

CLASSROOM SEATING ARRANGEMENT: THE IMPACT ON EDUCATIONAL CHOICES

Η ΧΩΡΟΤΑΞΙΚΗ ΔΙΑΡΡΥΘΜΙΣΗ ΤΗΣ ΣΧΟΛΙΚΗΣ ΑΙΘΟΥΣΑΣ ΚΑΙ Ο ΠΑΙΔΑΓΩΓΙΚΟΣ ΤΗΣ ΑΝΤΙΚΤΥΠΟΣ

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Abstract

Classroom arrangements influence the educational outcome. Architectural layouts can impede effectiveness and limit interaction. In this research, the impact of classroom settings on educational choices is examined. The setup of class seats is assessed as a factor related to educational results. Information is collected from Greek and international bibliography. Results indicate that the frontal layout refers to obsolete patterns which restrain educational impact. Team setup, the “Π” and “U” layouts designate alternatives that contribute to the utilization of class characteristics. The educational process ameliorates, by combining elements deriving from past knowledge with innovative ideas, which prioritize human needs. This research reveals that the setup cannot impose educational dynamics, though it can facilitate or hinder educational choices. Educators can take advantage of classroom setups, open to communication and inquiry. In this perspective, they often rearrange the setting as the architecture of the class is not fixed but is ideally flexible and adaptable.

Key words: *educational choices, classroom seating, architectural layout, seating arrangement, educational impact*

Περίληψη

Η διαρρύθμιση της αίθουσας επηρεάζει το εκπαιδευτικό αποτέλεσμα. Οι αρχιτεκτονικές διατάξεις μπορούν να εμποδίσουν την αποτελεσματικότητα και να περιορίζουν την κοινωνική αλληλεπίδραση. Σε αυτήν την έρευνα, εξετάζεται ο αντίκτυπος της αρχιτεκτονικής διαρρύθμισης. Πληροφορίες συλλέγονται από ελληνική και διεθνή βιβλιογραφία. Τα αποτελέσματα δείχνουν ότι η μετωπική διάταξη αναφέρεται σε παρωχημένα πρότυπα που περιορίζουν τον εκπαιδευτικό αντίκτυπο. Η διαρρύθμιση καθ' ομάδες, οι διατάξεις “Π” και “U” καθορίζουν εναλλακτικές λύσεις που συμβάλλουν στην αξιοποίηση των χαρακτηριστικών της τάξης. Η εκπαιδευτική διαδικασία βελτιώνεται, συνδυάζοντας στοιχεία που απορρέουν από γνώση του παρελθόντος με καινοτόμες ιδέες, που δίνουν προτεραιότητα στις ανθρώπινες ανάγκες. Η έρευνα δείχνει, ότι η διαρρύθμιση της σχολικής αίθουσας δε μπορεί να επιβάλλει την εκπαιδευτική δυναμική, αλλά μπορεί να διευκολύνει ή να εμποδίσει εκπαιδευτικές επιλογές. Οι εκπαιδευτικοί μπορούν να επωφεληθούν από τις διαρρυθμίσεις που ευνοούν την επικοινωνία και την έρευνα. Με αυτήν την προοπτική, συχνά αναδιατάσσουν την αίθουσα καθώς η αρχιτεκτονική της τάξης ιδανικά δεν είναι σταθερή αλλά ευέλικτη και προσαρμόσιμη.

Λέξεις κλειδιά: *εκπαιδευτικές επιλογές, διαρρύθμιση σχολικής αίθουσας, σχολικά καθίσματα, παιδαγωγικός αντίκτυπος*

INTRODUCTION

Space constitutes one of the basic factors in the formation of human personality and in establishing interpersonal relationships. Lagiou (2019) argues that in the classroom, a fundamental interaction field is formed. The majority of school classrooms seem to follow a one-dimensional pattern that refers only to a traditional way of functioning. Bidirectional interaction is blocked and as a result, students face the space with distrust and struggle to familiarize themselves with it, even though they spend a significant amount of time there. The architectural layout in combination with the seating arrangement constitute powerful tools that can either impede or enhance the effectiveness of the educational process. The environment can be subjected to interventions based on the educational choices, which can lead to maximization of the results of the educational process. These are some of the issues to be explored in this paper.

The research questions of this work are the following:

- To what extent does the classroom space contribute to the formation of the personality of a child?
- Do existing classroom layouts and seating arrangements support children's educational needs?
- Which are the possible alternative classroom layouts?
- Can classroom arrangements alone predetermine pedagogical relations?

This is bibliographical research. To accomplish our literature review scientific papers and publications were looked for on the internet and in scientific journals. The keywords that initiated our searching were classroom layout, seating arrangements, pedagogical relations (in English and Greek).

1 LITERATURE REVIEW

1.1 THE MEANING OF SPACE

Based on Prohansky et al. (1983) the identity of space is considered to be the foundation of our identity. Children start exploring themselves through constant and dependable relationships. The definition of those relationships is determined by the interaction with space. According to Tsoukala (2000), a subconscious connection between the student and the classroom is created, thus, the need to contemplate students as an integral segment of the educational choices is generated. Ghazzianni (2010) indicates that students are intrigued by the way they experience space. Stimuli in the room have a direct imprint on the vigilance of students and enhance communication and social integration. School classrooms and the utilization of their elements can strongly influence educational choices and their outcome.

1.2 CLASS SEATING AS A TOOL

Space, in which the educational process transpires, defines a versatile environment. Learning can be converted into an interactive process. Equipment is one of the factors that provide the students with incentives to unlock their potential. Probably the most crucial part of the material equipment is the diptych of the chair and desk. Through them, learning is dynamically experienced and its result is determined.

Mylona (1992) points out that the existing layout patterns focus on uniformity. The most widespread type of class seating provides high durability while ensuring low cost. The architecture tends to be minimalistic to prevent distractions. The construction materials

are wood, aluminum, and plastic and are deliberately light so that the equipment can be arranged based on the educational choices. Crucial variables for the selection of class seats are cost, durability, and the possibility of facile repair.

The most widespread type is the desk with a pair of chairs. There is, though, a more modern type of class seating that consists of individual student chairs with an integrated writing surface. The writing surface can be adjusted for right or left-handed users and the chair predefines proper body positioning. Their use is indicated for spaces that require more flexibility.

1.3 SEATING ARRANGEMENT PATTERNS

According to Tsoukala (2000), space configuration expresses the direction of the educational system and designates behavioral patterns. Planning indicates the roles of educators and students. The possibilities space provides, define the desired educational practices, and guide the attitude of students. As Kanakis (1993) has already pointed out, schools place the seats in a typical frontal layout with the educator standing on the top and opposite to the students. Students mainly work individually and teamwork is impeded according to Haghighi and Jusan (2012).

The variables of architectural layout and student participation have been studied extensively. Both Tsoukala (1998) and Callahan (2004) argue that the results indicate that the frontal layout leads to the creation of a limited “active students” zone. This is the group that occupies the front and central desks and due to this position, participates more actively in the learning process. The educators also tend to address more to students in this area. Nonetheless, the interest of the students is not affected solely by the position, but also by the educational choices.

According to Tsoukala (1998), researchers while trying to examine the effect of furniture on students' behavior, reduced the distance between the seats, making access and movement difficult, and then measured the reactions. The results indicated that the adjustments by students were minor, even though moving the desks was an easy process. The students adapted easily and neglected the difficulties. This phenomenon was interpreted as a consequence of the fact that students did not consider the classroom as their personal space.

Tsoukala (2000) supports that the relationship of students with space is defined by the dynamics that derive from the intended and the actual use by students. These dynamics impact interaction and the roles of the educator and the student as those are formed in the classroom.

1.4 ALTERNATIVE ARCHITECTURAL LAYOUTS

School classrooms are subjected to changes over the years, as the perceptions about education change. The adaptability of space is an important quality of architecture according to Valentis (1966). Space should ideally contain features that can be easily converted to meet the relevant needs. New educational choices seem to expel traditional teacher-centered approaches. Seats can be placed in a way that stimulates the aesthetic criteria of students, increases their curiosity, and eventually motivates them. Alternative forms of seating arrangements can help the student intervene and explore the room. Such forms are the team setup, the “Π” and the “U” or “User-oriented approach”.

The “Π” Approach

The development of the educational process is interconnected with changes in the classroom layout. Alternative seating arrangements may enhance proactivity, communication and boost collaboration. According to Papandreou (2009), a promising layout refers to the arrangement of class seats next to each other and not behind each other, in a shape reminiscent of the capital letter "Π" of the Greek alphabet or a semicircle. Of equal importance in such a layout seems to be the positioning of the teacher's desk. Its position should not obstruct access and should provide the educator with the opportunity to maintain eye contact with students without sidelining anyone. In a “Π-approach”, the educator's desk is ideally placed on the side and not in the center of the room.

This seating arrangement enhances communication and promotes collaboration. Trilianos (2008) supports that the educator, can coordinate conversations and activities and create a positive emotional and social atmosphere, as verbal communication is enriched by non-verbal features. The kids have the opportunity to see the face of their classmates and the barriers between them and their teachers are eliminated according to Simmons et al. (2015). Rosenfield et al. (1985) explain that interaction is boosted and the teacher-oriented approach is abolished. In such layouts, the use of individual student seats with an adaptable writing surface can be alternatively favored. However, the setting itself cannot constitute the sole criterion for the quality of teaching. The approach adopted by the educator is crucial. Fotinis (2018) points out that discussion can potentially be held in a frontal seating arrangement, while signs of authoritarianism can be observed even in a semicircular arrangement.

The team setup

In modern educational systems, a lot of activities require teamwork. The typical frontal layout prevents that since the class seats predefine specific working zones and serve as obstacles among students. An alternative approach that could enhance cooperation is the “team” setup. In this arrangement, two or three desks are combined facing each other and the chairs are placed around. That way small teams of four to six kids are created. Those teams are self-sustainable and interaction becomes a priority.

Dimitropoulos and Kalouri-Antonopoulou (2010) support that the collaborative teaching model promotes dialogue and self-actualization is cultivated. Social interaction is encouraged when face-to-face contact is achieved according to Marx et al. (1999). The educators serve as facilitators who guide the process towards the desired outcomes. For the team setup to be efficient the use of collaborative educational methods is encouraged.

The “U” or “User-oriented” approach

An educational system intending to unlock the potential of students focuses on the creation of flexible spaces. Students participate actively in the learning process when the architectural layout has taken into account their needs and aspirations. The “user-oriented” or “U” approach aims to integrate the demands of learning in alignment with different personality traits, interests, and needs according to Tsoukala and Germanos (2017).

Weinstein (1979) mentions that space as a concept does not only refer to the physical characteristics of the room. It includes the human factor and behavior in a social

environment. There is, therefore, the psychological dimension of the space created by the subjects and influenced by the interdependence with their environment. The goal of the “U” arrangement is a configuration based on the main characteristics of those directly involved and the application of modern didactic approaches.

The user-oriented approach does not solely focus on a single seating arrangement. It combines different layouts organized in zones. It aims to reinforce cooperation in bigger or smaller teams but also considers the importance of individual space. Multiple psychological and architectural frameworks are used, to combine the need for teamwork with the need for independence. To achieve a user-oriented approach, individual working spaces, spaces for smaller teams, and bigger groups are combined. In that way, the student establishes connections with others and feels ownership of the space.

This setting constitutes a composition of all the previous seating arrangements. Through it, the development of students’ relationship with their personal space and with the social environment is amplified. Kapsali and Nima (2012) support that different configurations refer to different levels of involvement, different quality of interpersonal relationships, and different educational choices. Slight alterations in the space can shape big changes in the quality of education and people’s development.

2 DISCUSSION

The literature review presented above has revealed the importance of space, in general, in the classroom, and in the formation of a child’s identity providing thus an answer to our first research question.

Concerning the second research question, our literature findings indicate that the frontal layout refers to obsolete patterns which restrain educational impact. Modern educational practices require conversion of the space.

Regarding the third research question, various alternative layouts were found through literature and the most important of them have been described.

However, even if space is modified, the desired outcomes cannot be achieved, if there are no corresponding adjustments in the educational practices as supported by many authors presented in this work, providing a clue to the fourth research question.

CONCLUSIONS

Education is the lever of human and society development. Classroom seats as the main element of material equipment strongly influence communication and knowledge transfer. The typical frontal layouts may refer to obsolete educational patterns which restrain the educational impact due to lack of flexibility. Thus, space needs to be adjusted in new educational approaches which provide a wide spectrum of stimuli. Alternative layouts and seating arrangements constitute new options that contribute to the maximum utilization of the class characteristics. It is important to consider, though, that the setting cannot impose educational dynamics itself but it can either ease or obstruct educational choices. The processes are to be decided by the cooperation between students and educators. The architecture of the class is not fixed. It should be adaptable, flexible, and transformable based on the needs. Field research can potentially clarify the dimensions and the directions mentioned above.

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