al. (2013), followed by Hanus

As a result of the analysis, the leading countries in the context of co-authorship are England (n=19), Spain (n=14), China (n=14), and the USA (n=14). Additionally, according to the network analysis results, countries were gathered under four different clusters. There are also similar results in the literature (Grosseck, Malita, & Sacha, 2020; López-Belmonte et al., 2020). In the cooperation between the two countries, it is indicated that there is a closer relationship between Spain and Mexico (link strength=6), the USA, and South Korea (link strength=8). According to the results obtained, geographical location does not directly affect the cooperation between countries. It is significant to note that developed countries are generally at the center of each cluster and cooperate with other countries.

The co-citation results for the authors are shown in the network map in Figure 8. 110 authors with at least 20 citations were included in the analysis process.

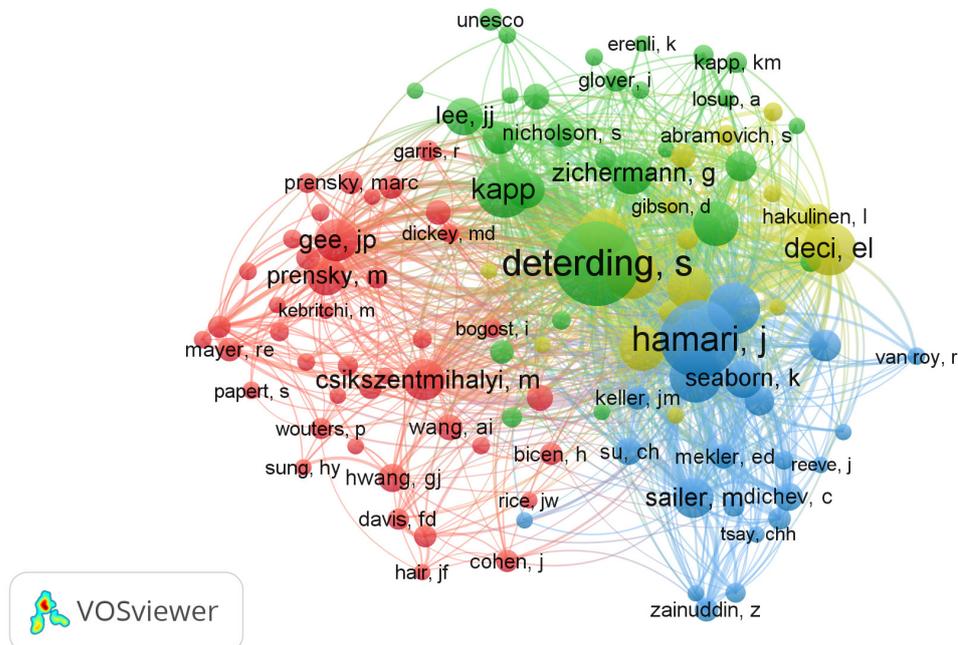


Figure 8. Co-Citation Analyses of the Authors

Figure 8 reports that the authors are gathered under four different clusters. The circle size is related to the number of citations. Deterding (n=349), Hamari (n=302), and Kapp (n=172) are among the leading authors in terms of co-citation. The study results conducted by Swacha (2021) are in line with this study's findings. Besides, considering that these authors are renowned scientists who direct the field of gamification, this is an expected result.

The results of the co-citation analysis in the context of the journals are similar to the results of the citation analysis. The analysis results, which included 184 journals with at least 20 citations, are shown in Figure 9.

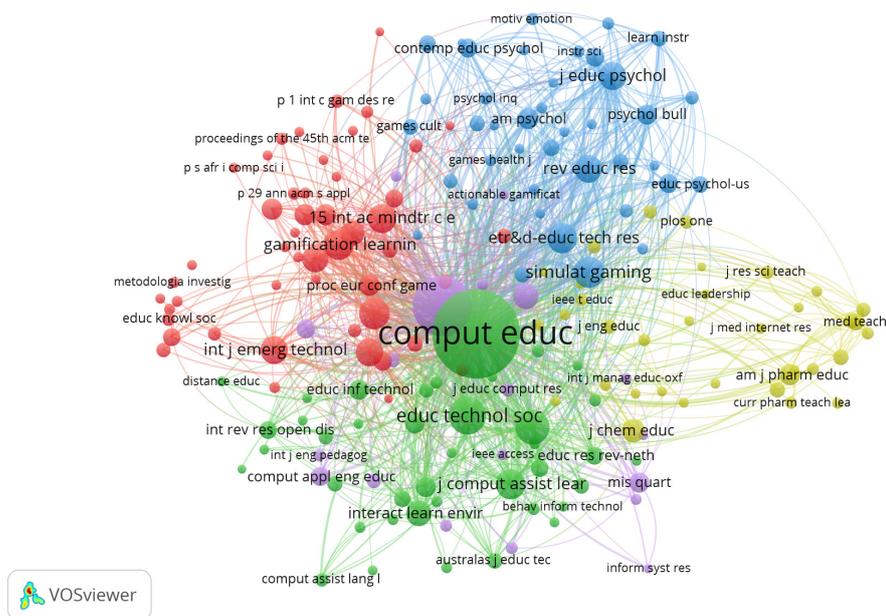


Figure 9. Co-Citation Analyses of the Journals

When Figure 9 is examined, it is seen that the journals are gathered in 5 different clusters. When the network map is considered in general, it is notable that the journals “Computers & Education” and “Computers in Human Behavior” are ahead by far. When the green cluster is examined, they are generally technology-oriented journals. Computers & Education, at the center of this cluster, received 1658 co-citations. Journals in the blue cluster are mostly psychology-based journals. Journal of Educational Psychology ($n=172$) is among the prominent journals. In the red cluster, there are journals about gamification. One of the journals that draw attention here is Gamification Learning ($n=202$). The purple cluster is the journals about education and training. Computers in Human Behavior ($n=776$) is also one of the remarkable journals. In the yellow cluster, there are health-centered journals. Journal of Chemical Education ($n=121$) is one of the leading journals in terms of co-citations. The results obtained by Grosseck, Malita, and Sacha (2020) are similar to this study.

Common word analysis was carried out to analyze the most used keywords within the scope of the research. 91 of a total of 1966 terms repeated at least 5 times were included in the analysis process. The size of the circles in the image represents the frequency of using the keywords, and the color of the circles represents the publication years of the studies in which the words were used.

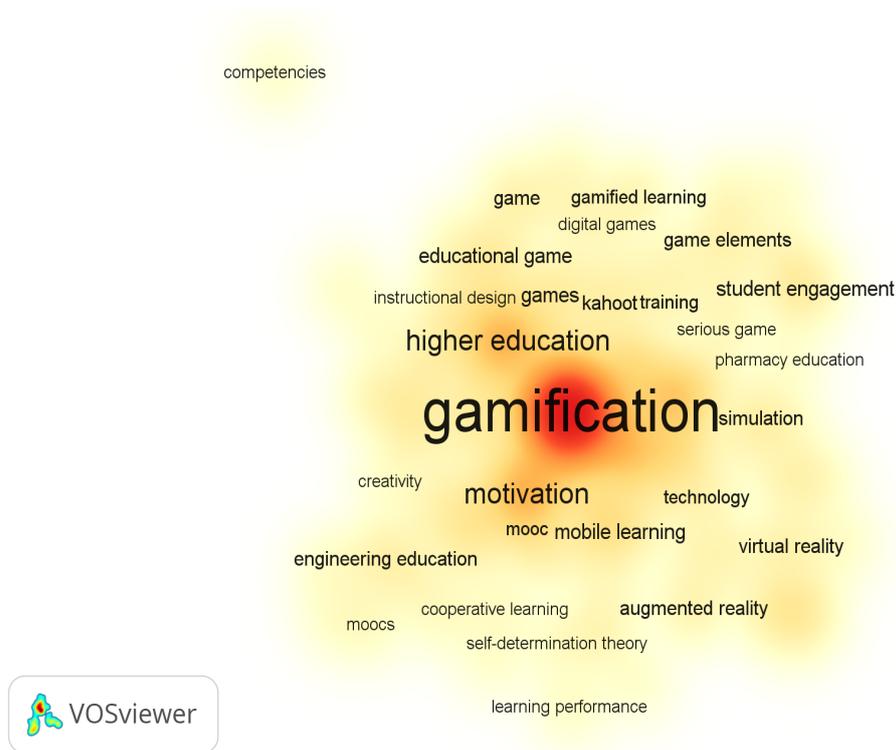


Figure 10. Most Used Terms in Keywords

Figure 10 reflects that the keywords frequently used in the articles are gamification (n=469), higher education (n=67), motivation (n=66), and game-based learning (n=54). This result is similar to many studies in the literature (Grosseck, Malita, & Sacha, 2020; Swacha, 2021; Trinidad, Ruiz, & Calderón, 2021).

Conclusion

In this study, in which articles on gamification in educational environments were examined, the following conclusions were obtained:

1. The articles were published in 2002 and 2022. The peak publication was between the years 2018-2021.
2. Articles are generally indexed by ESCI.
3. Spain and the USA are far ahead of other countries regarding the number of published articles.
4. English was generally preferred as the publication language of the articles.
5. Most cited studies were made by Domínguez et al. (2013), Hanus & Fox (2015), and Dicheva et al. (2015).
6. “Computers & Education,” “Educational Technology & Society,” and “Interactive Learning Environments” are the most cited journals.

7. The most cooperating countries are England, Spain, China, and the USA.
8. The most co-cited authors are Deterding, Hamari, and Kapp.
9. “Computers & Education” and “Computers in Human Behavior” are the most commonly cited journals.
10. Gamification, higher education, and motivation keywords are the most preferred keywords by the authors in the articles.

Suggestions

Suggestions for future studies include the following:

1. The data set of the research is limited to WoS only. More comprehensive studies can be carried out by including other databases.
2. Results can be compared using different analysis techniques.
3. This research is limited to articles only. Other academic studies can be included or evaluated separately and compared in other studies.

References

- Ahmed, M., Sherwani, Y., Al-Jibury, O., Najim, M., Rabee, R., & Ashraf, M. (2015). Gamification in medical education. *Medical Education Online*, 20(1), 29536. <https://doi.org/10.3402/meo.v20.29536>
- *Attali, Y., & Arieli-Attali, M. (2015). Gamification in assessment: Do points affect test performance?. *Computers & Education*, 83, 57-63.
- Al Marshedi, A., Wanick Vieira, V., & Ranchhod, A. (2015). SGI: a framework for increasing the sustainability of gamification impact. *International Journal for Infonomics*, 8(1/2), 1044-1052.
- Barna, B., & Fodor, S. (2017, September). An empirical study on the use of gamification on IT courses at higher education. In *International Conference on Interactive Collaborative Learning* (pp. 684-692). Springer, Cham.
- Basuki, Y., & Hidayati, Y. (2019, April). Kahoot! or Quizizz: the Students' Perspectives. In *Proceedings of the 3rd English Language and Literature International Conference (ELLiC)* (pp. 202-211).
- Berber, A. (2018). *Oyunlaştırma: Oynayarak başarmak [Gamification: Achieve by playing]*. Ankara: Seçkin Yayıncılık [Seçkin Publishing].

- Birch, H. (2013). Motivational effects of gamification of piano instruction and practice. (Unpublished master's dissertation). University of Toronto, Canada.
- Bozkurt, A., & Genç Kumtepe, E. (2014). Oyunlaştırma, oyun felsefesi ve eğitim: Gamification [Gamification, game philosophy and education: Gamification]. *Akademik Bilişim Konferansı [Academic Informatics Conference]*, Mersin, Turkey
- Burke, B. (2016). *Gamify: How gamification motivates people to do extraordinary things*. Routledge.
- Caponetto, I., Earp, J., & Ott, M. (2014, October). Gamification and education: A literature review. In *European Conference on Games Based Learning* (Vol. 1, p. 50). Academic Conferences International Limited.
- Chiarelli, M., Szabo, S., & Williams, S. (2015). Using ClassDojo to Help with Classroom Management during Guided Reading. *Texas Journal of Literacy Education*, 3(2), 81-88.
- Chou, Y. K. (2014). *Actionable Gamification: Beyond Points, Badges, and Leaderboards*. CA: Octalysis Media.
- Cobo, M. J., López-Herrera, A. G., Herrera-Viedma, E., & Herrera, F. (2011). Science mapping software tools: Review, analysis, and cooperative study among tools. *Journal of the American Society for information Science and Technology*, 62(7), 1382-1402.
- Correia, M., & Santos, R. (2017, November). Game-based learning: The use of Kahoot in teacher education. In *2017 International Symposium on Computers in Education (SIIE)* (pp. 1-4). IEEE.
- da Rocha Seixas, L., Gomes, A. S., & de Melo Filho, I. J. (2016). Effectiveness of gamification in the engagement of students. *Computers in Human Behavior*, 58, 48-63.
- *De-Marcos, L., Domínguez, A., Saenz-de-Navarrete, J., & Pagés, C. (2014). An empirical study comparing gamification and social networking on e-learning. *Computers & Education*, 75, 82-91.
- Deterding, S., Khaled, R., Nacke, L., & Dixon, D. (2011b, September). From game design elements to gamefulness: Defining gamification. Paper presented at the *15th International Academic MindTrek Conference: Envisioning Future Media Environments*, Finland.
- Deterding, S., Sicart, M., Nacke, L., O'Hara, K., & Dixon, D. (2011a, May). Gamification:

Using game-design elements in nongaming contexts. Paper presented at the *International Conference on Human Factors in Computing Systems*, Canada

- *Dicheva, D., Dichev, C., Agre, G., & Angelova, G. (2015). Gamification in education: A systematic mapping study. *Journal of Educational Technology & Society*, 18(3), 75-88.
- *Domínguez, A., Saenz-de-Navarrete, J., De-Marcos, L., Fernández-Sanz, L., Pagés, C., & Martínez-Herráiz, J. J. (2013). Gamifying learning experiences: Practical implications and outcomes. *Computers & Education*, 63, 380-392.
- Eyal, N., & Hoover, R. (2015). *Kancaya takılınca: Alışkanlık yaratan ürünler geliştirmenin sırları* [Once on the hook: The secrets to developing habit-creating products]. (Translate. B. Akat). Ankara: Elma Yayınevi [Elma Publishing].
- Fan, K. K., Xiao, P. W., & Su, C. (2015). The effects of learning styles and meaningful learning on the learning achievement of gamification health education curriculum. *Eurasia Journal of Mathematics, Science and Technology Education*, 11(5), 1211-1229.
- *Filsecker, M., & Hickey, D. T. (2014). A multilevel analysis of the effects of external rewards on elementary students' motivation, engagement and learning in an educational game. *Computers & Education*, 75, 136-148.
- Fiş Erümit, S. (2016). Oyunlaştırma yaklaşımlarının eğitimde kullanımı: Tasarım tabanlı bir araştırma [Use of gamification approaches in education: A design-based research]. Doktora Tezi [Phd thesis], Atatürk Üniversitesi Eğitim Bilimleri Enstitüsü [Ataturk University Institute of Educational Sciences], Erzurum, Turkey.
- *Gibson, D., Ostashevski, N., Flintoff, K., Grant, S., & Knight, E. (2015). Digital badges in education. *Education and Information Technologies*, 20(2), 403-410.
- Grosbeck, G.; Malita, L., Sacha, G. M. (2020) Gamification in Higher Education: A Bibliometric Approach. In Proceedings of the 16th International Scientific Conference—eLearning and Software for Education, Bucharest, Romania, 30 April–1 May 2020; eLSE: Bucharest, Romania, pp. 20–30.
- Gutiérrez-Salcedo, M., Martínez, M. Á., Moral-Muñoz, J. A., Herrera-Viedma, E., & Cobo, M. J. (2018). Some bibliometric procedures for analyzing and evaluating research fields. *Applied Intelligence*, 48(5), 1275-1287.
- Hamari, J., Koivisto, J., ve Sarsa, H. (2014). Does Gamification Work? – A Literature Review of Empirical Studies on Gamification. *In proceedings of the 47th Hawaii*

International Conference on System Sciences. Hawaii, USA.

- *Hanus, M. D., & Fox, J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. *Computers & Education*, 80, 152-161.
- Haque, U. (2010). Unlocking the mayor badge of meaninglessness. *Haward Business Review Blog*. Retrieved from <http://blogs.hbr.org/2010/12/unlocking-themayor-badge-of-m/>
- Hofacker, C. F., De Ruyter, K., Lurie, N. H., Manchanda, P., & Donaldson, J. (2016). Gamification and mobile marketing effectiveness. *Journal of Interactive Marketing*, 34, 25-36.
- Huotari, K., & Hamari, J. (2012, October). Defining gamification: a service marketing perspective. In *Proceeding of the 16th international academic MindTrek conference* (pp. 17-22). New York, USA.
- *Ibanez, M. B., Di-Serio, A., & Delgado-Kloos, C. (2014). Gamification for engaging computer science students in learning activities: A case study. *IEEE Transactions on Learning Technologies*, 7(3), 291-301.
- Jakubowski, M. (2014, March). Gamification in business and education—project of gamified course for university students. In *Developments in business simulation and experiential learning: Proceedings of the Annual ABSEL Conference* (Vol. 41).
- Kapp, K. M. (2012). *The Gamification of learning and instruction: Game-based Methods and strategies for training and education*. Pfeiffer.
- Kapp, K. M. (2013). *The gamification of learning and instruction fieldbook: Ideas into practice*. John Wiley & Sons.
- Kappen, D. L., & Nacke, L. E. (2013, October). The kaleidoscope of effective gamification: deconstructing gamification in business applications. In *Proceedings of the first international conference on gameful design, research, and applications* (pp. 119-122).
- Karahan, S., & Gül, L. F. (2021). Mapping Current Trends on Gamification of Cultural Heritage. In *Game+ Design Education* (pp. 281-293). Springer, Cham.
- Khatibi, M. B., Badeleh, A., & Khodabandelou, R. (2021). A Bibliometric Analysis on the Research Trends of Gamification in Higher Education: 2010–2020. *The New Educational Review*, 65(3), 17-28.

- Kim, S., Song, K., Lockee, B., & Burton, J. (2018). What is gamification in learning and education?. In *Gamification in Learning and Education* (pp. 25-38). Springer, Cham.
- Kumar, J. (2013, July). Gamification at work: Designing engaging business software. In *International conference of design, user experience, and usability* (pp. 528-537). Springer, Berlin, Heidelberg.
- Lazzaro, N. (2011). Chasing wonder and the future of engagement. Smartphone Summit, Game Developer's Conference. Retrieved from <http://www.slideshare.net/NicoleLazzaro/chasing-wonder-and-the-future-of-engagement>
- Lee, J. J., & Hammer, J. (2011). Gamification in education: What, how, why bother?. *Academic Exchange Quarterly*, 15(2).
- Li, Y., Zhang, J., Yang, C., & Xia, B. (2019). Bibliometrics analysis on the application of gamification in health management. *Chinese Journal of Health Management*, 6, 498-503.
- Licorish, S. A., Owen, H. E., Daniel, B., & George, J. L. (2018). Students' perception of Kahoot!'s influence on teaching and learning. *Research and Practice in Technology Enhanced Learning*, 13(1), 1-23.
- López-Belmonte, J., Parra-González, M., Segura-Robles, A., & Pozo-Sánchez, S. (2020). Scientific mapping of gamification in web of science. *European Journal of Investigation in Health, Psychology and Education*, 10(3), 832-847.
- Luo, Z. (2021, May). Educational Gamification from 1995 to 2020: A bibliometric analysis. In *2021 the 6th International Conference on Distance Education and Learning* (pp. 140-145).
- Macedo, R. F., Reis, M. A. M., & De-Bortoli, R. (2018). Health Gamification Research – a bibliometric analysis. *Journal of Engineering Research and Application*, 8(7), 52-55.
- Majuri, J., Koivisto, J., & Hamari, J. (2018). Gamification of education and learning: A review of empirical literature. In *Proceedings of the 2nd international GamiFIN conference, GamiFIN 2018*. CEUR-WS.
- Marczewski, A. M. (2013). Gamification: a simple introduction & a bit more. Self-published on Amazon Digital Services, Kindle edition, Loc 1405.
- Marczewski, A. M. (2017). A Revised Gamification Design Framework. Retrieved from: <https://www.gamified.uk/2017/04/06/revised-gamification-design-framework/>

- Marouf, R., & Brown, J. A. (2021, November). A Review on the Contribution of ClassDojo as Point System Gamification in Education. In *International Conference on Entertainment Computing* (pp. 441-448). Springer, Cham.
- Martí-Parreño, J., Méndez-Ibáñez, E., & Alonso-Arroyo, A. (2016). The use of gamification in education: a bibliometric and text mining analysis. *Journal of computer assisted learning*, 32(6), 663-676.
- McCoy, L., Lewis, J. H., & Dalton, D. (2016). Gamification and multimedia for medical education: a landscape review. *Journal of Osteopathic Medicine*, 116(1), 22-34.
- Mordor Intelligence (2021). Gamification market - growth, trends, COVID-19 impact, and forecasts (2021 - 2026). Retrieved from <https://www.mordorintelligence.com/industry-reports/gamification-market>
- Nah, F. F. H., Zeng, Q., Telaprolu, V. R., Ayyappa, A. P., & Eschenbrenner, B. (2014, June). Gamification of education: a review of literature. In *International conference on hci in business* (pp. 401-409). Springer, Cham.
- Negruşa, A. L., Toader, V., Sofică, A., Tutunea, M. F., & Rus, R. V. (2015). Exploring gamification techniques and applications for sustainable tourism. *Sustainability*, 7(8), 11160-11189.
- Nopliardy, O., & Ukwueze, R. (2021). Play Therapy for Healthcare: a Bibliometric Analysis in Business and Management. *Electronic Business*, 20(1).
- Pankiewicz, M., & Abdiomar, U. (2021). Gamification in item-based educational systems – a bibliometric analysis. In T. Bastiaens (Ed.), *Proceedings of EdMedia + Innovate Learning* (pp. 69-73). United States: Association for the Advancement of Computing in Education (AACE). Retrieved from <https://www.learntechlib.org/primary/p/219640/>.
- *Plass, J. L., Homer, B. D., & Kinzer, C. K. (2015). Foundations of game-based learning. *Educational Psychologist*, 50(4), 258-283.
- Sailer, M., & Homner, L. (2020). The gamification of learning: A meta-analysis. *Educational Psychology Review*, 32(1), 77-112.
- Sardi, L., Idri, A., & Fernández-Alemán, J. L. (2017). A systematic review of gamification in e-Health. *Journal of Biomedical Informatics*, 71, 31-48.
- Sheldon, L. (2012). *The multiplayer classroom: Designing coursework as a game*. Cengage Learning.

- Simoës, J., Redondo, R. D., & Vilas, A. F. (2013). A social gamification framework for a K-6 learning platform. *Computers in Human Behavior* 29, 345–353.
- *Su, C. H., & Cheng, C. H. (2015). A mobile gamification learning system for improving the learning motivation and achievements. *Journal of Computer Assisted Learning*, 31(3), 268-286.
- Swacha, J. (2021). State of research on gamification in education: A bibliometric survey. *Education Sciences*, 11(2), 69. <https://doi.org/10.3390/educsci11020069>
- Tang, M., Liao, H., & Su, S. F. (2018). A bibliometric overview and visualization of the International Journal of Fuzzy Systems between 2007 and 2017. *International Journal of Fuzzy Systems*, 20(5), 1403-1422.
- Trinidad, M., Ruiz, M., & Calderón, A. (2021). A bibliometric analysis of gamification research. *IEEE Access*, 9, 46505-46544.
- Weiss, J. (2019, January). Gamification and Scholarly Ethical Perspectives on Industries, A Bibliometric Analysis. In *Proceedings of the 52nd Hawaii International Conference on System Sciences*.
- Werbach, K., & Hunter, D. (2012). For the win: How game thinking can revolutionize your business. Wharton Digital Press
- White, M., & Shellenbarger, T. (2018). Gamification of nursing education with digital badges. *Nurse Educator*, 43(2), 78-82.
- Xu, F., Buhalis, D., & Weber, J. (2017). Serious games and the gamification of tourism. *Tourism Management*, 60, 244-256.
- Xu, F., Weber, J., & Buhalis, D. (2013). Gamification in tourism. In *Information and Communication Technologies in Tourism 2014* (pp. 525-537). Springer, Cham.
- Xu, Y. (2011). Literature review on web application gamification and analytics. (CSDL Technical Report 11-05). Retrived from <http://csdl.ics.hawaii.edu/techreports/11-05/11-05.pdf>
- Yang, Y., Asaad, Y., & Dwivedi, Y. (2017). Examining the impact of gamification on intention of engagement and brand attitude in the marketing context. *Computers in Human Behavior*, 73, 459-469.
- Yoon, G. (2019, May). Gamification Research in View of Bibliometrics: A Literature Trend, Bibliographic Coupling, and Co-citation Analysis: An Abstract. In *Academy of Marketing Science Annual Conference* (pp. 555-556). Springer, Cham.

Zichermann, G. & Linder, J. (2010). *Game-Based Marketing: Inspire Customer Loyalty Through Rewards, Challenges, and Contests*. John Wiley & Sons, Inc.

Zichermann, G., & Cunningham, C. (2011). *Gamification by design: Implementing game mechanics in web and mobile apps*. O'Reilly Media, Inc.

* *The ten most cited studies.*

Acknowledgements

The short version of this research was presented at the International Conference on Social Science Studies, which took place on September 23 - 26, 2021 in İstanbul, Turkey.

About Author

Dr. Mustafa Tevfik HEBEBCİ, conducts research in the field of educational technology. He has studies in human computer interaction, instructional design, STEM education, gamification, distance education and blended learning. He is still working as an Lecturer Doctor at Necmettin Erbakan University, Distance Education Application and Research Center.

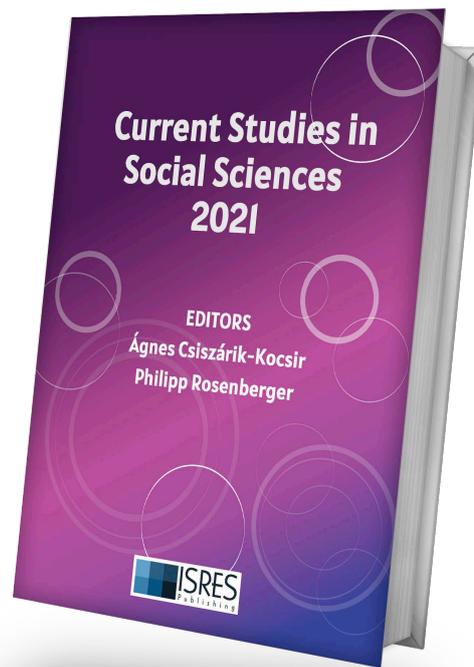
E-mail: mustafatevfik.hebebcı@erbakan.edu.tr, ORCID:0000-0002-2337-5345

Dr. Selahattin ALAN conducts research in the field of computer and instructional technologies. He completed his undergraduate and graduate studies in the field of Computer Education at Selçuk University and completed PhD in Educational Sciences at Necmettin Erbakan University in the field of Educational Programs and Teaching. He has studies in the fields of electronic portfolio, computer teaching and computer based teaching materials. He is still working as an Assistant Professor at Selçuk University Faculty of Technology.

E-mail: salan@selcuk.edu.tr, ORCID: 0000-0001-9344-9648

To Cite This Chapter:

Hebebcı, M. T., & Alan, S. (2021). Gamification in education: An overview of the literature. In A. Csiszárık-Kocsir & P. Rosenberger (Eds.), *Current Studies in Social Sciences 2021* (pp. 174–194). ISRES Publishing.



Current Studies in Social Sciences 2021 is published annually from the selected papers invited by the editors.

This edition includes 4 sections and 12 papers from the field of Politics & Social Sciences, Law & Ethics, Sustainability and Education.

All submissions are reviewed by at least two international reviewers.

The purpose of the book is to provide the readers with the opportunity of a scholarly refereed publication in the field of social sciences and education.

Current Studies in Social Sciences 2021 is published by ISRES Publishing.