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Proxemics in the Context of the Digital School

The information is in the people, not in your head.
Edward T. Hall

Abstract. It is impossible to live in society, without communicating with other people. Communication gives participants of school life, and thus the interpersonal relationships, the opportunity to exchange ideas, interact, follow in the same direction. Integrated planning of school places, may be described and evaluated in the light of the objectives of proxemics in the context of the „Digital School".

Keywords: relationships; distance; youth; teachers; information technology; education space; proxemics; the quality of education

Introduction

Currently, it is difficult to imagine life in the community, family and organizations, including schools, without communicating with other people. Communications Act gives the participants of school life, and thus the interpersonal relationships, the opportunity for the exchange of ideas, cooperation, going in the same direction of educational activities. By communicating a person find out what other people think and feel, and can express oneself.

Therefore, we look more closely at this process, especially in the "era of" government program "Digital School" in Poland and answer the question of whether we can effectively communicate?

The aim of the action in the body of the article is to discuss some facts related of interpersonal communication, taking into account the spatial layout of the school. Almost independent issues is the phenomenon of "invasion" of the man's personal space, close at a distance of less than 40 [cm], as well as other types of "invasion" and even: visual, sound, scent .

The need to supplement the knowledge and skills in creating the appropriate relationship between teacher and student dominated the last few years as a problem to be implemented in the form of improving the teaching skills of the learning environment. Mentioned special two groups of teachers' competence, that the most important influence on the ongoing interpersonal relationships. These are: communication skills and interaction skills. The first of these to be effective express language behavior in educational situations and include having knowledge of interpersonal communication and have good listening skills together with an empathic understanding of the intent and content of the speech of other people. But secondly, the powers of co-operation, relating to the effectiveness of pro-social behaviors and skills building activities the teacher. The aim is to present the facts of interpersonal communication, especially in light of the new information and communication technologies in primary schools for classes 4–6.

What are the assumptions proxemics?

Proxemics – a term coined by anthropologist Edward Twitchell Hall (1914–2009) in the late twentieth century to describe the use of space for people to communicate.

Proxemics is often equated with research on interpersonal distance as a fundamental indicator of social relationships, including the application of information technology and communication in education. Proxemics confirms and explains the intuitive feeling that the spatial arrangements have an impact on group activities (Tokar, 2010). Proxemics provides information about partners in the interaction on the basis of the spatial distance between them, and the use of a method of structuring micro space. Behaviors in terms of proxemics are influenced by two conflicting

needs: affiliation and Privacy. Hall is most, associated with proxemics the study of the case study – the human use of space in the context of culture. Hall developed his theory of proxemics, arguing that human perceptions of space, although derived from the senses, which are different for each person, are shaped and colored by the culture. He argued that different cultures define and cover in the framework of the organization of space, which are internalized by all people at an unconscious level, can lead to serious failures of communication and understanding in cross-cultural considerations. The author analyzes both personal spaces that people form around their bodies as well as sensitivity to the macro level that shape expectations, and cultural streets, neighborhoods and cities should be properly organized.

Classifications of space in terms of proxemics

Proxemics uses many types of space, where the classification is done in terms of: the involvement of rooms – let's look at the names of the space: the space durable, semi-permanent space and the space unstable. Bound to the distance, we need to keep creating distance between themselves people.

In this case distinguished: formal in which communication takes place officially designated routes flow of information, often extending the hierarchy of official subordination.

The pathways are often referred to formal information and deter-mined by those of top management. Formal communication is associated with the performance of people – members of the organization – tasks.

In our area of interest, or the school, apply to those already in school education entities, they are students and teachers. In the literature in-dicates that communication is a formal organization in two directions: vertical and horizontal. Proxemics confirms and explains the intuitive feeling that the spatial arrangements have an impact on group activities.

The spatial location relative to each affected people what they think, say, and they say, if at all they say and how to gesticulate, they move, what is the expression of their faces.

Dividing the space due to the mutual positioning of people

Known human spatial arrangements relative to one another can be divided into:

a) horizontal, also known as the horizontal, which are parallel or compatible with the horizon.

b) For this type of system include: linear (range, range); angle (right, left, front side, back side, right side oblique, left oblique side); semicircular; circular; vertical, or horizontal plane forming an angle.

These circuits may take shapes ladder, cone, pyramid, hemisphere, sphere.

Measurement made is treated as an indication of distance: intimate, personal, private, individual, social, public. Very precise, but controversial, concept description and evaluation of the horizontal linear and angular presented E.T. Hall. He suggests that the linear distance between people in close specific measure of the limits, assign certain of their relationship:

– private (0.15-0.45 m),
– personal (0.45-1.20 m),
– social (1.20-3.60 m),
– the public (3.60–7.50 m).

7.50 m above would expire collective sense of public references.

Also the angular position of the people within the specified distance has an impact on the content of relationships. People in the relationship angle of 90° to each other would be disposed most dialog-less box located "side by side", much less "face to face" and at least reversed back.

Research of different cultures suggest that culturally conditioned patterns of spatial systems in human relations are varied. Despite this differentiation, cultural and personality influence spatial arrangements on relationships, the general assumptions of proxemics to be taken as objectively ascertained. Therefore – as they put Symotiuk and Leyman (Tokar, 2010) – there is a metric spatial distances between individuals, reflecting the complex relationships between them: domination and subordination, positive and negative associations, intense and weak, etc.". But trying to create some unified theory of spatial systems in human relations, analogous to the theory of spatial systems constructed by natural

scientists and physicists, there may not to encounter difficulties. These difficulties result from the impact of culture on the differentiation of results similar spatial arrangements and different human temperaments of their intersecting axes of intentionality.

Considering school class as a social space Gołaszewski distinguishes three inner sphere, which says:

a) The first zone is a series of benches closest to the teacher's desk;
b) second zone, sometimes called a neutral, located in the middle class;
c) The third zone is the farthest from the teacher's desk.

As the results (Tokar, 2010, p. 31), of each of these zones to attract the interest of internal specific group of students.

Body position in space can be an expression of interpersonal attitudes.

In the literature, the sphere of spatial distance between teacher and student is included in the zone, whose characteristics are listed in Table 1.

Table 1. Body position in space as the spatial behavior of non-verbal communication teacher and student

zone	distance [cm]	Description	description ICT
Substrefa	0–15	Teacher makes direct physical contact (touch), pats on the back, shoulder, and sometimes hugs student.	The teacher is in contact with each student. If necessary, hold together with the student's mouse and keyboard support together.
Intimate	15–45	The teacher goes to each student on the bench.	The teacher goes to each student at the computer workstation.
Personal	45–122	The teacher comes when the whole class, goes to the first pews.	The teacher comes in all the classrooms, goes to the nearest computer workstations.
Social	122–360	Teacher goes only to the first pews.	Teacher goes only to the first positions of computer hardware.

Table 1. Body position in space as the spatial behavior of non-verbal communication teacher and student

zone	distance [cm]	Description	description ICT
Public	Above 360	A teacher sitting at a desk, standing at the blackboard, walks on a single track class, does not approach the first benches.	A teacher sitting at a desk, standing at the blackboard (and often interactive) As one track in classrooms, does not approach the first position at which the students work.

Observing the scope and implementation of the tasks related to information and communication technologies in the context of "Digital School", you can include coverage above class (except computer lab, off-site school) offering global zone.

Global	In addition to classrooms	The teacher can not maintain eye contact, but pointed verbal contact to exchange information	The teacher can use the available means of electronic communication, sometimes it is a contact through a social networking site such as Facebook

Adapted from a handful W. Nonverbal communication and the therapeutic role of the teacher, [in] Life School, No. 7, 1999 p. 483–486.

Here you can submit questions and problems, the answers to which will attempt to approximate and characterize the problem of interest to us. The solution hardware zoning is one of many possibilities, but the only one? Generated is also a question:

Are these elements affect the relationship between the participants in the learning process?

What is considering the possibility of job placement student in the classroom?

Examples of organizations auditorium in classrooms include:

a) governments – create barriers between the participants, make it difficult to interact;

b) wheel;

    c) horseshoe;
    d) and irregular ranges.

As the McCroskey and McVetta: "Effective communication in the classroom is essential to the success of both student and teacher. Type of communication in the classroom, as well as its quality is in part a function of the arrangement of seats" (Sztejnberg, 2007, p. 151).

And how this is done in the computer lab when using information and communication technologies in the implementation of the government program "Digital School?".

The respondents, teachers pursuing training in selected elementary school (Kujawsko-Pomorskie), during the launch of the Government Programme "Digital School", was requested to fill in a questionnaire.

Based on the data generated information, the extent to which a school teacher, has been awarded a grant under the "Digital School", using information and communication technology [ICT] in the conduct of their school activities, identifies a relationship between him and the students, and how it is in his opinion an impact on results – evaluation of the training.

Characteristics of teachers participating in the study.

Answers to the question of sex granted {k-woman} and {293 women M – man} 33 men. Although the study included school teachers were randomly selected for the pilot program, it was confirmed that the feminization of the teaching profession in this case, men accounted for almost one tenth of the respondents. Currently, on the basis of their response, the length of time working teachers – numerical results and their interpretation of the video is shown in the figure.

The collected data indicate a comparable time surveyed teachers at school and as a teacher. The data also allow you to see in the 30 – year number of respondents as a teacher at a school in different time intervals.

Characteristic data indicating:
    a) a decline in employment of teachers with experience more than 30 years;
    b) very large employment of teachers with seniority in the range 2 to 10 years;
    c) low employment of teachers in the second year of service;
    d) an increase in the hiring of new teachers in the school year 2012/2013 took jobs as teachers in primary schools.

Table 2. Variations in the location of hardware workshops when using ICT by respondents

The location of stations	rows	horseshoe	curvature	Other
Number of replies	151	99	13	69

Source: own study based on surveys

ROWS – 151	horsehoe – 99	curvature – 13	Other – 55 draw	Other – 14 draw
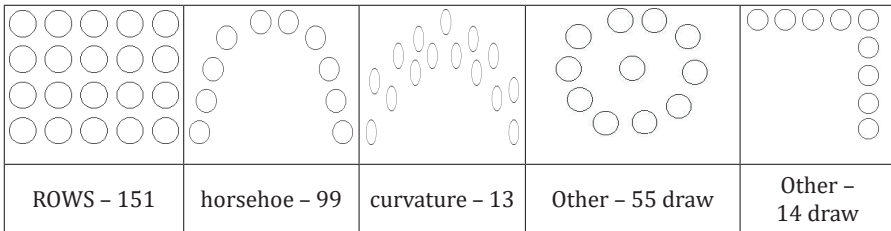
Figure 1. Note: The diagrams show the location of the positions in the school room, among other conditions may be such as a circle or a square, and if you are in?

The next question concerned the location of the stations "computer" in the lab/classroom, in the application of information and computer technology. It proposes possible alternative responses occurring in primary schools surveyed.
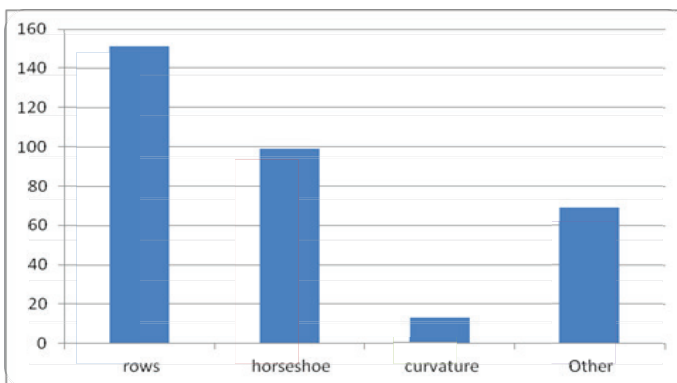

Figure 2. A graphical comparison of hardware placement options in workshops when using ICT by respondents

Source: Compiled on the basis of their own research

The predominant setting is "traditionally" <rows>, then <horseshoe>. Also interesting is the response to the variant: <Others> – draw. In this response than 20% of the respondents sketched setting shown in the figure above. Supplementary question to this problem is the issue of job placement stocking personal computers. The data obtained are shown in Table 3.

Table 3. Cast of computers in workshopswhen using ICT by respondents

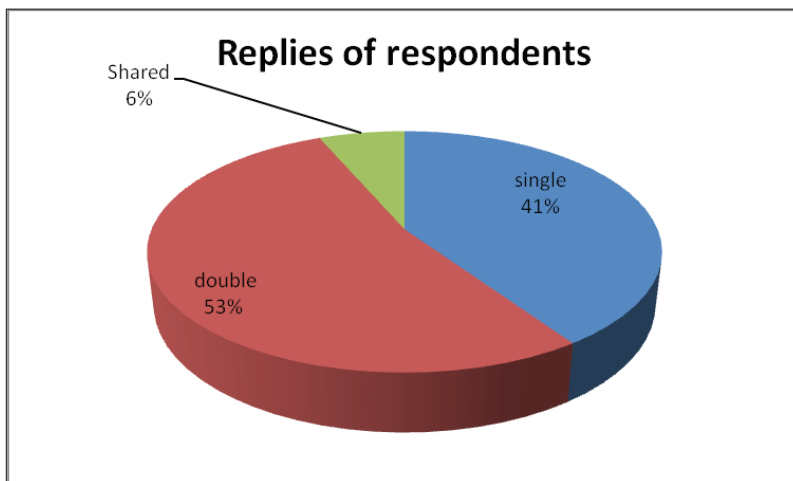| Cast of computer	single	double	shared
Replies of respondents	113	148	18

Source: Own research

Figure 3. Graphical representation of staffing computer workshops – the information given by the respondents

Source: Compiled on the basis of their own research

Computer stations for student work are double – 53% of respondents, but there is a noticeable indication for 41% of individual positions.

Recognition of interpersonal relationships
including distance measurement

A. Willis, considering (Wallis, 1990, p. 13), the social space in terms of sociological states that: "...The social space of the community are used and shaped by its area, which binds a system of knowledge, ideas, values and rules of behavior by which most fully identified with this area."

Proposals for the world's scientists are also creatures of Environmental Education Programme. The importance of the triad elements – circles, which include:

a) the social environment,
b) physical environment,
c) learning environment,
d) the physical environment.

Formal and private functions educational space Tamara Tkacz writes, as of education becoming a space where everyone is given the opportunity to rebuild its image. Especially noteworthy are the words T. Tkacz, "Inside the educational formation of new types of relationships. Instead of functions and hierarchical relationships appear collaboration, typical for open education". Noticeable education space, as Weaver (Tkacz, 2006) notes, includes both public and private universities, as well as new types of educational organizations (formal and informal), which implement the ideas of copyright in school teams.

In considering the author suggests that the human consciousness, perception of his society and nature is formed under the influence of two independent streams of information:

– one out of social conditioning, real human relationships with the environment,
– second from assimilated in the process of learning: knowledge, standards, requirements, attitudesand ideals that characterize public awareness and create a theory developed society's experience.

The results of the study – the distance between teacher
and student in the classroom with the class, group and individual

The survey placed the question used to obtain information in order to provide only the most-frequently occurring R T between teacher and

student in the classroom with the whole class, group and individual work with students.

Table 4. Distance most common between the teacher and the student while working with the class, group and individual activities – answers given by respondents

zone	Subsfera	Intimate	Personal	Social	Public
distance [cm]	0–15	14–45	45–120	120–360	360–600
with class	6	20	126	184	13
of a (part of a class)	8	24	178	118	5
Individual	26	101	173	24	2

Source: Own research

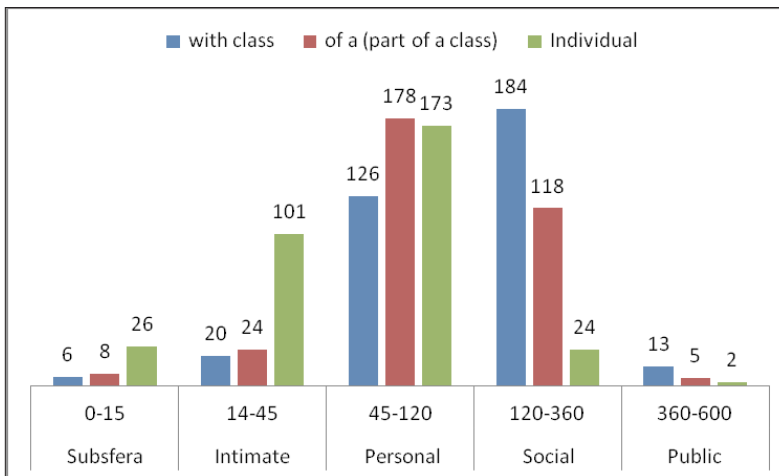## The most common distance

Figure 4. Graphical representation of the most common distance between teacher and student while working with the class, group and individual – the information given by the respondents

Source: Compiled on the basis of their own research

The answers help to identify a personal zone, as often occurs when working with students – both with a group and individually. However, the social area dominated much of the respondents work with the children you work with the class. Noticeable is the result, as indicated by the respondents, and on the work of an individual. In this case, it occurs in the zone of intimate, and therefore from a distance substantially less than the distance in the above-mentioned zones. While there are also educational work relationships are subsfera, indicating the nature of the tasks performed teaching. In the same way the ratio is also found in the social sphere, the teacher lives near the pupil. In the next section survey, respondents were asked whether the distance between the teacher-student at bar the use of ICT in class, affects the value obtained by the student evaluations (effects) of schooling?

Table 5. The existence of the impact of distance between the teacher and the student to the value obtained by the student evaluation

The impact of the value assessment	YES	NOW	Do not know
Subsfera [0–15]	74	39	86
Intimate [15–45]	100	39	73
Personal [45–120]	146	42	80
Social [120–360]	76	48	81
Public [360–600]	40	64	88

Source: Own research

The results provide an insight into the primary school teachers believe that personal and intimate zone, occupied during the process of education, affect the value of assessments. Thus does 48% and more than 30%. A group of teachers of the order of 23% are convinced about the impact of the effect of training is the implementation of activities in the area of social and substrefie. A large percentage, about 23% have no opinion on this issue.

You may not be reflected on this, and the problem of learning outcomes as seen from your point of view of teachers is very important when performing the tasks of the government program "Digital School".
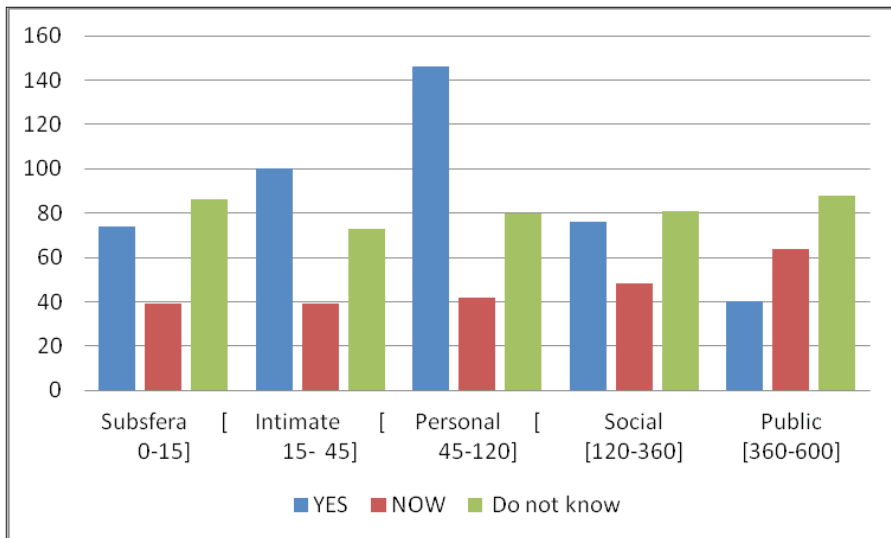
Figure 5. Graphical representation of the most common distance between teacher and student during the work and impact on the assessment

Source: Compiled on the basis of their own research

Interpersonal relations occurring in the area of computer workstations are one of the basic elements present in school. The relationships of student-student and student-teacher influence the climate as well as the effectiveness of education. Of course, the next player in the educational area of the school is a parent, an interest in the results and achievements of their child's education. Of course, at this level it is possible to interfere with the educational process to the next person, which is the director of the school. The increase in the area - the school environment appears more entities – individuals with both pedagogical supervision and executive management body followed by even representatives of the Ministry of Education.

Summary

Christina Ferenz says that the search for better, or more effective, ways to prepare a man for finding place in reality and accepting attitudes towards change is a constant feature in the variation of tasks teachers.

The results allow to initiate the following actions:
–   aim should be to build a good and safe personal relationship between teacher and student in the course of education;
–   good relationships with students and distance are just as young adults and affect the social atmosphere of class and school, as well as the education community;
–   as a result of the impact of the relationship and distance in the performance of student academic performance is largely the role of the teacher, having decisive importance;
–   would increase the number of teachers and make account <global> zone;
–   the results obtained with regard to the zones, especially chosen by their teachers, the personal and the social area, should be used as input for further educational research;
–   the results obtained the information for teaching staff to make the right choice of existing teaching resources and materials to develop new applications such as computer, which can be deployed to the ongoing process of digitization of education in Poland;
–   study presented above and taking into account the fact proxemics effects on learning using ICT, the elements to be of interest for media pedagogy.

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