

Integration of the Transformational Leadership Model into a school organization through the utilization of recycling and reuse of materials.

A Case study, "The sustainable development ... is going to school".

S.E. Theodoridou¹, E.D. Polytidis²

¹Skydra High School, Skydra, 58500, Greece

² Skydra Academy, Skydra, 58500, Greece

Presenting author email: theoso@sch.gr

Keywords

Transformative Leadership Model, Recycling, Reuse, Education for Worth Living Development

Abstract

Our reference study focuses and aims on the approach to contemporary school reality, as it interacts with pedagogy and other sciences. It negotiates the practical use of the transformative leadership model (TLM) in the administration of a specific school unit in the Greek territory. The project is achieved, among other things, through the innovative use and utilization of recyclable resources and reuse materials for important needs of the specific school.

Ultimately, the focus topic in this article is the innovative - unique in its kind - approach to the environmental literacy of the students of a school through the equipment of the reference school of the present study. The equipment consists of offices, libraries, bulletin boards, school board games (see table Ping Pong), which have been made from its devalued materials, such as old desks and chairs, barbed wire from its courtyard, etc. The integration of the theme of reuse in the everyday life of the school is enriched by reusing practices for the manufacture of experimental devices from waste to investigate the laws of Physics, as well as the cultivation of their technological thinking. These constructions are made by the students themselves, activating their divergent thinking through creative learning experiences. The conclusions of these study highlights as important the role of cultivating environmental literacy within the school (Gavrilakis, Stylos, Kotsis, Goulgouti, 2017).

Text

The present study focuses and aims at the approach to contemporary school reality, as it converses with pedagogy and other sciences. It negotiates the practical exploitation of the TLM in the management of a specific school unit in the Greek territory. The project is achieved, among other things, through the innovative use and utilization of recyclable resources and reuse materials for important needs of the specific school.

The effort was first piloted. The project presented significant degrees of difficulty, since in general the work of the Administration of a Greek school is demanding and pressing at the same time. It includes administrative and bureaucratic issues for the handling of operational issues of the school unit - especially at this time of the pandemic, the everyday life of the Management of a school is extremely burdened - while at the same time it is called upon to play a leading role in the expectation to be the head of a modern, effective and cooperative school (Stavrou, 2021). Often this obstacle is called to be overcome by the Management on its own and is unable to achieve it or, on a case-by-case basis, adopts different styles of leadership, as indicatively listed: the transformative (Χατζηπαναγιώτου, 2001). Leithwood & Jantzi, 2005), transactional/behavioral (Koutouzis, 2016), moral (Shapiro & Stefkovich, 2011), distributive (Spillane, 2005).

The term "leadership" means the set of actions of influence of thought, emotions, attitudes and behaviors that take place in an organization, aiming at the mechanistic compliance and motivation of existing employees to its requirements and needs. It aims through a series of procedures and specific situations to achieve its desired goals. In particular, this management model is linked in a school organization with the development and achievement of a common vision for the school, among teachers, students and others involved, based on personal and professional values. This vision is linked to the experience of sustainable development through innovative experiences that provide environmental literacy and awareness for the environment. (Terry, 1960. Katz & Kahn, 1966. Hersey & Blanchard, 1977. Stogdill, 1974. Bush & Glover, 2014).

The companion of man in the direction of understanding the functioning of the natural environment and recognizing the inextricable ties that connect his survival and living within it is environmental education. As early as the 18th century (Rousseau) and then in the 19th (Agassiz) the importance of environmental education and its experiential methods was highlighted. It was the aforementioned scientists who founded it. Of course, its decisive formation and evolution were carried out in the 20th century, first as a study of the natural environment (nature study) and then as a special type of education for its conservation (conservation education).

Environmental education was a natural consequence and a culmination of the ecological movement, which developed before 1960 (Holsman, 2001). Over the years it was strengthened and developed also because of human fear which stemmed from the identified effects caused by pesticides, waste, water pollution, radiation and everything else that threatened humans through the degradation of the environment (Hammerman, 2001). During the same period, the emergence of Environmental Sciences had as its object the exploitation of natural resources. Living in the camps and the experiential education of the students in nature helped them to approach it (Sharp, Partridge, 1947).

The scientific hoe in collaboration with the ecological awareness of people made, in the coming years and until today, environmental education widely known as a useful means to address global environmental problems. The "Belgrade Charter" (1975) (McCrea, 2006), the first intergovernmental conference on environmental education in Agriculture of the former SSSR (1977), strategies for human well-being and sustainable development (1980), Reports by international Fora on the degradation of the planet due to problems such as air pollution, overpopulation (Our common future, 1988), United Nations Conferences on the Environment (UNESCO, Thessaloniki 1977, 1978, United Nations 1988, Agenda 21, Agenda 2030), are some of the most important stations that have led to today's Environmental Education and its evolution, which is Education for Sustainable Development.

The ultimate goal of modern societies is the ability to manage and address environmental problems they may encounter, within the framework of an Organisation for Economic Cooperation and Development (2003).

Papavassiliou (2011) proposes, among others,

- the awareness and awareness of modern man about the environment and its problems.
- the acquisition of knowledge through information and experience, so that the citizen understands the environmental functions and the problems they present.
- the cultivation of attitudes with the ultimate goal of forming values and environmentally friendly positions that will motivate the activation of the citizenship of citizens resulting in their participation and activation in favor of the environment.
- the cultivation of skills of recognition and participation in the solution of environmental problems.

The accumulation of serious environmental problems in our time, which also endanger this existence of man, makes the environmental literacy of students more necessary than ever. The awareness of the environmental threat posed is not accompanied by a simultaneous understanding that can lead to its confrontation, as far as it concerns the modern citizen. (Costas Gavrilakis, Georgios Stylos, Konstantinos Kotsis, Anastasia Goulgouti, 2017).

Nowadays, environmental education is always at the forefront, helping to address problems that have taken on planetary dimensions. Through it, students perceive the role they are called to play at the individual (individual responsibility) and collective level (collective responsibility). They understand that they coexist and interact with the natural environment as part of a whole that they have to protect (Georgopoulos, Tsaliki 2005, Tsaliki 2006).

In the present study, the main axes of development of the transformative leadership model are based on innovation and a leadership with the potential potential for a profound change of itself and those who work in the school organization, so that in this way a change of school culture is achieved. This leadership style focuses more on the processes —seeking collaborations, interactions, and teacher synergies—than on the outcome (Leithwood, 1994. Jantzi & Steinbach, 1999. Leithwood & Jantzi, 2005, Bush & Glover, 2014). The carrying potential of MMI can bring about functional changes and new organizational strategies in the school unit, (Onorato, 2013). The Greek school reality is far from similar approaches, having as an inhibiting factor the centralized character of our educational system, the lack of a culture of administration based on the formulation of educational policy, the inability to compose a common vision from those who happen to school life. (Georgiadou & Kambouridis, 2005. Tsioumbou, 2019).

Ultimately, this study focuses on the innovative - unique in its kind - approach to the environmental literacy of students of a school through the equipment of its reference school. The equipment consists of offices, libraries, bulletin boards, school board games as pink ponk, sofas-benches, which in their entirety have been made of devalued materials of the school, such as old desks and chairs, barbed wire from the courtyard, etc (photos 1, 2). The integration of the theme of reuse in the everyday life of the school is enriched by reuse practices for the manufacture of experimental devices from waste to explore the laws of physics, aiming at the same time at the cultivation of students' technological thinking (photo 3). These constructions are made by the students themselves, activating their divergent thinking through creative learning experiences.



Photo 1. A Table-library made of useless desks and chairs



Photo 2. A free lending library with reusable books from donations

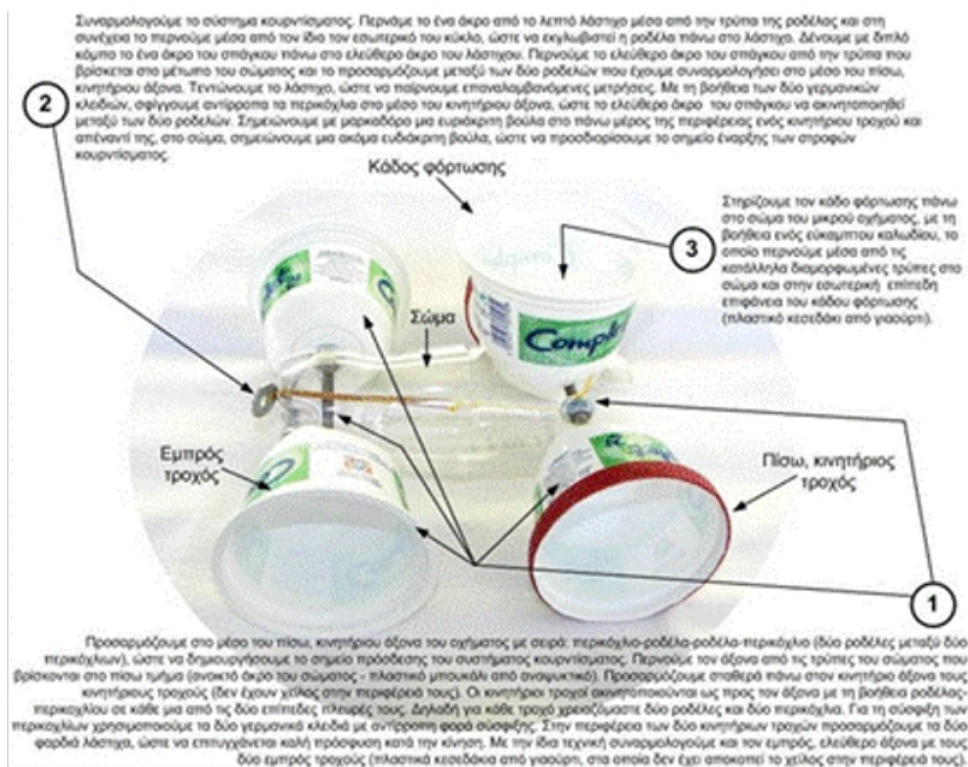


Photo 3. The issue of reuse in the everyday life of the school is enriched by reuse practices for the manufacture experimental devices from waste. Dr Antonios Baldoukas' s invention of the winding car, which is constructed by students of Skydra High school, used during their courses.



Photo 4. A wheelchair purchased from the sale of plastic water caps.

In addition to the above, plastic recycling is carried out, which aims, in addition to the obvious environmental benefit, to the rewarding economic ability to exploit the profits. At this stage it has generated profits for the purchase of a wheelchair (photo 4), which will be used for the movement of students with mobility problems within the school unit.

It has been established that, although society foresees the risk of serious environmental problems occurring, it does not take any action that prevents them from being resolved at birth. This conclusion highlights as important the role of cultivating environmental literacy within the school (Costas Gavrilakis, Georgios Stylos, Konstantinos Kotsis, Anastasia Goulgouti, 2017). The present case study moves to the exploitation of the above findings, as the modern scientific "hoe" led to the conclusion that environmental literacy changes the attitude of man towards the environment and especially of young people who are sensitive to environmental issues and have environmental concerns (Hungerford and Volk 1990) as a result of their environmental knowledge and their experiences from their participation in environmental actions. Advocates the innovative attitude of this particular school the established position that appreciates that the experiences that each of us acquires in relation to the environment we live in. (Hungerford, Volk and Ramsey 2000) help to develop additional responsibility for the environment, related to the sense of commitment to the environment, participation in appropriate measures, as well as participation in environmental actions (Teksoz et al 2014).

The utilization of recycling and reuse was selected as an experiential object of study, in order to seek the degree of contribution of the TLM to environmental literacy and sensitization of the students of the school under study, under the umbrella of AGENTA 2030. In contemporary reality and problematic literacy around the environment plays a pivotal role in the direction of managing the current situation in terms of Worth Lining Development. The important position and importance of the environment, from the past until today, is still semantically characterized by indeterminate boundaries due to its openness to evolving social phenomena (Harff & Durand 1977, Flogaitis 1998). The interpretation of the term 'environment' varies from case to case. It appears sometimes as "space of life, space of living, system of relationships, field of action, field of creation, production, consumption" and sometimes as "field of experimentation, transformation, learning, space of socialization, expression of culture, stimulus for reactions and behaviors, good to be exploited ..." (Flogaiti 1998). Therefore, its multifaceted importance is offered as a garment and a means of reference to each transformative effort to change the school culture.

In the identified need to change the way we perceive environmental reality (Raggou, 2015), new interpretative codes are incorporated, regarding concepts, functions, values, behaviors and priorities of society in a unified view of the world (Littleddyke 2008), through the environment and ecology.

The focus of this research concerns the processes of application and investigation, so that finally a new environmental reality can be structured, accompanied by a new communication proposal, through environmental literacy and awareness raising of young people aged from 12 to 15 (High School of Skydra) (photo 5). Human action and learning are not distinct fields, which the researcher approaches separately. They are points in time that each of us follows as the creator of a learning trajectory that constantly leads to a broader "stream of action" (Giddens 1988). This position fully justifies the inclusion in the cadet learning processes of learning activities. Flogaitis refers to action as "the democratic alternative educational proposal to behavior change" (2006).



Photo 5. The High School of Skydra. A provincial frontier school whose community struggles to reduce its carbon footprint.

These principles are finally summarized in the active and equal involvement of the trainees, the possibility of developing self-motivation, the prevalence of a radical educational philosophy in the management of training time, the absence of coercion as opposed to the possibility of taking personal initiative, the ability to choose leading to differentiated learning,

the exercise in decision-making (Opaschowski 1977, Schmeer-Sturm 1990, Weschenfelder & Zacharias 1992, Theodoridou, Zagaz, Varvarousi 2020).

In conclusion, it is proposed to expand and implement the above environmentally friendly model of utilization of recycling and reuse in the Greek school, in an experiential, utilitarian and functional way. Certainly, before and during the process of its implementation, the operation of the TLM in the school unit will contribute greatly to its effectiveness. This approach will create those processes, innovative perspectives, collaborative climate and shared vision among students and teachers to cultivate unhindered future citizens who are environmentally literate. The student's development of environmental awareness will not only help him become more autonomous, but will also give him an impetus for continuous development. Don't forget though, environmental awareness starts at home with a closer eye to how the school's environment affects the needs of its residents.

Bibliographic references

- Bush, T. & Glover D. (2014). School leadership models: what do we know? *School Leadership & Management*, 34:5, 553-571, DOI: 10.1080/13632434.2014.928680
- Hammerman, D. R., Hammerman, W. M. & Hammerman, E. L. (2001). *Teaching in the outdoors* (5th ed.). Danville, IL: Interstate Publishers.
- Harff, Y. & Durand, M. (1977). *La Qualité de la Vie : Mouvement écologique - Mouvement Ouvrier*. (1977, Hardcover)
- Hersey, P. and Blanchard, K.H. (1977). *Management of Organizational Behavior: Utilizing Human Resources*. New Jersey/Prentice Hall. στα Hersey's personal website on The Situational Leadership Model: <https://situational.com/> και Blanchard's personal website on Situational Leadership II: <https://www.kenblanchard.com/>
- Holsman, R. (2001). The politics of Environmental Education. *The Journal of Environmental Education*, 32(2): 4–7.
- Hungerford, H. R., & Volk, T. L. (1990). Changing learner behavior through environmental education. *The Journal of Environmental Education*, 21(3), 8–21. <https://doi.org/10.1080/00958964.1990.10753743>
- Gavrilakis, C., Stylos, G., Kotsis, K.T., & Goulgouti, A. (2017). Environmental literacy assessment of Greek university pre-service teachers. *Science Education Research & Praxis* (in press). ISSN:1792-3166.
- Georgiadou, V. & Kambouridis, G. (2005). The director-leader, *Review of Educational Issues*, 10:121-129.
- Georgopoulos A., Tsaliki E., (2005) *Environmental Education, Principles of Philosophy, Methodology, Games and Exercises*, Publications: Gutenberg.
- Jantzi, D. & Steinbach, R. (1999). *Changing leadership for changing times*. Buckingham: Open University Press.
- Leithwood, K. (1994). Leadership for school restructuring. *Educational Administration Quarterly*, 30:498-518.
- Leithwood, K. & Jantzi, D. (2005). A Review of Transformational School Research 1996-2005, *Leadership and Policy in Schools*, 4Q3, 177-199.
- Kambouridis G. (2002) *Organization and Management of school units*. Publications: Keystone. Athens
- Katz, D., & Kahn, R.L. (1966). *The social psychology of organizations*. Wiley.
- Koutouzis, M. (2016). *Management- Leadership- Effectiveness: Seeking scope of application in the Greek system*, postgraduate program "Educational Policy and Management of Education", course notes, second semester, PPP, NKUA.
- Littledyke, M. (2008). *Science Education for Environmental Awareness Approaches to Integrating Cognitive and Affective Domains*.
- McCrea, E. (2006). *The Roots of Environmental Education: How the Past Supports the Future*. Stevens Point, WI: Environmental Education and Training Partnership.
- Onorato, M. (2013). Transformational Leadership style in the education sector: an empirical study of corporate managers and educational leaders, *Academy of Educational Leadership Journal*, 17: 33-47
- Opaschowski, H. W. (1977). *Freizeitpädagogik in der Schule. Aktives Lernen durch animierte Didaktik*. Bad Heilbrunn. Obb: Klinkhardt.
- Organization for Economic Cooperation and Development (2003). *Definition and selection of competencies: Theoretical and conceptual foundations (Summary of the final report "Key competencies for a successful life and a well-functioning society")*. Neuchâtel, Switzerland: Author.
- Papavassiliou, V. (2011). *Environmental Education in Education Sciences*.
- Raggou, P. (2015). *Didactics of Environmental Education, Unit 04: Conceptual demarcations of Environmental Education*. Department of Forestry and Natural Environment, Aristotle University of Thessaloniki. Course notes, second semester. Thessaloniki, 2015.
- Shapiro, J.P., Stefkovitch, J. (2011). *Ethical Leadership and Decision Making in Education*, 3rd edition, Routledge.
- Sharp and E. D. Alton Partridge. (1947). See also Ivonne Piercy, *The Extent of Influence of Lloyd Burgess Sharp as Identified in the Lives*.
- Schmeer-Sturm, M. (1990). *Theorie und Praxis der Reiseleitung. Einführung in ein interessantes und anspruchsvolles Berufsfeld*, Müller Werner und Ude Gudrun: Published by Jaeger (1990)
- Spillane, J. (2005). Distributed Leadership, *The Educational Forum*, 69:2, 143-150.
- Stavrou, D. (2019). *Leadership Models in the Greek Primary School*, Panhellenic Conference of Educational Sciences. Available on the <https://eproceedings.epublishing.ekt.gr/index.php/edusc/article/viewFile/3170/3249> website, retrieved December 29, 2021.

- Stogdill, R. M. (1974). *Handbook of leadership: A survey of theory and research*. Free Press.
- Terry, G. R., 1960. *Principles of management*. Homewood, Ill: Richard D. Irwin. Testa, M. A. & Simonson, D. C., 1996. Assessment of quality-of-life outcomes. *New England Journal of Medicine*, 334(13), p. 835–840.
- Teksoz, G., Boone, J. W., Yilmaz Tuzun, O. & Oztekin, C. (2014). An evaluation of the environmental literacy of preservice teachers in Turkey through Rasch analysis. *Environmental Education Research*, 20(2), 202-227. DOI: 10.1080/13504622.2013.768604
- Theodoridou, S., Zagas, Th., Varvarousi, L. (2020). The water balance of the Forest as a factor of influence on the microclimate of an area. Information and awareness design using original educational material, *Openearth.1st International Conference*. Thessaloniki, 12-15 February 2020.
- Tsaliki, E., (2006). *Factors Which Influence the Intention of Older Primary School Pupils to Act Environmentally. The Case of the Forest*; Aristotle University of Thessaloniki (AUTH), Faculty of Education: Thessaloniki, Greece.
- Tsiombou, E. (2019). *The triangle of toxic leadership: Investigation in the Public Sector*, in the Postgraduate Program in Public Administration, University of Macedonia.
- Flogaitis, E. (1998). *Environmental education*. Publications: Greek Letters. Athens.
- Flogaitis, E. (2006). *Education for the environment and sustainability*. Publications: Greek Letters. Athens.
- Chatzipanagiotou, P. (2001), Aristotle University of Thessaloniki (AUTH), *School administration and the participation of teachers in the decision-making process*. Doctoral Dissertation. Thessaloniki, 2001.
- UNESCO (1997). *UNESCO Thessaloniki Declaration (1997) Educating for a Viable Future*.
http://www.unesco.org/education/tlsf/mods/theme_a/popups/mod01t05s01.html
- UNESCO (1978). *Final report, Intergovernmental Conference on Environmental Education*, organized by UNESCO in cooperation with UNEP, Tbilisi, USSR, 14–26 October 1977. Paris: Author.
- United Nations (1988). *Report of the World Commission on Environment and Development: Our Common Future*.
- Weschenfelder, K. & Zacharias, W. 1992. *Handbuch der Museumspädagogik. Orientierung und Methode*, Schwann Verlag: Düsseldorf.