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Contents

Sexuality in teaching – good, bad or ugly? Lessons from a collaborative ethnographic study

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Abstract

Sexuality in education is often considered taboo, following a social attitude that perceives sexuality as dirty and ugly in the teacher-student relationship, not only if it implicates sexual relationships but erotic feelings or subtle sexual connotations, too. Studies tend to judge the issue more reflexively along with moral and pedagogical categories of right and wrong, good and bad. However, in our collaborative (auto)ethnographic research, we found that sexuality, in a broad sense, as an anthropological dimension, is inescapably present in pedagogical relations and teaching. Going beyond a moralising approach, we aim to analyse sexuality in teaching along the lines of critical (feminist) pedagogy and the ethics of care. In line with these perspectives, we also aim to provide practical implications for teachers on the subject. Our theoretical approach follows these two frameworks but still takes a focused and limited approach to sexuality by concentrating on its universal and performative aspects. Our analysis seeks to answer how sexuality in teaching can be judged as 'good' or 'bad'. Our study's novelty consists of exploring the topic in a broad sense and a complex approach combining pedagogical and ethical aspects. Methodologically, our reflection is based on two related auto/ethnographic projects running over several years. A key element of the inquiry was a continuous collaborative reflection in our dialogical field notes complemented by interviews and focus groups. In presenting our findings, we use vignettes to illustrate the complex dimensions of sexuality in teaching. We conclude that the 'good' and 'bad' factors of the presence of sexuality cannot be separated entirely. Teachers should move beyond a moralising and dismissive attitude to reflect (or even consciously integrate) the dimension of sexuality in their teaching. Still, they should constantly reflect on the power relations and oppressive factors inherent in sexuality.

Keywords: sexuality, critical pedagogy, feminist pedagogy, collaborative ethnography

1. Introduction

Several studies have been carried out on the subject of sexuality and schools. Most of them are concerned with sex education (e.g. Krebbekx, 2019; Kehily, 2005; Epstein et al., 2003), the topic of different sexual orientations (e.g. Pascoe, 2007, McCormack, 2012) or

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manifestations of sexuality among students or in everyday school life (Krebbekx, 2018, Rédai, 2019). However, sexuality as a dimension of teacher-student relations and teaching seems to be neglected: a taboo subject not only in schools but also in educational research. Only a few studies address this topic, and most of them regard student-teacher sexuality conceived by social norms as a scandalous phenomenon (Sikes, 2006; Johnson, 2004; McWilliam, 1996; Howell et al., 2011; Dollar et al., 2004; Ewing and Taylor, 2009; Allen, 2009; 2011; Sikes and Piper, 2009; Angelides, 2009). This is in line with the public discourses around sexuality and schooling. Sexuality often appears as something ugly in relation to education. This ugliness represents a certain disgust surrounding the issue (Haywood, 2013). It is more of an emotional attitude with a moral contour than a reflected approach. Educational literature (especially in ethnographic studies) shows that sexuality is manifested in many ways in schooling. Teachers often do not know how to deal with it, and their reactions are distance, confusion, embarrassment or joking (Rédai, 2019; Sárospataki, 2020). Notwithstanding, practitioners and scholars rarely raise the seemingly provocative question of whether sexuality in teaching and teacher-student relationship can have a (positive or negative) pedagogical dimension.

During our ethnographic research studies (Sárospataki 2022, Mészáros, 2022), a new interpretation of sexuality in teaching emerged. We conducted two independent, partly interconnected ethnographic/autoethnographic studies in a Hungarian high school. These research processes involved continuous conversations about our impressions, interpretations and findings. During these dialogues, we found that sexuality (which in our conception is, as we will explain below: e.g. erotic feelings and expressions, sexual topics, sexually and gender-related performances, etc.) was present in teaching practice. We both noted the lack of reflexive discourses in this field and felt the need for more complex interpretations. Thus, we decided to develop a paper that addresses this topic. We entered into this research and theory-building process with our positionalities. Barnabás Sárospataki is a doctoral student, a heterosexual, middle-class man and a high-school teacher doing (and finishing) his doctoral study about his own teaching. György Mészáros is his supervisor, a homosexual, middle-class man, an associate professor and an activist.

As the result of our collaborative work, this paper aims to outline an approach that considers sexuality in a broad sense as an inherent part of teaching. Its purpose is to facilitate moving academic and practical interpretations of sexuality from the unreflected "ugly" to the question of "bad" or "good" by examining both the pedagogical and ethical aspects of this topic. Our further objective is to offer innovative perspectives on sexuality that help teachers prepare themselves professionally and (self-)evaluate and reflect on their work. The two intertwined ethnographies were produced in Hungary, but our insights may also be relevant to an international audience because they present a unique perspective that has not yet been elaborated in the literature.

Barnabás has already published a paper (Sárospataki, 2020) about sexuality and teaching. In that article, he partly systematised some of the research experiences used

here. He raised and reviewed some interpretive frameworks that are neglected or even entirely new in the pedagogical literature. Some of these are also present in this article (e.g. power games, performances, the role of eros). But here, we focus on findings and conclusions related to the ethics of practice. In this paper, we have introduced new theoretical issues and new practical approaches to the pedagogical presence of sexuality, reconciling different views. In this paper, we explore the theoretical context of our results in more detail and introduce new aspects (such as the role of humour). Finally, the vignettes cited here differ in most cases from those published in the previous article.

2. Theoretical background: the epistemological and ontological dimensions of research

Critical pedagogy is the most important foundation of our theoretical perspective. It aims to offer pedagogical and transformative solutions to the problem of oppression by exploring the social and systemic dimensions of education (Freire 1970/2000, McLaren, 2003). Critical pedagogy connects broader social and educational discourses on human relations (including sexuality). However, we use a limited framework of the critical perspective in this research. Primarily, we reflect on the pedagogical and ethical problem of power relations based on the ethics of care approach. Our question is how sexuality can be constructively present for those involved in education while avoiding domination and oppression (given the fact that, according to our theoretical view, it is an inevitable aspect of human being/existence). We use a feminist edition of critical pedagogy that integrates dimensions of social critique, ethics of care and feminist pedagogy (Noddings, 1984; hooks, 1994, 2003). Thus, we do not delve into the deeper, structural issues and do not aim to explore the intersectional realities of various oppressions. Aspects of class, ethnicity and sexual orientation are not included in detail in our interpretation because we have focused on a broader, anthropological understanding of sexuality and its universal dimensions. The epistemology of our research is critical because it reflects on some aspects of power relations, offers transformative solutions, and wants to influence teachers' practice. Thereby, it points indirectly towards educational and social change.

The ontological assumptions of this study are also critical in a similarly limited sense. We depart from the socio-historical reality of sexuality and examine it embedded in social and educational structures. Nonetheless, we do not use an explicit materialist perspective to interpret sexuality and gender. While we are aware of critical, materialist approaches, for practical reasons, we stick to a simpler interpretation of sexuality based more on performances. Nor do we enter into the heated debates around the interpretation of sexualities and gender (particularly the queer, social-constructivist and critical feminist traditions). The simplified definition allows focusing on shifting the discourse from the perspective of sexuality *and* teaching to the one of sexuality *in* teaching. Since, as we will explain below, our approach is that sexuality does not infiltrate, does not interfere with, nor does it supplement the teaching process but is *an inherent part of it*: an aspect of teaching that provides a new perspective on the pedagogical process.

In the course of the research, we were primarily looking for micro-histories, and teacher-student interactions, in which sexuality plays a hidden, emergent role. We also looked at happenings in which a unidirectional (or possibly bidirectional), persistent but platonic attraction shapes the teacher-student relationship. Thus, we did not focus on cases in which sexuality appears explicitly either as a subject of discourse or in the behaviour of the teacher or student. In particular, we did not consider cases in which a sexual relationship between teacher and student is realised. This means that a 'hidden' or 'broader' ontological understanding of sexuality prevails in this research.

As indicated above, we do not want to debate the more profound interpretation of sexuality. In the critical tradition, for example, the reinterpretation of Freud is strongly represented. A large amount of literature attempts to connect Marx and Freud's ideas (Wolfenstein, 1993; King, 1992). While we acknowledge that Freud's approach is an inescapable part of thinking about sexuality, we do not follow a clearly psychoanalytic framework. Sexuality as an often repressed part of everyday relations and the concept of the subconscious are present in our understanding. Still, we do not identify with the conceptual apparatus of psychoanalysis: the pleasure principle, the relationship between es, ego and superego, the opposition of instinctual drives to social norms, etc., and we understand repression at the level of the social rather than the individual. At the same time, as indicated, we do not use an explicitly critical definition of the material-social approach to sexuality either. Notwithstanding, there is an understanding of the social embeddedness of sexuality behind our analysis.

For the ontology of sexuality, we follow Smith and Williamson's (1985) practical and simple definition. They outline what is meant by a broader meaning in three points. Sexuality is (1) not only related to the genitals but to the whole human body, (2) not a separate act(s) but a circumstance that exists continuously, (3) therefore, part of all human relationships (since the body is the primary medium of human relationships).

Our definition, therefore, already implies that sexuality is part of teaching. This approach has both benefits and risks. The risk is that our writing can be misinterpreted in two ways from an ethical point of view. One is that since sexuality is part of teaching anyway, there is no need to draw boundaries. The other, the 'counterpart' of the risk, is that because such a broad interpretation of sexuality is rare, the audience might not take on board this kind of broad interpretation and therefore understand every case we present as an unethical unleashing or at least problematic manifestation of sexuality.

However, we want to show that, although the presence of sexuality in schools is common and typical, it is not constituted by homogeneous phenomena, and there is no general perspective or attitude against which the different forms of sexuality can be approached or evaluated. The aim and advantage of our general approach is, therefore, reflective vigilance. A perspective that does not think in terms of extremes or precisely defined boundaries but rather in terms of a careful and detailed reflection on the presence of sexuality in education.

This broad interpretation can also cause difficulties in determining exactly which cases and phenomena fall within the area of sexuality. In the following paragraphs, we will try to make our concept more concrete by listing a few types of cases.

One of the most prominently reflected forms of sexuality in our research is the attraction between teacher and student (Sikes, 2006; Johnson, 2004; McWilliam, 1996; McFarland et al., 2016). These are often linked to hidden erotic thoughts and desires. Attraction is a central issue in our research, primarily because we believe that this aspect of sexuality raises essential questions that are difficult for practising teachers to deal with. However, we do not only consider attraction as a manifestation of teacher-student sexuality.

We also consider the discourses on teachers' and students' appearance, gender roles, sexuality and attractiveness (Rédai, 2019; Krebbekx, 2018) as part of the sexuality present in the teacher-student relationship (McWilliam, 1996). This is precisely a form of sexuality which, according to our definition above, is a continuous circumstance - maintaining an atmosphere of sexuality in school situations.

However, beyond these more hidden manifestations, sexuality can also appear in many ways in the teacher's and the student's behaviour towards each other. Such behaviours include, for example, courting, complimenting, and the use of flirting as a communication strategy (Trethewey, 2004; McWilliam, 1995; Johnson, 2004, Pryer, 2001). It can be any form of touching but also any behaviour that highlights gender roles and gender differences.

However, as will be explained in the article, we use sexuality in a more abstract and general sense than in the previous examples. Thus, we consider cases of sexuality any situation in which the role of the body is emphasised (e.g. performances of the teaching process, as the teacher presents the subject through his/her body (hooks, 1993; Bartlett, 1998)), or passion (e.g. passionate involvement in a classroom situation or teaching process, in the interpretation of a poem, or the enthusiastic solution of a mathematical problem (Cohler and Galatzer-Levy, 2006; Hull, 2002; Pensoneau-Conway, 2009)). We think that these situations are not only metaphorically related to phenomena of sexuality. But instead that they are closely associated with the more obvious cases mentioned above and are essentially identical in the hidden presence of sexuality.

The concept of gender is also closely linked to sexuality. We interpret it as a social system of relations, again without getting into the debate about its definition. From our standpoint, the gender perspective is most specifically relevant concerning the concept of sexuality described above. We do not aim to analyse the role of gender in teaching, but rather we consider the inevitable gendered aspects of sexuality.

The presence of sexuality, however, cannot be categorised only in ways of manifestation or behaviours. Indeed, these behaviours can have many different motivations and purposes. There may be a platonic or explicit attraction between teacher and student, but there may also be other reasons for sexualised behaviour. It may be simply a gesture to influence the mood of the teaching situation, a way of establishing a

more direct relationship. In other cases, it can be a tool of manipulation, a form of asserting one's interests or, in extreme cases, abuse of sexual desires.

It is clear that the above forms of sexuality are ethically different, but in this paper, we are trying to highlight that this distinction is typically not clear. The difficulty in distinguishing between the different types is that there are multiple purposes, effects and interpretations. Intrinsic motivations, attraction, context, behaviour and discourses simultaneously, coherently and separately maintain a hidden condition of sexuality, which is already the consequence of the fact that the actors of the teaching situation are present in their embodied reality. The root causes of the various manifestations of sexuality may be different.

In the following paper, we will highlight several, often quite distinct, manifestations of sexuality while sticking to our broad definition described above. We believe that sexuality (in teaching) cannot be represented by a list of types and that the phenomena of sexuality cannot be interpreted by typification. We can only offer different, interrelated and intertwined perspectives and approaches to interpreting the many different situations related to sexuality.

3. Sexuality in educational literature

The most researched area of the relationship between sexuality and pedagogy is sex education. Even the large, synthesised works (Kehily, 2005; Epstein et al., 2003) (almost) only deal with the role of sexuality in schools in this context. Their interpretation suggests that sexuality is mainly a topic, a subject of pedagogical processes, and ignores the possibility that it might play a role as a factor in them. There are numerous studies on gender and education (Kelly, 1988; Duffy et al., 2001; Stromquist, 2007; McFarland et al., 2016). However, these works often tend to analyse the role of gender only from an educational perspective (e.g. the perception of boys' and girls' intellectual abilities) and do not focus on the more general phenomena that emerge in pedagogical interactions. Several other studies address the presence of sexuality among students (e. g. Rédai, 2019; Krebbekx, 2018) or the diversity of sexualities (e. g. McCormack, 2012). This body of research implies a more complex interpretation of sexuality, but it does not consider the potential of exploring the pedagogical role of sexuality (as some unconventional papers do (e.g. Gallop, 1992; 1995; Pryer, 2001). The vast majority of the studies are silent about the fact that sexuality can also emerge between teacher and student. It seems a taboo subject. This is probably due to different factors like the above-mentioned component of ugliness connected to sexuality, especially concerning minors or the strong moral judgment on teacher-student sexually motivated relationships (Haywood, 2013). Some scholars (Epstein et al., 2003; Britzman, 2000) mention also that sexuality in schooling is a taboo topic because of the normative (and problematic) division between private and public. Sex is interpreted as a private matter that should not be part of public discourses and settings. There might also be a legal element in the moral considerations. The age of consent in a lot of countries is 17 years. In Hungary, it is 14; however, sexual activity

between adults and teenagers is socially less accepted (especially between teachers and students). The age of consent as a legal or a normative limit might engender the tabooization of sexuality not only concerning sexual acts but desires, erotic feelings, bodily expressions, etc., too. At this point, it is important to note that we also consider ethically highly problematic the concrete sexual activity between a teacher and a student, even if consensual sexual acts between an adult and teenager are legally not punishable in Hungary. Nevertheless, we contend that we should not make a taboo subject of sexuality in the above-delineated broader, anthropological sense, even in the case of teacher-student relations. Yet, educational research should pay more attention to this dimension in teaching.

In light of the above-described "tabooization", it is not surprising that only a few research studies address the topic of sexuality between teacher and student. There is a description of the partially asexualised teaching profession (Johnson, 2004) and discussions of the platonic or even realised reciprocal love relationships between both male (Sikes, 2006) and female (Johnson, 2004; McWilliam, 1996) teachers and their students. They examine the social perceptions of these relationships (Howell et al., 2011; Dollar et al., 2004; Ewing and Taylor, 2009; McWilliam, 1996; Allen, 2009; 2011) and discuss the incompatibility of the different social roles connected to them (Sikes, 2006, 2010; Sikes and Piper, 2009; Angelides, 2009). Much of the latter research avoids interpreting the relevant cases in-depth. While exploring critical interpretative possibilities, others focus on extreme cases, typically not reflecting on the hidden mechanisms and less explicitly sexually-related situations that can occur in any teacher-student relationship. The literature's message is that the intertwining of sexuality and pedagogy can only occur in such extreme circumstances.

Nevertheless, some studies have fundamentally different approaches (Cohler & Galatzer-Levy, 2006; Hull, 2002; McWilliam, 1995; McWilliam & Jones, 1996; Allen, 2009; Alston, 1991; Gallop, 1992; 1995; Pryer, 2001). According to these papers, sexuality and desire are always present in teaching. It is not an exceptional and particular relation(ship) between some students and some teachers but an inherent aspect of passionate teaching. Based on this, sexuality has a vital and productive force in education.

4. Methodology

The empirical data of this paper is based on the collaborative ethnographic reflections of two authors. The methodology was similar to the approach of co/autoethnography (Coia & Taylor, 2009), but it innovatively mixed ethnography and autoethnography. The doctoral student (Barnabás) pursued autoethnographic research in his own high school, where he was a teacher; meanwhile, the supervisor (György) also conducted a comparative ethnographic study observing some of Barnabás's classes. The high school is an institution in a small town in Hungary predominantly attended by middle-class students. The age of the students involved in the study was from 14 to 19. During the classes, when we were both present, we wrote two initially independent field note texts,

one from a teacher-researcher perspective and one from an external researcher perspective, and then juxtaposing them, we added responses, comments and additions to each other's notes. Thus, multi-viewpoint, dialogically organised descriptions of class happenings emerged. One of the foci of these texts was the presence of sexuality in teaching. In addition, Barnabás wrote independent field notes for five years on his own experience as a novice teacher, and György wrote a field diary for three and half years for his comparative ethnography in different school settings. Barnabás collected additional data through 10 individual interviews and 9 focus groups with students, teachers and student teachers.

During preliminary scanning of the texts, we collected more than 100 cases: stories from the interviews and vignettes or researchers' conversations on happenings in the field notes. We analysed the selected cases according to the interpretive tradition of qualitative research (Denzin and Lincoln, 2011; LaBoskey, 2004; Lassonde et al., 2009). We coded the cases to different themes and theoretical approaches following our main epistemological and ontological assumptions while conducting a recurrent literature search. In revisiting individual cases, we have sought a deeper analysis, richly annotated, linked and compared them along the theoretical lines. Thus, the research data, experiences, findings, ideas and lessons and the literature review interacted continuously, leading to new interpretations confirmed by empirical experience. The emic, insider perspective, which is a fruitful condition for autoethnographic and self-study research (Bullough and Pinnegar, 2001), played a prominent role in our interpretation and analysis. We do not consider subjectivity an obstacle but a potential to be exploited in research. We do not aim to offer representative, generalisable results but only some deep reflections.

Both of our studies have ethical permission, and we defend the anonymity of the participants in this. We use pseudonyms and make the concrete cases unrecognisable. During the interviews, we paid particular attention to helping the participants deal with the possible uncomfortable topics.

5. Findings

The inevitable presence of sexuality in educational situations and relations

As we already mentioned, the repressed nature of sexuality in pedagogical situations can be traced back to the tradition of the disjunction between the public/professional and the private/personal spheres (Britzman, 2000; Epstein, 2003). Pedagogical culture inherited this principle primarily from psychology. However, this principle is becoming highly questionable, both in general (Ford, 2011, from a feminist point of view: hooks, 1993) and in the field of psychology (Pipes et al., 2005; Taber et al., 2011; Scandell et al., 1997; Sullivan, 1993). In educational literature, there is a large body of research that not only takes for granted that the personal and professional dimensions co-construct teacher identities and roles (Bernstein-Yamashiro and Noam, 2013; Day et al., 2006; Farrell,

2014), but several authors explicitly consider it to be enriching and even transformative when the teacher engages in the pedagogical process with his or her personality, emotions, etc. (Rodgers and Scott, 2008; Shoffner, 2009; O'Connor, 2008). Now, we focus on the connection between the personal and professional. Analysing our cases and own experiences, it has become clear that separating the two spheres is not totally possible. The teacher is always present in school settings as a person. The data show that students also demand this and are more engaged in the educational (and pedagogical) process if they can see the teacher as a person. They found it inauthentic if the teacher is trying to mask or alter his or her personality in school situations.

Since sexuality is a key anthropological dimension of (teachers') personality, teachers (and the students) cannot entirely 'leave out' their sexuality (intended in the broader sense) from school settings. For example, sexual attraction or the possibility that the teacher is engaged in a (sexual) relationship (outside school) is often part of how students view their teachers and talk about them, particularly the young ones.

- Mr Teacher. How old are you, if I may ask?
- 26
- Then, you are one year younger than my boyfriend
(FN /=field note/ 5 October 2015)

I'm entering the classroom, and I'm packing my stuff. Claudia says. "Teacher! I'm taking some photos; look how good you've gotten. I think you're very charming. (FN 10 May 2016)

Notwithstanding, sexuality is also present in students' discourses around older teachers. For example, a teacher is mainly accepted by some of the female students because he is elegant and attractive despite his age. In other cases, students highlight teachers' asexuality or sexually unattractive appearance in their discussions about them.

Teachers also appear to represent themselves as sexual beings, consciously or unconsciously. Numerous field notes show that teachers exploit their attractive appearance to motivate students, allude to their romantic relationship/marriage when they speak about themselves, and sometimes even make jokes about their own sexuality.

As one of the interviewees says:

In a classroom situation, the teacher is present with his/her whole personality, bringing in himself/herself, including his/her sexuality, even if unintentionally... because even knowledge can be attractive. The teacher shouldn't do anything against this fact, but he or she should be cautious not to push this dimension too far. (INT /=interview/ 4 December 2018)

A normative statement follows a descriptive part in this interpretation. The above-cited literature also affirms that certain boundaries remain or may be set in the pedagogical relations when the personal dimension is involved. This question of boundaries is particularly significant regarding the issue of sexuality. The discourses around sexuality always involve some ethical or normative considerations. In the following sections, we will explore not only how sexuality is represented and described

in the educational situations but also what normative or ethical judgements the participants associate with each case (i. e. good or bad).

The struggle for dominance and power games

One of the most significant dimensions of the presence of sexuality in school is connected to the issue of power. From the perspectives of feminist and critical pedagogy and the ethics of care, it is crucial to raise the issue of power and domination. It has been one of our most important interpretational points, too. Many (feminist) researchers are dismissive of the presence of sexuality in pedagogical relationships because it necessarily involves an abuse of power (Trethewey, 2004). The fact that the public sees sexual relations between teachers and students as a scandal is also partly due to this ethical consideration. This kind of moral attitude is a relevant regulating factor. The reflection on domination is pivotal to constructing a critically and ethically informed pedagogy, but this interpretation is often simplistic.

The power divide is not always in favour of the teacher. We have noticed, and it is in line with the literature, that the school environment differs from a few decades ago. The socially defined rules and roles associated with teaching have become increasingly blurred (Taylor et al., 2014; Sullivan, 1993). The teacher's position of (power) over students has also become increasingly questionable (Manke, 1997). The loosening of fixed norms and the greater acceptance of informality have given room for teacher-student interactions as power games. The complexity of the situation is that it creates a wavering 'battleground' in which both the teacher and the student may have a (powerful) interest in 'performing' their sexuality and using their sexual attractiveness (as a kind of Bourdieuian symbolic capital, cf. Bourdieu, 1998, 2002) to gain a more favourable position in classroom situations. The following case drawn from an interview is illustrative.

> Certain girls in my former high school class provoked some (older, less authoritative) male teachers with their dress and comments. These teachers would often go so far as to flirt with my classmates via chat applications. They often sent small compliments, which the girls would seemingly receive readily. But in fact (usually, before the teacher(s) had arrived in the classroom) would share them with the whole class, ridiculing the teacher. (INT 12 December 2018)

This example illustrates what kind of interdependent relationships may be formed by these transgressive performances. The connections are related to social capital in terms of mutual obligations (Bourdieu, 1998). In this case (as also interpreted by the interviewee following the above extract), the schoolgirls probably gain a certain privilege in the classroom, and the teacher might gain a feeling of recognition of his sexual attractiveness. There is an abuse of teachers' power, but the girls also exercise control over the teachers and instrumentalise their sexuality. This happening and the interdependence certainly have pervasive effects on the teacher-class and teacher-students relationship and, through it, on pedagogical situations.

Furthermore, we can trace a significant tendency in the interview fragment: the interviewee's interpretation is that the girls are to blame for the teacher's behaviour. The girls provoked him, and the teacher responded. This tendency is also part of the common (patriarchal) understandings of sexuality.

The constructive pedagogical connection should be based on an ethical community where the persons respect each other and care for each other's growth. The interdependence erodes this relationship, and teaching cannot fulfil its nurturing and developing role. The ethical and pedagogical ravages of the instrumentalised sexuality and domination game are intertwined. Critical interpretation should go beyond the micro-happenings and situate this case in the context of wider socio-cultural structures. The reflection of these structures might be found in the widespread instrumental interpretation of sexuality. The power that sexuality might have in certain educational situations and for different stakeholders is surprisingly trivial for many students, and discourses on this are quite common.

> Tomi <muscular, flamboyantly dressed guy> explains that if he were a teacher, he would go to class with his shirt buttoned up to his navel, "letting the nipples flash!" Then he would get everyone's attention and have no discipline problems in the classroom. (FN 26 April 2019)

In this latter example, utilising sexuality (a bodily performance with sexual connotation) is connected to the concept of disciplining or class management. The student understands it in a teacher-centred way. Discipline means that students pay attention to the teacher. In this concept, the main pedagogical tools are the ones that manage to orient the class focus on the teacher. Teachers' body and their physical attraction seem powerful means for this purpose.

In our fieldnotes, there are also several examples when students use subtle gestures of sexuality for their interests (e. g.: sending kisses and heart gestures to the teacher to gain permission). The fact that sexual attraction or flirtation is so often mentioned in students' discourse as a factor influencing the teacher is definitely linked to the process of increasing and cross-cutting commercialisation of physicality and sexuality in the broader social context.

Constructing and performing gender

In their study, Francis and Skelton (2001) present cases where male teachers construct their own masculinities in pedagogical situations (thus typically reinforcing their position of power). This phenomenon can also be observed more generally. Teachers (and students) conform to some gender roles/performances or even explicitly refer to their own gender roles/performances and the characteristics they consider important. Although this does not directly bring sexuality into the pedagogical situation, such acts are likely to emphasise the presence of sexuality because of the interconnection between gender performances and sexuality. In some cases, the emphasis on gender performance or gender roles is evidently connected to sexuality, like in the following scene from Barnabás's field notes.

Robert: Teacher, could you open my bottle, please. It's too heavy. (At first, I don't understand why he would interrupt the class with that, but in the end, I don't make a big deal out of it.)
I theatrically get ready, pulling up my shirt sleeve a little. I manage to open it. Then I kiss my bicep. Many people laugh.
Oliver [more silently and softly]: "Teacher, could you open my heart?" (FN 8 March 2019)

This "performance" represents a case where the teacher makes fun of his masculinity. He uses a gendered and sexually characterised gesture to give space for some fun during the class by answering the subtle provocation of the student. Another student reacts to the sexual connotation of the gesture and probably reveals his (same-sex) attraction toward the teacher. In our reflection, this case is a good example of the complexity of how sexuality might be constructive and problematic in teaching simultaneously. This performance might be considered a constructive, not oppressive usage of the body as a sexual and gendered 'node' of pedagogic relations. The teacher can construct a positive, not hierarchical relationship with students through such performances; meanwhile, he deconstructs the structures of hegemonic masculinity (Connell, 2005) with a parodistic act. However, this performance might also serve as means to gain students' positive, informal attitudes toward the teacher, which is not a direct pedagogical objective. In addition, it might make students vulnerable to potentially uncomfortable feelings of attraction to a teacher. Notwithstanding, the fact that the student dared to express his feelings might be positively valued because it revealed the safe space that the teacher created.

The performativity of teaching, the body as medium

The above-depicted vignette also sheds light on another significant aspect of teaching: bodily performance. Teaching typically takes place as a series of performative events. The teacher 'acts' the lesson, (also) teaches through his/her body, uses his/her body to conduct the class, and sometimes he or she even tries to make something understood through his/her own body. Knowledge (which may be attractive to students) is always represented in an embodied way: the teacher's (or even the student's) 'body' is carrying it. We have already seen above (in expanding the notion of sexuality) that this is one of the reasons why sexuality can be seen as a constant human dimension of teaching (hooks, 1993; Bartlett, 1998). Beyond the relatively obvious cases collected in the context of physical education or drama classes, this bodily aspect can often be observed in unexpected classroom situations, such as chemistry classes. In these cases, sexuality can appear either in connection with the presentation of the subject matter (during the presentation of examples related to bodily sensations) or independently of the subject matter (due to the teacher's body movements and presentation style). These conscious or unconscious performances noted in our field notes and recorded in interviews can be interpreted as constructive ways of teaching with the body or, in other cases, as the (sexual) objectification of the body (e. g.: oversexualised movements of the teacher).

Eros*: teaching as a shared, enthusiastic activity*

There is a small number of papers on the positive, forward-looking, productive role of sexuality in pedagogical situations (Trethewey, 2004; Cohler and Galatzer-Levy, 2006; Hull, 2002; McWilliam, 1995; McWilliam and Jones, 1996; Alston, 1991; Pensoneau-Conway, 2009; Burch, 1999). Other researchers with a similar perspective go as far as to (provocatively) assert that sexuality does not merely permeate teaching but is a series of sexual acts (Gallop, 1992; 1995; Pryer, 2001). Many of these reflections use the ancient Greek concept of eros. The following example is a good illustration of these authors' approach. To add to the context, only eight girls attended this literature class because of a field trip.

> [As I read Shakespeare's 75th sonnet] their attention grew from line to line so that I could experience it more. Silence for the last four lines. Ahh finally! Thanks Shakespeare! I admit I thought about looking at them to get a better involvement but then decided that would be too much. There was a touched silence, broken of course by Nelli: "It's a very beautiful poem!" "Well..." I say, "I told you so." Now let's start analysing the poem. After the form (I said sorry, but let's get the dry part over with first), we started looking at the ambivalence and imagery of the poem. Nelli immediately got into the spirit of it and began to describe the difficulties of jealousy vehemently. Blanka reacted, then Hanga, too, and the tempers were almost out of control. Blanka emphasised the importance of trust, Hanga the importance of dignity, contrasting reason with the legitimacy of jealousy. (...) It was a very good 15-20 minutes, very direct, I enjoyed it incredibly! (...) Blanka remarks at the end, "It's good that there are fewer of us. It's so familiar." I think so too. (FN 16 May 2016)

Although in the example above, the topic of the lesson is also love or a love poem, which is an important addition, more crucial is how the teacher and the students are involved in this classroom situation. This passionate, enthusiastic involvement is what we mean by the pedagogical role of eros. This implies a profound attraction, a feeling mainly according to the platonic interpretation, which can manifest itself in contemplative attention to the (inner) beauty of the other person beyond the physical and leads to the experience of erotic desire through the realisation of spiritual truth and knowledge. The eros inspires both lovers and philosophers to seek (transcendent) knowledge.

The quoted authors justify the implicit presence (and also the advancing role) of sexuality (eros) in teaching by a metaphorical interpretation. Teachers and students are present in a shared act of living cognition enthusiastically and passionately in some cases. The process of teaching and learning is like a sexual act in a metaphorical sense: giving oneself to the Other in an ecstatic way, losing and finding ourselves in an intimate, sensual process of sharing (Gallop, 1992; 1995; Pryer, 2001).

On the one hand, this highly metaphorical and romantic approach might erode the original meaning of sexuality, making it too broad and thus exposing it to blurring interpretations. This could lead to relativising the power dimensions in the presence of sexuality. On the other hand, this strong connection between sexuality and teaching might be helpful as an out-of-the-box and transgressive understanding of teaching that

has positive, pedagogical repercussions. It might facilitate a more progressive pedagogical perspective that is transformative, as hooks (1999) claims in her book: Teaching to Transgress. This approach represents the good side of sexuality in teaching.

The role of humour

In addition to these aspects, it should be noted that humour is present in many of the situations mentioned above. Although we have identified joking as a mechanism to avoid reflection on sexuality, it also provides an opportunity to present sexuality with less edge and less normatively in educational situations. This idea might be related to Trethewey's (2004) suggestion to consider desire as laughter, thus facilitating the reflection on it in pedagogy.

But we see the role of humour as more than just reflecting desire. In the story about opening the bottle quoted above, for example, the student's joking remark may be a humorous representation of desire, but more likely, it brings in the subject of (homo)sexuality in a joking way. We also mentioned the case of a schoolgirl who sent kisses and formed a heart with her hand to get permission to leave school during school hours. These gestures were, of course, somewhat ironic, caricatural and humorous, partly because of the situation but mainly because of the way they were performed. Although, in this case, too, the humour may mask real desires, it somewhat mitigates the fact that she uses eroticism as an instrument to legitimise behaviour that is also against the norm.

6. Discussion: the good and the bad kind of sexuality?

We raised the question: is sexuality a 'good' or 'bad' dimension in teaching? From the literature, it might seem that there are these two distinct types of sexuality connected to pedagogy. One is reprehensible, oppressive, and typically detachable from the teaching process and the other is enriching and intertwined with teaching. This dichotomy does not only appear as different approaches of studies with contrasting perspectives, but also the most permissive writings that interpret sexuality in the broadest sense (e.g. Pensoneau-Conway, 2009) perpetually ask the question: is it (already) the kind of sexuality that is 'wrong' or the kind that is '(not) wrong yet'? In the autoethnographic field notes and conversational texts included in this analysis, we encountered the same problematisation several times: we often raised this question in the reflective parts of our field diaries.

Trethewey (2004) articulates a similar kind of dichotomy when she writes: "say yes and no to sex". She means that we must admit that sexuality can be understood as both an oppressive and a liberating act (for the participants). To say no and yes means to keep this duality in mind, to look for a practice in which "pedagogical sexuality" can be experienced, but to avoid its risks and dangers. In the end, Trethewey is also separating 'good' and 'bad' sexuality, even if they are the same sexuality, but can be two kinds in their effects and functioning. But we think that this reflection is not sufficient. We argue

that the partly inevitable, partly voluntary presence of sexuality in the pedagogical space has good and bad dimensions simultaneously.

From a philosophical point of view, in every human relationship, the parties have goals and desires that cannot be the same, so they exercise a certain amount of power over each other. Supposing sexuality is taken into account as a factor, this is even more obviously true since, in sexuality, the other person appears as the subject/object of our own goals and desires. With constant negotiation and work, the power divisions in intimate, personal relationships can be reduced or minimised, but the pedagogical relationship always bears the burden of unequal power.

To take an example of a case that has been brought up in the concept of eros: it is true that regarding learning as an enthusiastically shared experience, sexuality is more liberating than oppressive. But let us note that the teacher uses eros to manipulate the students' learning to some extent. The students' enthusiasm also influences or even manipulates the teacher's behaviour (to the students' advantage in most cases).

We think it is an illusion to separate good and bad sexuality in teaching totally. We cannot typify forms or behaviours of sexuality (always in our broader sense and not considering the extreme cases and clearly abusive forms) that are yet good because they are inside certain boundaries. This means that teachers should perpetually be in doubt. This is the 'wobbling', to which we referred above about our reflections also described in Pensoneau-Conway's (2009) autoethnography. This reflection, in our view, has no resting point because the care for others always interpellates us ethically. From a critical perspective, pedagogical relationships and the inevitable sexuality in teaching always have a power dimension, and thus, the latter always remains a potentially oppressive force.

However, this does not mean that it should be rejected and excluded from pedagogy. It is not possible, either. In addition, when making pedagogical decisions, we must always bear in mind that it is not possible to exploit only the positive (or only the negative) effects of sexuality. There will always be its shadow side. This claim does not mean that we should not have clear boundaries around the presence of sexuality in teaching. In the final section, we will outline a practical, reflective process for teachers about these boundaries.

Conclusions: the steps of (self-)reflection and decision-making for teachers

Our goal has been to offer some practical pedagogical and ethical advice drawn from our analysis. It is obvious that no simple "recipe" can be given for such a complex issue, but we outline a possible trajectory of reflection that can be unfolded based on what has been described so far. First, teachers need to recognise that sexuality is present ab ovo in pedagogical situations. Suppose they avoid the traditional moralising attitude and the triangle of denying, disapproving and making fun of it. In that case, they can then come closer to the phenomenon, freeing themselves from guilt, shame and confusion. In this

case, they can also see sexuality as having aspects in pedagogy, such as the role of eros, which can be fertilising and fruitful in teaching.

Whoever gets here has taken critical steps towards a liberated and authentic pedagogical practice. It is liberating for the teacher, who is thus freed from the narrow borders of taboo. But it is also liberating for the students, who are also able to experience and make sense of broader ideas and feelings about sexuality. (In their case, this is particularly important because they are at the beginning of their sexual experiences.) As one student-teacher commented after one of the focus group interviews: "It's a pity we didn't have training on this topic at school. It would have put a lot of things in place for us."

At the same time, who finds the "good sexuality", he or she has also put him/herself (and his/her students) at great risk because he/she might not consider its possible downsides. To become a critical and ethically conscious teacher, we think the following reflective steps are crucial. Thus, teachers should recognise and accept that the presence of sexuality inevitably contains (unequal) power dimensions that are potentially exploitative and oppressive; at the same time, they should realise that this does not mean that it is necessarily wrong overall.

However, after embracing these thoughts, teachers will need further reflection on boundaries and ethical and pedagogical criteria. They should ask the most important ethical questions: Does one party suffer any disadvantage? Does one party exercise power over the other? How? Is there a pedagogical advantage of the presence of sexuality? Which do I feel is more important, the pedagogical or the personal goal related to sexuality (in a broad sense: feeling good, desire, etc.)?

There are no clear answers to these questions, not even because, in our view, there are no right and wrong types of sexuality in the broad sense. Even if we can distinguish between different aspects and manifestations of sexuality (as we have done in this article), an ethical judgement does not follow clearly from these. Approaching sexuality in different ways helps us to make more complex interpretations of pedagogical situations. It opens a wide space for ongoing reflection, allowing us to make ethical decisions.

The task of practitioners is to recognise and accept the positive impact of sexuality while minimising the risks associated with its dark side (which is not a specific, clear "side"). Reflective pedagogical practice takes place in a dialectical relationship between the interpretative and ethical possibilities of sexuality, which is perhaps best achieved by always keeping the pedagogical goals in mind, and leaving the personal sides (the desire, the sexuality) as a background embedded in but not above it.

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Measuring sustainable communication in education

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Abstract

Although aspects of sustainability in communication such as nonviolence are discussed from time to time, hardly any theoretical basement with an empirical validation can be found. In the broadest sense, sustainability refers to the ability to maintain or support a process continuously over time. This paper asks for the theoretical approach that helps to understand the challenges of teaching in schools of diverse societies (2) and explains some core aspects of the ongoing research on sustainability and communication (3). After that, this paper presents the research question this project tried to answer (4) and explains the used instruments, the data, and some of the most relevant outcomes of this study (5). Finally, some conclusions describe the opportunities and threats of sustainable communication for teacher education.

The outcome of this paper is that a specific theory of sustainable communication is missing. Furthermore, the results of the empirical investigation show that intercultural communication, non-violent communication, cooperation, problem solving and, reflection are statistically related as constructs and predictors of sustainable communication. Also, the teaching experience of the participants in the sample is a significant predictor of the sustainable communication.

Keywords: sustainability; communication; nonviolence; collaboration; problem solving

1. Introduction

Although aspects of sustainability in communication such as nonviolence are discussed from time to time (classical: Rosenberg, 2015), hardly any theoretical basement with an empirical validation can be found. But some sources discuss sustainability and communication as different terms with some interrelations. This is not an enormous surprise since communication and sustainability are highly relevant for societies in the 21st century because of societal diversity and inclusion or general crises like the Covid-19 pandemic or climate change.

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2. Literature Review: What We Know About Sustainable Communication Already

In the broadest sense, sustainability refers to the ability to maintain or support a process continuously over time. Sustainability of resources and lifestyle is increasingly crucial regarding climate ch33ange education and shortages of resources such as raw material, energy, biodiversity, etc. (Hernández-Ramos, Pernaa, Cáceres-Jensen, & Rodríguez-Becerra, 2021). Here, especially the interdependencies of ecological, societal, and economic systems generate many different perspectives on sustainability and sustainable development (Danaher, Wu, & Hewson, 2021; regarding cultural perspectives in Thailand schools Saemee & Nomnian, 2021).

The 21st century society is characterised by polarisation and diversity, a fact that should be observed in education systems around the world. Sir Ken Robinson observes that 'The more complex the world becomes, the more creative we need to be to meet its challenges' (In the preface to Robinson, 2011). Unfortunately, the educational system has not always adjusted its methods to align with the needs of society. The 21st century education should be about giving all the students a chance to attain their educational potential, to succeed in their future life. Society and the educational system have to see diversity not as a problem but as an asset, from which everybody can benefit. For this, we must tackle the nowadays problems in schools regarding inequities based on the socio-economic backgrounds, ethnic origins, language, religion, gender, and sexual orientation of the students.

In this polarised society dealing with students, parents, and colleagues with different backgrounds can be sometimes challenging. The school systems have to recognize this challenge, in order to support and encourage all the students regardless of their backgrounds. There is a need for a deeper understanding of the needs of teachers in dealing with diversity. Hence, teachers need competencies to deal with these differences in students, social networks, teaching units, and society in general. By this, the quality of communication needed in recent schools needs to be long-lasting in terms of social interactions, including differences, and prevent exclusion and violence. In other words: sustainability of social interactions is needed in schools. Based on different scientific sources, as shown below, we decided to call these competencies related to communication, focusing on empathy, respect, social cohesion, shared meaning, and solution-orientation in environmental, social, economic, and political perspectives, "sustainable communication."

2.1 Sustainability

Communication in a sustainable way is a complex process that includes different components, like intercultural communication, nonviolent communication, reflection on one's own communication, conflict resolution and problem solving related to communication and cooperation. In this regard, students' knowledge may often be limited (Yuan, Yu, & Wu, 2021) as well as the teachers' (Santamaría-Cárdaba, Martins, & Sousa, 2021) and the organizational knowledge of schools (Nakidien, Singh, & Sayed,

2021). But communication is essential to act in social connections with the challenges of these developments (Hernández-Ramos, Pernaa, Cáceres-Jensen, & Rodríguez-Becerra, 2021). Less is known about the sustainability of communication itself. Sometimes authors or companies address the *communication of sustainability*, e.g., when referring to sustainability in company goals "to disclose information on the way they operate and manage social and environmental challenges" (European Union, no date) or as a measurable form of interaction (European Association of Communication Directors, 2021). Thus, there is a knowledge gap regarding the *sustainability of communication* because only some of the single elements of sustainable communication can be found.

To qualify students in primary and secondary education for further scientific investigation of challenges in natural science, new curricula are developed and implemented. Goals are the better engagement of the students in the lessons, the longer-lasting learning effects, and their development of critical thinking (Aceska, 2016). In doing so, a deeper understanding of sustainable development is intended.

Using information and communication technology (ICT) helps achieve sustainability of learning and administrative processes (Pais, Pedro, & Santos, 2016). These platforms and courses gain empathy and awareness of social cohesion as well as economic issues through interaction in forms of global education (Szobonya & Roche, 2021). Furthermore, they reflect ideas of sustainability in global contexts of knowledge, culture, and economy (Fonseca, Julian, Hulme, De Lurdes Martins, & Brautlacht, 2021). Teaching and learning become more dynamic and effective in students' motivation and quality of outcomes (Ramazanoğlu & Toytok, 2021).

However, it also must be said that using ICT requires special professional and technical skills to participate in these learning processes and the communities, where shared meaning is essential (Coffield, et al., 2021; see also 2.3). Therefore, further education and training are crucial. The issue arises that the gender bias in ICT often is still huge, and the gender digital divide needs to be closed to achieve justice and sustainability (Ancheta-Arrabal, Pulido-Montes, & Carvajal-Mardones, 2021).

Another issue is the question of infrastructure in ICT-based education: "the new practice of online learning does not seem a sustainable model of learning in the current situation because many students, particularly from remote rural villages, still do not have access to digital devices and the internet." (Paudyal & Rana, 2021, p. 1012) Although the cited paper deals with experiences from Nepal and by this from a country with specifically (not) developed infrastructure, the question of infrastructure and access needs to be discussed in general for every place where ICT-based education shall be sustainable. The authors require intense support from the universities, but societal reliability in providing relevant infrastructure also seems to be required.

To establish community-related enterprises and education programs, a "learning laboratory" in the social spaces can be implemented to deal with social issues in a sustainable form (Intrator & Siegel, 2010). Thus, sustainability in urban contexts is not only a question of individuals but also of social spaces and their networks.

In sustainable education, recognition is vital: “For sustainable personal development, the assessment of education and learning is an obligatory condition in terms of recognition.” (Yaman Ortas, 2021, p. 186) This means that in social networks such as communities and social spaces in general, good chances are given to get recognition from within the social network one belongs.

Especially regarding ICT, new forms of interaction between actor groups such as experts, professionals, academics, practitioners, and students have become established. Thus, community building is crucial for sustainable learning (Nanjundaswamy, Baskaran, & Leela, 2021).

Another quality of community education is described concerning local wisdom. This unique perspective leads to different forms of local-based knowledge management processes: “1) knowledge identification; 2) knowledge creation and acquisition; 3) knowledge organization; 4) knowledge codification and refinement; 5) knowledge access; 6) knowledge sharing; and 7) learning.” (Intem, Phuwanatwichit, Sarobol, & Wannapaisan, 2021, p. 38) Here, local knowledge and general support are combined to generate sustainability in educating for local knowledge and relation.

2.2 Communication

Communication is vital for belonging in schools in general (Hamm, Bragdon, McLoughlin, Massfeller, & Hamm, 2021), mainly when non-deficit oriented because communication is broadly estimated as necessary for “understanding, social unity, and peace” (Şeker, 2021, p. 326; referring to Çelikkaya et al.). This is particularly important for the interaction of immigrant students and other students in school (Kabataş, 2021).

2.2.1Social and Emotional Learning Competencies

Prior academic outcomes and demographic characteristics best predict the academic effort, but nearly not by social and emotional learning competencies. On the other hand, communication between students, parents, and teachers is needed to minimize academic failures, avoid exclusion experiences (Kabataş, 2021), and improve school experiences (Kautz, et al., 2021).

2.2.2. Intercultural communication

Today’s world, this “global village” like McLuhan (1962) called it, is rapidly changing, becoming increasingly global and multicultural. This fact requires progressively complex skills and competencies from everybody. The role of the educational institutions is to accommodate the needs of the ‘new’ society, by learning the required skills and competencies.

The term "intercultural communication" was first used by the anthropologist Edward T. Hall in his book *The silent language* (1959) and nowadays is part of various disciplines like cultural anthropology, psychology, social psychology, communication science, linguistics, political science, historical science, cultural geography, and economics

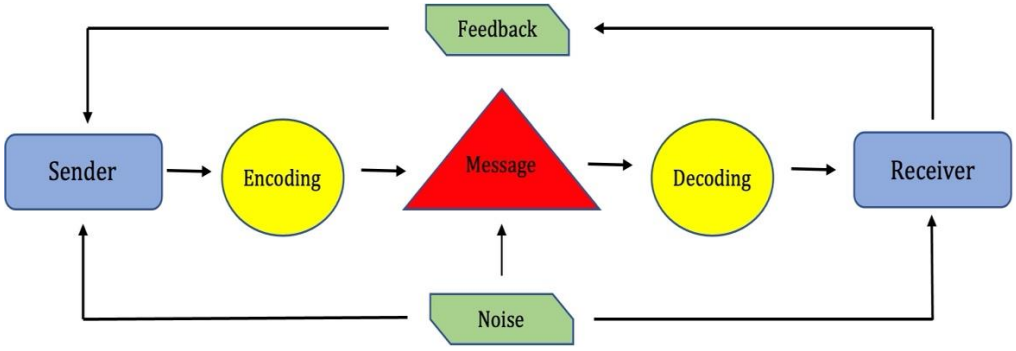
(Maletzke, 1996), each discipline looking at the phenomenon of 'intercultural communication' from its own point of view.

Culture is always a collective phenomenon, since it is shared, at least in part, with people who live or have lived in the same social environment. Culture is often described as an iceberg whose foundations are values, and above the surface are attitudes, behaviour, communication, manners, artefacts (Schein, 2003). These values and attitudes are internalised during socialisation and are therefore often not conscious. Hall compares culture with "a giant, extraordinary complex, subtle computer", in which "programs guide the actions and responses of human being in every walk of life". This complex process "requires attention to everything people do to survive, advance in the world, and gain satisfaction from life" (Hall, 1990, p. 3).

Communication and culture are directly related to each other because communication is part of culture. Hall goes one step further and claims "Culture is communication and communication is culture" (Hall, 1959, p. 186). It is therefore a question of which cultural factors influence our communication and how we can deal with them.

Communication is mostly defined as a process in which information is transmitted from a sender to a receiver. There are four elements involved in any communication: (a) a sender or source who (b) encodes a message which is then transmitted over (c) a channel to (d) a receiver who decodes the message.

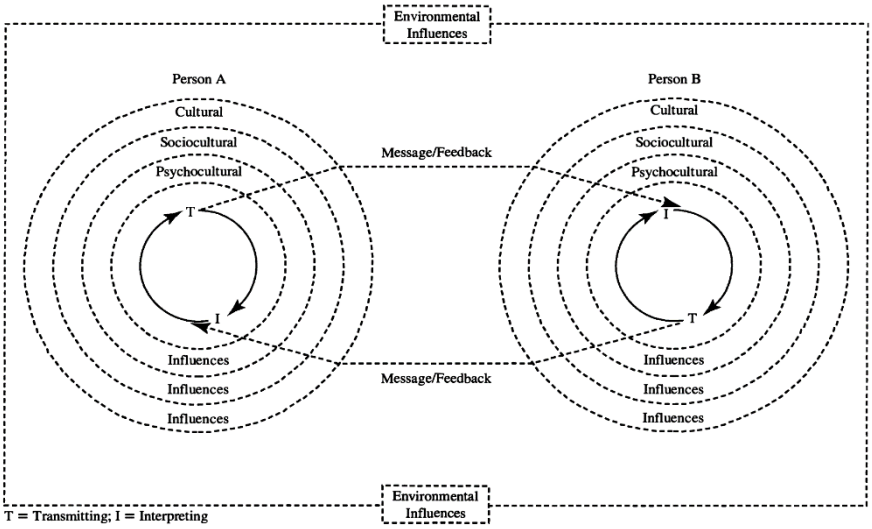
Figure 1: Elements involved in any communication



Looking at this model we might believe that communication is a simple, one-way process and that the messages are sent and received without reference to the environment and the sequence of past and anticipated future events. But communication is a two-way dynamic process and relies to some extent on the shared social knowledge of sender and receiver. Messages are usually meaningful only within a given, well-defined social setting. Gudykunst & Kim (1997) highlight the fact that encoding ("transmitting") and decoding ("interpreting") of the communicative message is an interactive process influenced by cultural, sociocultural, psychocultural and situational factors. By drawing the circles and the box with dashed lines they indicate "that the elements affect, and are affected by, the other elements" (Gudykunst & Kim, 1997, p. 44) and that the communicative environment is not isolated, but an open system instead. Every time people communicate,

they are simultaneously engaged in transmitting and interpreting of messages, they interpret incoming stimuli at the same time as they are transmitting messages, that indicates that "communication is not static" (Gudykunst & Kim, 1997, p. 46). This model sees communication as a concept of interaction and can be used to describe abnormalities in communication with people from different cultures.

Figure 2: Communication as a concept of interaction (Source: Gudykunst & Kim 1997, 45)



When communicating with people from different cultures we may experience uncertainty and anxiety. To manage those feelings people should be conscious and mindful about their communication, so Gudykunst & Kim (1997), especially because much of our communication behaviour is habitual. Langer (1989, cit. in Gudykunst & Kim, 1997) isolates three characteristics of mindfulness: (1) creating new categories, (2) being open to new information, and (3) being aware of more than one perspective. Paying attention to these conditions contributes to effective communication with every member of the society.

The goal of intercultural communication is, among other things, to know and to understand the norms, symbols, values, and facts which are important for both communication partners and to include them in the communication in order to be able to create a dialogue on an equal level.

2.2.3 Organizational Communication in Schools

Organizational communication in schools is a multidimensional construct, remarkably related to job satisfaction. The most critical aspects of corporate communication are "openness between principal and staff as well as supportive, directive, and democratic communication" (De Nobile & Bilgin, 2022, p. 13). Here, powerlessness and empathy are of the same importance for organizations as for instruction (Mathis, 2021) and open a perspective on the communication of emotions that notices, connects, and responds to

the other individuals (Miller, 2007). Furthermore, organizational communication is essential to optimize inclusive policies within the educational system (Tonegawa, 2022).

2.2.4 Counselling in Schools

Recent research shows that "multicultural counselling competence" in school counsellors is not widely developed in the investigated schools (Shi & Carey, 2021). Here, the question of multilingualism and translanguaging (as the tactical use of the linguistic repertoire) is essential and needs to be considered for identity building and social justice (Fuertes Gutiérrez, 2021). This question of social justice also rises when communication in ICT-based education settings is thought of. Pre-service teachers need competencies of – again – critical thinking to give impulses for social justice learning within the classroom: "The hope is that this exposure to educational uses for ICTs will create a mindset that makes both preservice and, thus, in-service teachers more amenable to incorporating technology into their classrooms in ways that interrogate inequities and foster advocacy in and for marginalized populations." (Shelby-Caffey, 2021, p. 38)

2.3 Nonviolent communication

The concept of Nonviolent Communication (NVC) goes back to the American psychologist, mediator, author, and teacher Marshall B. Rosenberg, who – by his own admission – brought together and systematised various sources and perspectives on the subject from the early 1960s. His own violent experiences in childhood and youth, which he had in Detroit with discrimination based on religious and ethnic affiliation, shaped him and motivated him in finding an efficient way to communicate. As a psychologist, he pursued a basic idea: if you want to create peace, you not only have to pay attention to what you say – but also how. Rosenberg therefore developed the concept of "Nonviolent Communication" (Rosenberg, 2015). It assumes that most interpersonal conflicts are caused by our judgemental language and the fact that we communicate our needs incorrectly in dialogues. In his book "Nonviolent Communication" he explains how focusing on people's underlying needs and making observations instead of judgments can revolutionise the way you interact with anybody.

The NVC is based on the following assumptions:

- **All human beings share the same needs.** It is the strategies we use to meet these needs that differ. Using different strategies can lead to conflicts, not the needs.
- **Every human action basically wants to fulfil its own need.** Because our feelings are directly related to our needs, we feel in a certain way (happy, satisfied, sad, scared etc.) when needs are met or not met.
- **All human actions are motivated by a desire to meet needs.** Although people try to find ways in meeting their needs without harming others, they do not always recognize a path for this. So, any kind of violence is a tragic expression of unmet needs.

- **All human beings have the capacity for compassion.** People instinctively enjoy helping others as long as they can do so voluntarily.
- **Cooperation can meet everyone's needs.** Through competition, the needs of the individual are met while the other party suffers.
- **Communication and healthy peaceful relationships only work when there is true empathy.** Through dialogue and connection, we can meet more people's needs more peacefully.
- **All human beings have the capacity to grow and change.**

In the concept of Nonviolent communication, it is important to express yourself honestly and to listen to your communication partner honestly. The four elements of NVC are: observation, feelings, needs and requests.

- **Observation**: At the beginning there is the perception and description of the situation, without any interpretation. It is important to communicate our observations without judgement or evaluation.
- **Feeling**: Only then should emotions be felt and named in words. A distinction must be made between thoughts and feelings.
- **Need**: A need can be identified from the feeling. At this point we say what needs are behind these feelings.
- **Requests**: If the need is clearly identified, a request should arise from it. The request should be positive and specific.

Non-violent communication is a form of interaction based on mutual respect and mutual appreciation. It can contribute to encouraging self-responsibility for one's own contribution to school life. Students and teachers, but also parents and stakeholders are equally important for a successful school life. Nonviolent communication helps them to formulate their own feelings and needs in conflicts. In this way, they are more likely to avoid assigning blame and refrain from making diagnoses. A constructive handling of conflicts and heterogeneity can become possible. School can strengthen children, young people, and adults - a strength that does not lead to mutual injuries, but to non-violent interaction with one another.

Many researches on NVC were conducted during the last years[2]. All show that using NVC the participants express themselves without criticising or blaming the others (Brascomb, 2011), they are aware of the needs and feelings of others (Nash, 2007) and understand emotions better and manage conflicts (Nosek & Durán, 2017).

2.4 Cooperation

The Partnership for 21st Century Skills has identified collaboration as one of several key skills (OECD PISA Collaborative Problem Solving Expert Working Group, 2013; Trilling &

[2] Lee, C. A., Kessler, C. M., Varon, D., Martinowitz, U., Heim, M., Rosenberg, M., & Molho, P. (1998), Cox, E., & Dannahy, P. (2005), Rose, L. (2006), Kasumagic, L. (2008), Agnew, E. N. (2012), Baesler, E. J., & Lauricella, S. (2014), Nosek, M., Gifford, E., & Kober, B. (2014), Museux, A.-C., Dumont, S., Careau, E., & Milot, É. (2016), Nosek, M., & Durán, M. (2017), Terepyshchyi, S., Khomenko, H. (2019) - to name just a few of them.

Fadel, 2009). Although cooperation has been shown to bring more quality to the classroom and greater job satisfaction, many teachers are working mostly alone. Cooperation means that resources can be used, and a wide range of potential can be developed. Cooperation determines the collegial working relationship between the teachers, shapes the trusting relationship between teachers and students as well as the relationships with parents and partners outside of school. According to the Partnership for 21st Century Skills collaboration is one of several learning and innovation skills necessary for post-secondary education and workforce success.

Until now, the classic "one-person model" has been applied: "one class, one subject, one topic, one goal, one level, one tempo, one method, one grade and (of course) one teacher" (Schley 1998, p. 114). Nowadays in order to deal with the challenges that schools face this needs teamwork and a cooperative activation of all resources and potentials. But cooperation is no automatism, it must be learned, because it is a vital skill.

Roschelle and Teasley (1995, p. 70) define collaboration as "coordinated, synchronous activity that is the result of a continued attempt to construct and maintain a shared conception of a problem". So, cooperation is a key skill for problem solving. The partners have to engage in activities in a coordinated effort to solve the joint problem. By cooperating the participants can explain their understanding to each other and to elaborate and reorganise their knowledge (Van Boxtel, et al., 2000).

According to Dillenbourg (1999, p. 1) collaborative learning is "a situation in which two or more people learn or attempt to learn something together". That involves not only studying together for a period of time as a "biological and/or cultural process" (Dillenbourg, 1999, p. 4) or in a smaller group for a test but also "learning from collaborative work, which refers to the lifelong acquisition of expertise within a professional community" (Dillenbourg, 1999, p. 4). When interacting with other people one important aspect is negotiability. Teachers and students have to learn that they cannot impose their own opinion on others, but on the contrary they must work with each other and talk to each other for the common goal. For this they have to explain and justify their position and give reasons for it. Collaborative learning encourages the ability to communicate constructively and interact with the partners in prosocial ways, starting from the premise that the contribution of every member of the team is valuable.

2.5 Conflict resolution and problem solving related to communication

Collaborative learning is an important factor for other skills like critical thinking (Bailin et al., 1999; Heyman, 2008; Nelson, 1994; Thayer-Bacon, 2000) and conflict and problem solving (Halpern, 1998; Willingham, 2007).

The conflict as a phenomenon has been an omnipresent object of interaction since the beginning of human existence (Moning-Petersen and Petersen, 2013, p. 204). Conflicts exist at all levels: at the macro level (e.g. between states), at the meso level (e.g. conflicts between social groups) and at the micro level (e.g. family conflicts). So, it's utopic to think about a society and a school without conflicts. The important thing is the form of

dealing with conflicts und searching together for a solution, in which all partners must be involved and listened to. In order to be able to deal with the conflict constructively, an "emotional distance" is often necessary. It is therefore advisable to be sensitive to the right point in time when dealing with the conflict.

Communication is the basis for developing relationships and organising societies. Within the group arise relevant communication patterns and codes that every member of the group are familiar with. “These patterns and codes mark group membership and demarcate boundaries of group membership. Using communication to transcend these boundaries becomes the task of conflict resolution.” (Ellis & Maoz, 2003, p. 256)

Even more important than the subject of the conflict are its actual causes, and just as with an iceberg, these causes are often very far-reaching and lie hidden beneath the surface and are related to the experiences, hopes and fears of the people involved. When dealing with conflicts we have to take into consideration also the thinking, imagining, perceiving and at the same time feeling and wanting of all partners. At the same time, one must assume that communication is divided into two levels: the factual level and the relationship level, whereby the later plays a very important role in understanding the other. So, relationship conflicts are often behind factual conflicts. To solve a conflict, one has to tackle the conflict and seek dialogue with the other party.

Just like in every society conflicts can also be found in the whole education systems, and they occur at all its system levels. On one hand, they take place between all school stakeholders (e.g. educational authorities, school administrations, parents, associations, teachers, students and the staff employed in the school system) and in the classroom between teachers and students, between teachers and parents, between students. And because conflicts are often inevitable, we have to see conflicts not only as a burden but as an opportunity for bringing about change and advancement. A conflict resolution requires a communicative approach because it can contribute to understanding the nature of the conflict, in order to handle it fairly, creatively, and especially non-violently. An important task of the school would be to sensitise the students to conflicts and strengthen their social and personal skills. The teachers play a major role in this because their behaviour and the use of effective methods of conflict resolution also make it easier to achieve the goal of joint learning and teaching. Also, other factors like the study of history, language, religion, traditions, values and norms of other groups or nations helps in intercultural understanding and problem-solving, but it is only a starting point.

The emergence of conflicts depends primarily on our ability to communicate. The better humans learn to express themselves (their needs, observations, opinions, expectations, etc.) and to communicate to others, the better they will be able to solve conflicts or even avoid them arising.

2.6 Reflection about one's own communication

We live in a society that largely expresses its communication in terms of guilt and problems, rather than needs and solutions. All our interpersonal problems could be solved through more conscious and benevolent communication, maybe even with ourselves. The first step on the way to successful and authentic communication is an honest reflection on your own communication behaviour.

Self-reflection about communication is the ability to step back from one's own communication experience and look at it in a critical, analytical and non-emotional way (Adams, et. al, 2006). The capacity of self-reflection and self-awareness may be a very important aspect for communication, conflict resolution, problem solving and decision making (Boud, et.al, 1985).

Mezirow explains that "critical reflection may be either implicit, as when we mindlessly choose between good and evil because of our assimilated values, or explicit, as when we bring the process of choice into awareness to examine and assess the reason for making a choice." (Mezirow, 1998, p.186).

In education the methods which facilitate self-reflecting should be developed, to enable self-reflection about one's own communication. Schön (1987, 9.89) means that only learning which significantly influences behaviour is self-discovered, self-appropriated learning.

3. Research Questions

As shown in the literature review above (cf. chapter 2), much is known about sustainability and communication. But little is known about sustainable communication, which refers to intercultural communication, non-violent communication, cooperation, problem solving and reflection. Therefore, our investigation's research questions are:

- Are intercultural communication, non-violent communication, cooperation, problem solving and, reflection statistically related as constructs of sustainable communication?
- Are there any predictors for sustainable communication development?

4. Purpose of the Study

The aim of the study is to explore the sustainable communication in schools from Germany and Romania and to identify its possible predictors.

5. Research Methods

5.1Participants and procedure

A number of N = 131 participants was involved in the research conducted, including a number of N = 94 in-service teachers, and a number of N = 36 pre-service teachers. Out of the total number of participants, a number of N = 79 are from Romania, and a number

of N = 52 are from Germany. A slight majority were females (90.2%), 8.3 % were males, and 0.8 did not mention the genre. Mean age was 31.1 years (SD = 1.15)
The research instruments were applied in the electronic version, using the Google forms, and the participants generally completed the questionnaire in approximatively 15 minutes. Participation was voluntary, participants were informed about the confidentiality of any sensitive information and the researchers has obtained informed consent.

Data obtained were statistically analysed using IBM SPSS ™ software, and since the research instrument that we used is not standardised, we used a cut-off point of -1/+1 mean standard deviation performed with Visual Binning in SPSS for setting the cut-off points.

5.2 Research instruments

The participants were asked to fill in a survey developed for the purpose of this study. The survey had 31 items designed on a Likert scale with 5 points, where 1 represented strongly disagree and 5 strongly agree. The statements of the scale were designed to assess the sustainable communication through 5 different constructs: intercultural communication, non-violence communication, cooperation, problem-solving regarding the communication process, and reflection.

For measure how accurately our scale taps into the various aspects of the specific constructs that we already mentioned, we consulted 19 independent experts-judges from Universities from Romania, Germany, Belgium, Portugal, Turkey, Spain, and Lithuania. The experts received the scale, in electronic version, and evaluated it considering aspects such as: the relevance of the items, the clarity of the wording, the number of the items. The degree of the agreement between the experts-judges was calculated using *Kendall's W coefficient = .94 (df = 6.00, p >.005).* Also, to identify the internal consistency of the scale, we have calculated the *Cronbach's Alpha = .91.* Therefore, taking into consideration the value of Cronbach's Alpha and Kendall's W coefficients, it can be stated that our research instrument is relevant and valid.

6. Findings

In order to identify if the intercultural communication, non-violent communication, cooperation, problem solving, and reflection are statistically related as constructs of sustainable communication, we performed a Pearson Correlation Coefficient and, also a Multiple Regression analyse.

The results showed that some correlations are high and, others of them are medium. But even though not all the correlations are high, we can observe in the Table 1 that all of them are significant ($p < 0.005$). The high correlations that we have found are the correlations between intercultural communication and cooperation ($r = 0.642$, $p < 0.005$), between nonviolence communication and cooperation ($r = 0.669$, $p < 0.005$), between problem solving and cooperation ($r = 0.676$, $p < 0.005$) and between problem solving and

reflection (*r = 0.609, p < 0.005)*. Therefore, based on this data we can observe that in three of four cases of high correlations, is strong evidence that the cooperation is laniary related with the others sustainable communications constructs. That means that the higher are the cooperation skills, the higher are the intercultural communications, the non-violence, and the problem-solving skills. Therefore, we can state that cooperation activities can make a significant contribution to schools dealing more effectively and professionally with all the challenges, and thereby improving teaching and learning processes. Of course, the others medium correlations are relevant because they show that there is a statistically significant relationship between sustainable communication constructs.

Table 1: Persson Correlations of the sustainable communication constructs

		Intercultural Communication	*Nonviolence Communication*	*Cooperation*	*Problem Solving*	*Reflection*
Intercultural Communication	Pearson Correlation		.496[a]	.642[a]	.511[a]	.412[a]
	Sig. (2-tailed)		.000	.000	.000	.000
	N		131	131	131	131
Nonviolence Communication	Pearson Correlation			.669[a]	.511[a]	.471[a]
	Sig. (2-tailed)			.000	.000	.000
	N			131	131	131
Cooperation	Pearson Correlation				.676[a]	.426[a]
	Sig. (2-tailed)				.000	.000
	N				131	131
Problem Solving	Pearson Correlation					.609[a]
	Sig. (2-tailed)					.000
	N					131
Reflection	Pearson Correlation					
	Sig. (2-tailed)					
	N					

As we can observe in the table displayed above, there are significant correlations between all the sustainable communication constructs, but we found also that these constructs are very strong predictors for the sustainable communication development in schools. Therefore, we performed a multiple regression analysis to identify which are the strongest predictors of the sustainable communication.

According with the data presented in Table 2, Table 3, and Table 4, we can state that 94% from the variation of the sustainable communication ($R^2 = 0.94$) is determinate by its mains constructs. In our multiple regression a linear relationship was identified between the criterion variable and the predictors ($F = 499.53, p < 0.005$) which means that the teachers who have high levels of sustainable communication, have also a high level of the intercultural communication (*Beta = 0.26, p < 0.005*), of the non-violence communication (*Beta = 0.30, p < 0.005*), of the cooperation (*Beta = 0.23, p < 0.005*), the problem-solving regarding the communication process (*Beta = 0.40, p < 0.005*), and of the reflection (*Beta = 0.75, p < 0.005*).

Table 2: Model Summary for sustainable communication constructs

R	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
.97	.94	.94	.12

Table 3: ANOVA for sustainable communication constructs

	Sum of Squares	*df*	*Mean Square*	*F*	*Sig.*
Regression	28.71	5	7.18	499.53	.000
Residual	1.81	126	.01		
Total	30.52	130			

Table 4: Coefficients for sustainable communication constructs

	Unstandardized Coefficients		*Standardized Coefficients*	*t*	*Sig.*
	B	*Std. Error*	*Beta*		
(Constant)	.04	.09	.00	.47	.000
Intercultural Communication	.20	.02	.26	9.24	.000
Nonviolence Communication	.27	.02	.30	10.93	.000
Cooperation	.18	.03	.23	6.45	.000
Problem Solving	.35	.03	.40	13.34	.000
Reflection	.47	.04	.75	12.94	.000

We have shown above that intercultural communication, non-violent communication, cooperation, problem-solving and reflection are strong and significant predictors of the sustainable communication, because they are its main constructs, but could there be other predictors of the sustainable communication development? Considering the data presented in Table 5, Table 6, and Table 7, we can state that 12% from the variation of the sustainable communication ($R^2 = 0.12$) is determinate by teaching experience of the participants. In our multiple regression a linear relationship was identified between the criterion variable and the predictor ($F = 9.05, p < 0.005$) which means that the teachers who have high levels of sustainable communication, have more teaching experience (*Beta = 0.30, p < 0.005*).

In the multiple regression that we performed, we did not find a significative influence of the age on sustainable communication (*Beta = 0.06, p > 0.005*).

Table 5: Model Summary for sustainable communication predictors

R	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
.35	.12	.11	.46

Table 6: ANOVA for sustainable communication predictors

	Sum of Squares	*df*	*Mean Square*	*F*	*Sig.*
Regression	3.78	2	1.89	9.05	.000
Residual	26.74	128	.21		
Total	30.52	130			

Table 7: Coefficients for sustainable communication predictors

	Unstandardized Coefficients		*Standardized Coefficients*	*t*	*Sig.*
	B	*Std. Error*	*Beta*		
(Constant)	3.75	.09	.00	43.46	.000
Age	.03	.06	.06	.43	.668
Experience	.07	.03	.30	2.16	.033

Conclusions

The exploratory study we conducted revealed important information about the sustainable communication constructs. At the same time, the findings showed some interesting correlations and predictors of the sustainable communication in schools.

More specifically, the intercultural communication, non-violent communication, cooperation, problem solving and, reflection are statistically related as constructs and predictors of sustainable communication. Also, the teaching experience of the participants in the sample is a significant predictor of the sustainable communication, more than age. Those findings lead to the conclusion that sustainable communication is a very important skill in schools and for the education field. Our research results are connected with many others research (Muste, 2016; Docherty, 2014; Morreale & Pearson, 2008; Weheba & Abd El Kader, 2007) who place communication in the centre of the teaching and learning process. Being able to communicate plays an essential role in being an effective educator. Teachers require good communication skills to ensure the goal attainment of teaching-learning in schools. Communication in school is more than conveying information, it is about stimulating critical thinking, modifying attitudes, eliminating stereotypes and thus approves to be sustainable.

Our study has some limitations. First, it is limited by the sample that was a convenient one and was quite small, which negatively could influence the generalisations of the results. Another limitation of our study is small number of the research on sustainable communication, and even if we tried to find as many related studies as possible, it is the validity of the construct may be negatively influenced.

Future research should investigate, on a bigger sample, the possible differences between in-service and pre-service teachers regarding the dynamic process of the sustainable communication. Also, we should experimentally investigate which are the factors that could develop the sustainable communication, and its mains constructs, for the in-service and pre-service teachers.

To conclude, we can argue that the development of the sustainable communication is a very complex process, including skills as intercultural communication, non-violent communication, cooperation, problem solving and, reflection, which influence and predict each other.

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Hybrid teaching approach at Romanian Language and Literature in PISA 2018, Romania

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Abstract

In recent years, teaching became an important subject of public debate, as a critical area of educational reform in Romania. There is little consensus about what is expected of Romanian teachers, some standpoints inclining towards taking a more constructivist approach in teaching. However, there is little scientific evidence about the teaching practices of Romanian teachers, for public debate to rely on. PISA 2018 (Romania) gives access to data about the frequency of 5 teaching practices, as perceived by students at Romanian Language and Literature lessons. The analysis of these practices suggests that, in their students` perception, Romanian teachers have a hybrid approach of teaching, with a predominance of directed instruction. Also, according to the students, other frequent practices in Romanian language and literature class are teacher support and teachers` stimulation of reading engagement. For the future, more accurate evidence is necessary, in addition to investigating the students` perceptions, we should do observational studies of the teaching practices themselves.

Keywords: teaching practices, directed instruction, constructivist teaching, PISA, Romanian Language and Literature

Introduction

In recent years, teaching became an important subject of public debate, as a critical area of educational reform in Romania. It is one of the two most important, determining factor of school success in the public perception (Tufiș, 2022). Also, improving the quality of teaching represents a priority in political projects (România Educată, 2019), European funding (Borș, 2020) and the civil society`s standpoints (Coaliția pentru Educație, 2015).

There is little consensus about what is expected of Romanian teachers, some standpoints inclining towards taking a more constructivist approach in teaching. The teachers are expected to become facilitators of learning (MEC, 2019, România Educată, 2019), to prioritize formative assessment and feedback (Kitchen et al., 2017, Banca Mondială, 2020) or to use engaging and meaningful teaching methods (Banca Mondială, 2020). However, these claims are based on consultations with stakeholders, international studies and/or a political preference.

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There are some studies showing that Romanian teachers use interactive methods (Petruța, 2013) and have a positive attitude towards constructivist approaches in teaching (Rogoz, 2015). With some limits PISA 2018 could help us gain some more clarity on the subject. PISA 2018 (Romania) gives access to data about the frequency of 5 teaching practices, as perceived by students at Romanian Language and Literature lessons. The students were inquired about adaptive instruction, teacher support, teacher feedback, teachers` stimulation of reading engagement and directed instruction. In this article I present an analysis about the frequency of these practices and their variation pattern.

Before proceeding further, it must be said that myself and the reader should approach this analysis and the subject of teaching with consideration. Systematic reviews show that teaching practices, measured independently or as part of broader school factor (eg. the curriculum), have a significant, positive effect on students` performance (Hattie, 2014, Reynolds şi alţii, 2014, Scheerens, 2016). Nonetheless other researchers are claiming that the evidence about teaching became so politically important because it legitimizes the raising control of neoliberal governments (Ball, 2007), to the detriment of teaching itself (Biesta, 2010). Also, there is evidence that OECD studies themselves give us a limited understanding of teaching and challenge the teachers' authority (Sorensen and Robertson, 2017). In the light of these criticisms, I acknowledge that even though my intention with this analysis is to enrich our understanding of teaching for teaching`s sake, simply by using data from PISA 2018 I am perpetuating a certain understanding of teaching, close to OECD politics. As follows, I am inviting the readers to read and use the results critically, to restrain from using this evidence for unfair, hasty judgment of teachers, and support or involve in complementary and independent studies of teaching

Data: PISA 2018

In the analysis I used data from PISA 2018, the large-scale and standardized assessment of 15-year-olds competencies, coordinated by the Organization for Economic Cooperation and Development (OECD). In Romania, the data for PISA 2018 were collected by the Institute of Educational Sciences[3], as designated by the Ministry of Education and Research (MEC, 2019). PISA investigates three[4] domains of competence, reading, math and science. In PISA 2018, the major testing domain was reading, which in Romania`s case, is defined as: "understanding, using, reflecting on and engaging with written texts, in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society" [5] (OECD, 2010, p. 23).

[3] Reorganized in the Education Research Unit within the National Center for Policy and Evaluation in Education in April 2020.

[4] In the 2018 wave, two new secondary areas were investigated: financial skills and global skills, but it is not clear what their status is in the next waves. These minor areas have not been tested in Romania.

[5] The definition of the testing domain changed in 2018 for the countries who did computer based assessment of literacy, the change consisted of adding „evaluation" to the 4 general capabilities. (OECD, 2019a)

In relation to the discipline associated to reading (Romanian Language and Literature), PISA 2018 investigated the students` perceptions about teaching practices such as adaptive instruction, teacher support, teacher feedback, teachers` stimulation of reading engagement and directed instruction. These practices were measured with 3-4 items of frequency or opinion, included in the students' background questionnaire. By aggregating the items, respecting the statistical threshold of internal consistency, of at least 0.7, measured by the Cronbach alpha, the PISA consortium obtained 5 indices: adaptivity, teachsup, perfeed, stimread, and dirins. The indices were calculated using the Rasch model, the values being reported as weighted likelihood estimates (OECD, 2009). The positive values of the indices indicate that the perceived frequency of the practice is higher than the average frequency perceived by the students from the OECD countries.

Table 1

The composition of the pedagogical practices' indices (OECD, 2010)

Teaching practice	Items
Adaptive instruction (ADAPTIVITY)	• The teacher adapts the lesson to my class's needs and knowledge; • The teacher provides individual help when a student has difficulties understanding a topic or task; • The teacher changes the structure of the lesson on a topic that most students find difficult to understand.
Teacher support (TEACHSUP)	• The teacher shows an interest in every student's learning; • The teacher gives extra help when students need it; • The teacher helps students with their learning; • The teacher continues teaching until the students understand.
Teacher feedback (PERFEED)	• The teacher gives me feedback on my strengths in this subject; • The teacher tells me in which areas I can still improve; • The teacher tells me how I can improve my performance.
Teachers` stimulation of reading engagement (STIMREAD)	• The teacher encourages students to express their opinion about a text; • The teacher helps students relate the stories they read to their lives; • The teacher shows students how the information in texts builds on what they already know; • The teacher poses questions that motivate students to participate actively.
Directed instruction (DIRINS)	• The teacher sets clear goals for our learning; • The teacher asks questions to check whether we have understood what was taught; • At the beginning of a lesson, the teacher presents a short summary of the previous lesson; • The teacher tells us what we have to learn.

According to ISE (MEN, 2019), the data for PISA 2018 were collected from a nationally representative sample of 5,081 students, grades 7-10, from 170 school units, with a validation rate of 99% (N = 5075 tests). Among the respondents, the lowest share comprises of 7th grade students (0.9%), followed by the 8th grade students (6%), the 10th grade students (15.1%) and the 9th grade students (77.9%). Sampling was performed by the OECD consortium through a multistage and stratified sampling procedure (OECD, 2009). This strategy allows for an acceptable level of representation at an affordable cost of data collection.

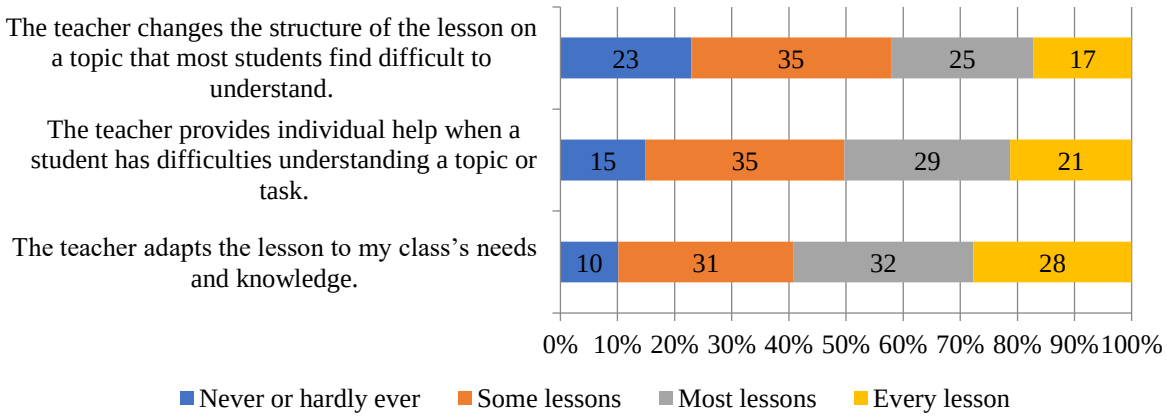
The sampling procedures, with schools and classes being the primary and second sampling units, generates some degree of error (OECD, 2009). On the one hand, at national level, schools have various sizes, which means that the students` probability to be selected in the sample is higher for those from smaller schools. Also, the students from the same school are more likely to resemble, which means that the sample does not fully capture their diversity, at national level. The correction of this error is particularly important in Romania because the lower secondary education is highly segregated (Iosifescu, 2016, Kitchen et al., 2017). As recommended by the consortium (OECD, 2009), the representativeness error was partly corrected by doing analysis on weighted data.

Results

The students' perceptions of their teachers` adaptivity in Romanian Language and Literature classes are divided. The statistics of the index (min = -2.25, max = 2.00, M = 0.04, SE = 0.02, CI = -0.00,0.09, KURT = 0.13, SKE = 0.02, SD = 0.98, SE = 0.01) suggest that on average adaptive instruction is rather high. Nevertheless, as shown by the items' distribution (see Figure 1), the aggregated average is not representative for an important proportion of Romanian students. At least 40% of the students believe that their teacher changes the structure of a lesson, adapts the lessons, and provides individual help almost never or at some classes. Thus, it would be more accurate to conclude that in the practice of Romanian teachers, there are important differences regarding the frequency of adapting their teaching to the students, as individual and / or as a group.

Figure 1

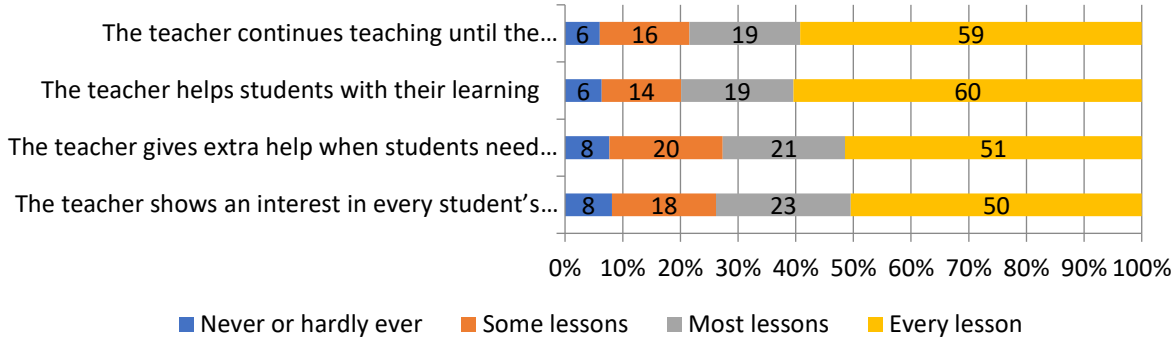
Teachers` adaptivity (%)



Teacher support, defined as time, interest and extra help to students, is a common practice according to the students' perception. The statistics of the index (min = -2.72, max = 1.31, M = 0.2, SE = 0.02, CI = 0.18.0.27, KURT = -0.02, SKE = -0.66, SD = 0.97, SE = 0.01) show that in general students feel supported at Romanian Language and Literature classes. At least 70% of students state that most or every lesson their teachers show interest in every student's learning, gives help, and continues teaching until the students understand.

Figure 2

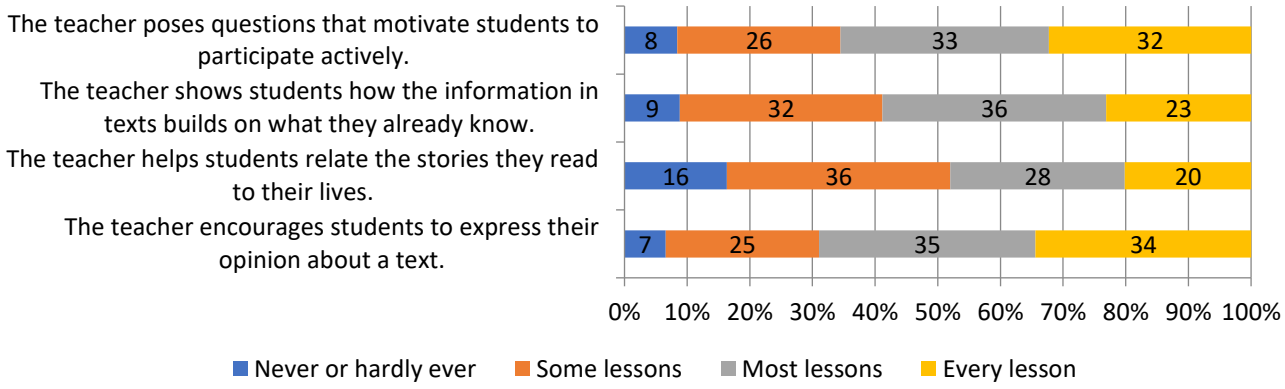
Teacher support (%)



According to the students, the stimulation of reading engagement is a common teaching practice, however this is not a clear-cut trend. The statistics of the index (min = -2.30, max = 2.09, M = 0.3, SE = 0.02, CI = 0.25,0.34, KURT = -0.15, SKE = -0.047, SD = 1.0, SE = 0.014) show that on average, most students consider that teachers stimulate their reading engagement in most Romanian Language and Literature lessons. However, between 20% and 30% of students say that this only happens in some lessons. Looking at the items` distribution, one could observe that the micro-practice of helping students to relate the stories they read to their lives is the least common one.

Figure 3

Teachers` stimulation of reading engagement (%)



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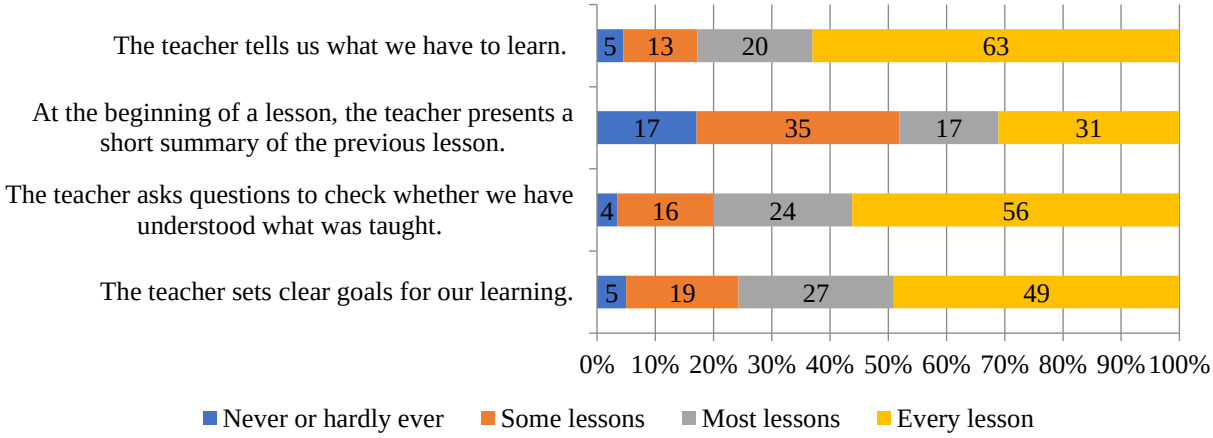
Directed instruction is a common practice at Romanian Language and Literature lessons, in the students` perception. The statistics of the index (min = -2.94, max = 1.82, M = 0.3, SE = 0.02, CI = 0.27.0.37, KURT = 0.08, SKE = -0.21, SD = 0.97, SE = 0.02) show that on average, the micro-practices specific to directed instruction were reported in most lessons. Also, in the case of two micro-practices, telling students what to learn and checking their understanding, seem to be quite common, over 50% of Romanian students associate these with every lesson. At the other end of the spectrum, 17% of students say that at the beginning of Romanian Language and Literature lessons, teachers rather don`t present a short summary of the previous lesson.

Figure 4

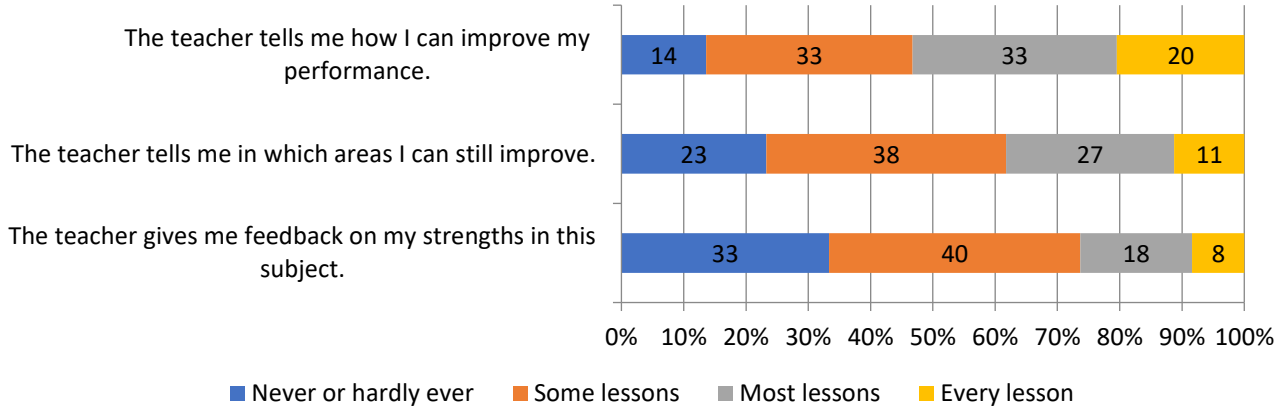
Directed instruction (%)



In the students' perception, feedback is a practice with a rather low frequency. The statistics of the index (M = 0.2, SE = 0.02, CI = 0.18.0.27, KURT = -0.02, SKE = -0.66, SD = 0.97, SE = 0.01) show that on average, students receive feedback from their teachers in some lessons. An important share of students, 33%, reported that they never or almost never receive feedback on their strengths regarding Romanian Language and Literature classes.

Figure 5

Teacher feedback (%)



As one ca see in table 2, the correlation analysis of the teaching practices shows that there is a positive and moderate/substantial relationship between all the measured practices. This suggests that, in the students` perception, one practice does not systematically exclude another, but they are reported with a significantly correlated frequency.

Theoretically, directed and constructivist approaches in teaching are defined in opposition to each other. The correlation analysis shows that, in practice, with a probability of 95%, the students who reported a high frequency of directed instruction, also reported a rather high frequency of the teachers` stimulation of their reading engagement. Between these practices there is a positive and moderate correlation (r = .37, SE = 0.02, R2 = 0.13, p <0.01), which suggests that Romanian language and literature teachers have a rather hybrid pedagogical approach, systematically combining directed instruction with a constructivist one (the stimulation of reading engagement). Nevertheless, as showed previously, directed instruction is the practice with the highest frequency, according to the students' perception. Therefore, I conclude that the Romanian teachers have a hybrid approach, with a predominance of directed instruction.

The correlation analysis also shows that some practices correlate stronger than others. On the one hand, teacher support is more strongly correlated with directed instruction than with teachers` stimulation of reading engagement. Both relationships are positive and moderate, but the correlation between the index that measures teacher support and the index that measures directed instruction (r = .55, SE = .012, p <0.01) is stronger than the correlation with the index that measures the teachers` stimulation of reading engagement (r = .43, SE = 0.02, p <0.01), the difference being statistically significant (z = -9.28), according to the testing method developed by Meng, Rosenthal, and Rubin (1992 in Gignac, 2019). This shows that, in students' perceptions, a higher frequency of support is more likely to be associated with a higher frequency of directed instruction than with a higher frequency of teachers` stimulation of reading engagement.

On the other hand, both adaptive instruction (z = 11.80) and feedback (z = 13.25) are more strongly correlated with the teachers` stimulation of reading engagement than with directed instruction. The correlation of adaptive instruction (r = .49, SE = 0.02, p <0.01) and feedback (r = .52, SE = 0.01, p <0.01), with the teachers` stimulation of reading engagement is moderate to high. This shows that in students' perceptions, a higher frequency of adaptive instruction and feedback is more likely to be associated with a higher frequency of teachers` stimulation of reading engagement than with a higher frequency of directed instruction. These differences in correlation power isn`t surprising, teacher support as measured by PISA is a theoretically consistent with direct instruction, additionally, adaptive teaching, feedback and stimulation of reading engagement share constructivists theoretical assumptions.

Tabel 2
Correlation of pedagogical practices

		ADAPTIVITY	TEACHSUP	PERFEED	STIMREAD	DIRINS
Adaptive instruction (ADAPTIVITY)	r	1				
	N	4960				
Teacher support (TEACHSUP)	r	.41	1			
	N	4943	4989			
Feedback (PERFEED)	r	.48	.39	1		
	N	4873	4891	4913		
Teachers` stimulation of reading engagement (STIMREAD)	r	.45	.43	**.53**	1	
	N	4972	4950	4882	4978	
Directed instruction (DIRINS)	r	.33	**.55**	.33	**.37**	1
	N	4944	4977	4893	4953	4992

*p<0.01

Conclusions and Discussion

This descriptive and correlation analysis show that, in the students' perception, teacher support, teachers` stimulation of reading engagement and directed instruction are frequent practices in Romanian language and literature classes. Adaptive instruction is also rather frequent, but the results are importantly dispersed. However, the frequency of feedback is rather low. PISA data also suggest that, on the one hand, a higher frequency of perceived teacher support is correlated with a higher frequency of directed instruction, and on the other hand, feedback and adaptive instruction are more strongly related to teachers` stimulation of reading engagement. Overall, the variation of the practices suggests that, in their students` perception, the teachers have a hybrid approach, with a predominance of directed instruction. However, more accurate evidence is necessary, in addition to investigating the students` perceptions, we should do observational studies of teaching practices.

The hybrid approach of Romanian teachers is not out of the ordinary. In scientific literature teaching is disputed between competing learning and instructional theories. However, there are studies showing that in practice teachers use a bricolage of teaching activities, some directive, and others constructivist. Some teachers get directive during interactive teaching approaches (Myhill and Warren, 2005, Dyer and Gamoran Sherin, 2015) and others are being receptive to their students thinking during directed instruction (Chin, 2006, Tiilikainen et al., 2019).

More precisely, by analyzing critical moments[6], Myhill and Warren (2005) conclude that sometimes teachers use dialogue to control, not scaffold their students: through a series of questions and explanations, the students are guided to the correct information, in the logic of the teacher. Coffey et al. (2011) claim that even the scientific understanding of formative evaluation gives insufficient importance to how receptive are teachers to their students` thinking. On the other hand, Chin (2007) found that an overall directed approach to instruction, in the form of IRF (initiative / question, answer, feedback) can include in-depth investigation and uptake of students' ideas. In the cases analyzed by the author, what makes the difference is how teachers react to the students' answers. While some teachers use corrective feedback, establishing if their students' answers are correct, others remain rather neutral. The latter don`t guide their students' attention on performance, but on actual knowledge through open-ended questions, which aim at higher levels of thinking and encourage students to explore their ideas to a greater depth. Also, the responsibility for the conclusion and evaluation is redirected to the students, so the actual knowledge, not the authority of the teachers, becomes the reference point for students.

From an effectiveness point of view, some studies prove that there is no general model of effective teaching (Reynolds et al., 2014), and the pedagogical approaches with the highest results blend constructivist and directed instruction (Kyriakides et al., 2013, Scheerens, 2016). Other studies also show that learning is fostered by a good balance between structuring learning and cultivating the students` independence (Donovan and Smolkin, 2002). Especially experienced teachers are effective in facilitating the construction of new knowledge by combining rigor and creativity (Sawyer, 2011a), supporting students neither too much, nor too little. Sawyer (2011b) calls this phenomenon “the learning paradox” and argues that, based on this evidence, teaching should be reimagined as an art of improvisation. The hybrid approach of Romanian teachers is promising in this sense, but future studies should test its effects on students` performance, regardless of their social class, gender, ability, ethnicity.

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Fostering womens to choose stem career by using emotional intelligence as key element

Cristina Tripon•

Abstract

Emotional intelligence has become more and more important in our society, being part of the competencies of the 21st century, regardless of the field in which the professional career exists. Especially in the STEM field, which is deeply marked by the small number of women represented, this could be the key to motivating girls to increase their motivation to choose the STEM field. This article presents the gender gap in terms of emotional intelligence and its expressiveness in order to create the premises to encourage girls to become leaders in the field, based on their ability to empathize (better than boys). STEM girls have an emotional intelligence superior to boys and there is a difference between girls and boys in terms of perceiving and expressing emotions. Thus, girls studied in STEM domain tend to be affirmative expressing their feelings directly, naturally, they are sociable, socially balanced, sometimes they can have exaggerated emotional reactions to a situation. Despite this, test results have shown that boys, unlike girls, have the ability to perceive and use emotions within the relationships they establish, much higher. STEM girls have an empathic ability superior to boys. This indicates that girls, unlike boys, are able to listen to others look from the perspective of others, to put their feelings in tune with others, they have altruistic behaviors that give them a dose of generosity that is sometimes lacking in boys.

Keywords: emotional intelligence, female STEM career,self-regulation.

Introduction

Emotional inteligence plays an important role in the lives of young people. It has been found that mothers who protect their children from frustrations, from stressful situations, from those that cause them anxiety, actually exacerbate the child's inclination towards shyness, which ultimately leads to depriving the child of the opportunity to learn to cope alone in unfamiliar situations and to get rid of fear. This causes children to become safe targets in front of the manipulator. Also, some parents despise the feelings of their children and show them no respect, criticizing them in general, disapproving of them, punishing them or being angry at them for daring to express their affective feelings, not knowing that shyness is not a native disposition, a trait that belongs to the nature of man, but is largely determined by education. Children become anxious when they are in

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unfamiliar situations or meet new people. If they are protected by educators or parents in the sense of avoiding stressful events, places and new people, then they have the chance to become shameful adults, timorous, inhibited in behavior and vulnerable to the manipulative influence exerted by those around them.

Emotional intelligence requires a permanent commitment to development and a continuous personal evolution. Emotional crises, which generally cause vulnerability to manipulative influence, associated with inherent events-career failures, illness, deaths of loved ones, moving to lesser-known places--are ameliorated or at least easy to bear with the sincere sharing of feelings with another person.

Children learn early on from adults that feelings are not information and that they are not accepted by others as information. In this situation they will cease to express their feelings or rely on them and will try to orient their lives on, and towards, neutral information (so-called objectives). This, however, is not simple because the feelings exist, and their power is very great.

From the point of view of meaning cognitive learning and emotional learning are interrelated, so it is a real problem. Although the programs for the development of emotional competences gather the best of classical training, the development of emotional competences differs from the usual training, by:

- duration - the development of emotional competences takes longer than the development of cognitive skills; IE means change and change requires time; learning also occurs after the end of the course itself;
- motivation - the motivation of the participants in the IE training is generally higher and healthier;
- practice - to reach excellence in the field of EI requires a lot of practice;
- accentuated dynamics - learning is not linear, change does not happen at once, it returns to old behaviors, it is tried once again; there are falls and comebacks;
- support – EI development requires significant organizational support;
- learning – IE training is centered on emotional learning, which means a reshaping of neural circuits; cognitive learning means acquisition of information and does not involve a "reprogramming".

Students learn early on from adults that feelings are not information and that they are not accepted by others as information. In this situation they will cease to express their feelings or rely on them and will try to orient their lives on, and towards, neutral information (so-called objectives). This, however, is not simple because the feelings exist, and their power is very great. Emotional intelligence requires a permanent commitment to development and a continuous personal evolution.

1.Elements of Emotional Intelligence

Knowing personal emotions involves identifying and expressing them coherently, in a given context. In any relationship we express information, feelings, facts, memories. Sometimes, however, we find it difficult to express clearly what we want to say or feel -

we are not coherent, and sometimes we find it difficult to understand what we are told - the intention that hides behind the words. These situations are generating conflict.

In order to avoid them, it is important to be able to encode and decode the transmitted messages, at the verbal or non-verbal level, so that we can correctly transmit and understand the meaning of the messages.

Managing emotions refers to the ability to choose how we will express s in a given situation. In order to manage emotions, it is important to take into account: What do we express? How do we express it? When do we express? Where do we express? To whom do we express?

Directing emotions towards purpose is the criterion by which we manage our emotions. It is important to take into account what we want to do or achieve, concretely: duration in time - when we want to achieve the goal; participants - who we need; strategy - what steps to follow; resources - what we need.

Empathy it is the ability to intuit or recognize the emotions of others. Empathy is not about living other people's emotions, but about understanding them from our experiences.

The ability to build positive interpersonal relationships is the art of emotional intelligence comes down within this component. Thus, we have the possibility to create our own relationships using the elements mentioned so far: we set our goals, we channel our energy and emotions according to the goal (using empathy as a tool), we express and identify our emotions in a coherent way. We will be aware of our responsibility and that of others in interpersonal relationships. This will help us reduce conflicts and communicate effectively (Roco, 2001).

Goleman (2001) considers that the elements that make up emotional intelligence are:

- social skills – the ability to manipulate, communicate, collaborate, cooperate;
- self-control-desire for truth, conscientiousness, adaptability, innovation;
- self-awareness - self-confidence;
- motivation - desire to conquer, dedication, initiative, optimism;
- empathy-to-understand others, diversity, political capacity.

High level of emotional intelligence-differences by gender

The difference between emotional intelligence (IE), the level of structuring of which is assessed by the emotional contributor (QE), and academic intelligence, which relates to logical thinking and is acquired in schools, evaluated by intellectual contributor (QI), can also be made in terms accessible to all, namely the voice of the heart and the voice of reason. The two forms of intelligence refer to two kinds of knowledge, one based on affectivity and the other on ration (Roco, 2001).

Psychological profile for a male student with high emotional ability (QE): has a social balance in human relationships, has an ability to engage in solving other people's problems, can dedicate himself to noble causes, is socially responsible and takes into account the moral side of the circumstances in which he is involved, has a rich affective

life, nuanced about herself, feels comfortable with herself and others in the social universe in which lives.

The psychiatric profile of a woman student with high QE: tends to be affirmative, expressing her feelings directly, naturally, life for her makes sense and deserves to be lived to the fullest, is sociable, expresses her sentences appropriately and adapts well to stress, is socially balanced, easily gets acquainted with new people, feels comfortable with herself being a joke, playful and sexually natural, rarely feels anxious.

Goleman (2001) identifies two types of people from an affective point of view: the passionate, who has exaggerated emotional reactions to a situation and the indifferent, who tends to totally ignore the seriousness of a problem.

Critical situations-types of reactions and frequent

When one has to cope with the reactions of others, when he needs them or when he has to solve a misunderstanding with other people, the different reactions can be summed up in four typical attitudes: to run away, to attack, to manipulate, to assert yourself.

The first three attitudes do not give very satisfactory results for solving problems and ensuring good relations with others unlike the last, to be assertive, which allows affirmation constructively.

Knowing these attitudes facilitates their understanding and puts everyone in a good position to choose and decide the behavior that seems best for everyone in the situations in which they find themselves.

Flight is an attitude of active or passive avoidance in front of people and events: rather than asserting himself slowly but surely, the fugitive prefers to obey or flee, even to his disadvantage, although he would have the possibility to act differently.

The attack is an attitude of aggression in front of people and events: rather than asserting himself slowly but surely, the attacker prefers to subdue others, to make them fit after him, even to his detriment, although he would have the possibility to act differently.

Assertiveness aims to make the individual able to express his personality, continuing to be accepted socially without fear of arousing hostility in the environment.

To assert means to affirm, to say. By extension: to assert themselves, to defend their rights, to claim to: assert yourself without fear and constructively; defend your rights, without restricting those of others; aspire to your own truth, to your own ideas, to your own tastes; take possession of your personal environment again.

The manipulator is skilful and Machiavellian. Generally, he stands aside when he participates in a debate, but his work intensifies through interruptions of the meeting. Was always looking behind the interpretations, not trusting the direct information. Often presents himself as a useful, if not indispensable, intermediary. Is never the real responsible, only draws the consequences from the will of another, not his own. Mentally speaking, it often takes on the airs of theatrical character, plays a role. Often begins

phrases: "honestly", "let's not spin around the tail", so that the other can free himself and let his guard down.

Behaviors and attitudes typical of emotions manipulators

To flatter and seduce: imposing yourself in front of others and gaining appreciation from them must be tactfully in order to succeed: to like and flatter if you want to be liked and flattered.

To devalue what allows the other to unbalance, especially if he lacks safety or if he is already in situations of weakness. A devaluation humor, along with short phrases that prove intelligence and culture, is only a sad manipulation, without effectiveness in solving problems. The defeated one, full of strangeness, seeks only revenge.

To exaggerate and caricature involves starting from the information offered by another, the retention of a single aspect to be exaggerated, caricatured.

To simulate and fable: "lie....lie," Voltaire said, "there will always be something left of this." Simulation is a classic element of manipulation. It's an old childhood reminiscence, the first means of existing outside of parenting. They are the means of the weak, to arouse the weakest like him, or to defend himself from overly heavy responsibilities, and by denying facts or reality or by inventing happenings in his favor.

To conspire - reveals half-heartedly partial truths and hints even more. Provocative of rumors and rumours, he acts with the help of rancor and ambitions. It is more skillful to create conflicts at the right time than to settle existing ones.

To combine-play is to know how to turn the rules.

To stage this person expresses his talent in the presence of difficult audiences.

To interpose-know "who and what does"; it has its inputs and exits.

Guilt: knows the art and how to exploit the background of traditions, beliefs; perosana takes the air of rescuer. The highest degree is to make the other guilty of his own value systems.

To enslave-his charged conscience prevents him from being directly or from putting the point on I when the situation demands it. He feels the need to enslave, to use indirect practices, to cause small catastrophes in the hope of counting on the supered of others.

Doing the honest- starts with phrases like: "you can trust me...", let's say it all...". it can really be honest, but very rare. The more or less conscious simulation is the most common attitude that hides behind this wonderful behavior.

To manipulate unconsciously- these people are full of good intentions and do not want for anything in the world to manipulate others. If they are told that they are manipulating, they are not too amazed: they are people who manipulate honestly, without realizing it.

The adverse consequences of manipulation

Passivity: feeling more or less consciously restricted by the manipulation of the other, the one in question becomes submissive and passive. Of course, his superior feels a skilful

psychologist, but he is naively amazed by the lack of initiative and the poor sense of responsibility of the collaborators.

Revolt and revenge: after letting himself be used once, the one in cauya develops a resentment and becomes aggressive as soon as the power and social life ratio allow him; it is the type of revenge and even the pseudo-manipulator is amazed by so much aggressiveness.

Defiance: in any case, trust is lost, and the one in question will interpret all behaviors less clear as manipulations.

The origin of manipulative attitudes is usually found in traditional education, which can be defined as a huge permissive manipulation, regulated and elevated to the level of moral system. A lying to children can mean not to lie. In any case, the children who grew up and became adults remember this and, unconsciously, think that in order to have power they must manipulate because the first authoritarian individuals they met were their own parents who turned out to be famous manipulators.

2.Women in Science, Technology, Engineering and Mathematics

In 2022, engineering and computer science (most lucrative STEM fields) is viewed as male dominated, only 34% of women are involving in the highest-paid jobs, according to National Science Board (2022). From the point of view of U.S. Bureau of Labor Statistics (2020) the precent of women in STEM occupations are 46% in Biological Scientists, 40% in Chemists and Materials Scientists, 25% in Computer and Mathematical Occupations, 16% in Engineers and architects. In Romania, the women representation is more likely to the EU standards and is quite increasing over years (Eurostat, 2020).

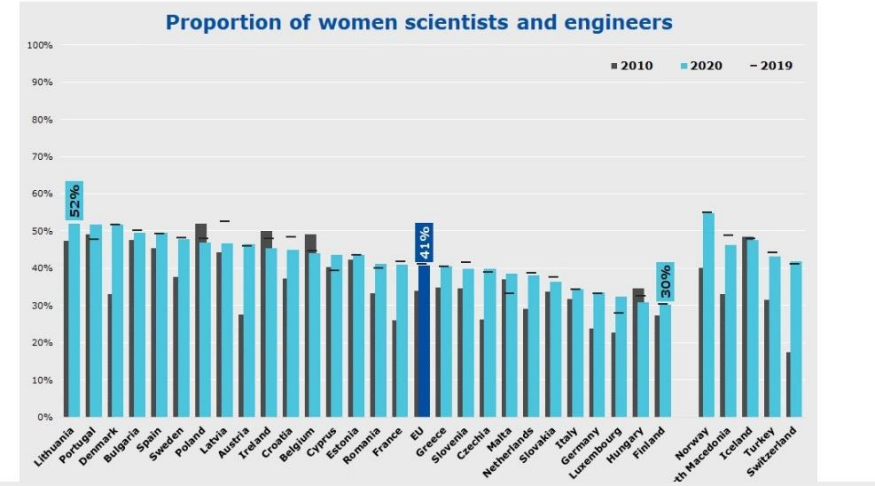
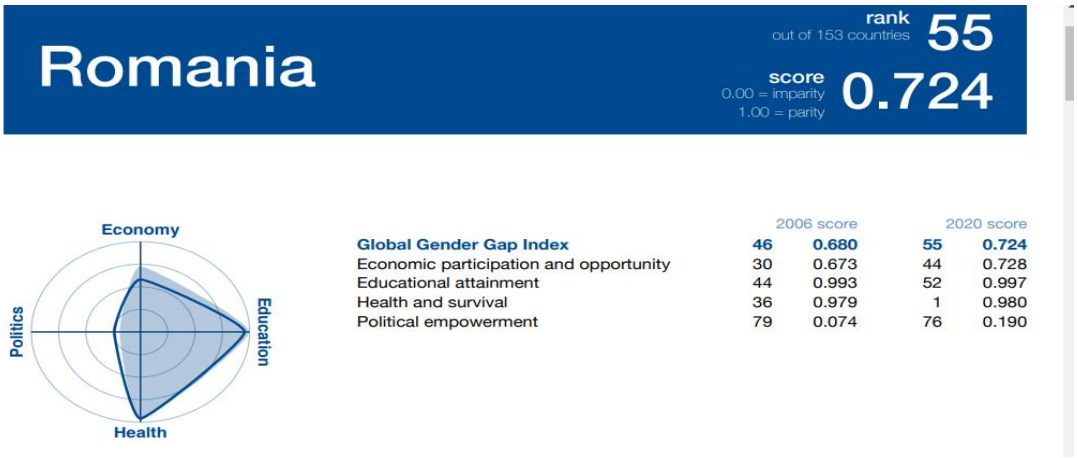


Image 1.Proportion fo women scientists and engineers in the word. Source: Eurostat, 2020

An investigation about gender situation balance, in the Romanian universities, was conducted in 2019, by Drumea and all. (2020). The article offers an analysis of the

potential impact of the gender selection in terms of management and the power structure, especially in the STEM universities.

World Economic Forum (2019) reveals than the global gender gap index, in the Romania case was 0.724 and the STEMS education and skills, shared by the gender is lower than in others countries (20% female/ 40% male), as can be seen in Table no3 and Image no.2.



	2006 score		2020 score	
Global Gender Gap Index	**46**	**0.680**	**55**	**0.724**
Economic participation and opportunity	30	0.673	44	0.728
Educational attainment	44	0.993	52	0.997
Health and survival	36	0.979	1	0.980
Political empowerment	79	0.074	76	0.190

Image no.2 Global Gender Gap Index. Source: World Economic Forum, 2019

female	male	value	**Education and skills**	female	male	value
–	–	239.6	STEMS, attainment %	20.25	40.80	0.50
–	–	23.50	Agri., Forestry, Fisheries & Veterinary, attainment %	2.79	5.75	0.48
10.02	9.49	19.50	Arts & Humanities, attainment %	11.00	8.03	1.37
-0.69	-0.77	-0.73	Business, Admin. & Law, attainment %	32.49	22.60	1.44
48.66	51.34	0.95	Education, attainment %	6.44	0.93	6.95
			Engineering, Manuf. & Construction, attainment %	10.95	28.31	0.39
female	male	value	Health & Welfare, attainment %	12.63	7.01	1.80
3.73	5.04	0.43	Information & Comm. Technologies, attainment %	2.79	7.93	0.35
3.62	4.85	0.75	Natural Sci., Mathematics & Statistics, attainment %	6.52	4.56	1.43
16.52	11.28	1.46	Services, attainment %	2.69	9.46	0.28
–	–	n/a	Social Sci., Journalism & Information, attainment %	11.71	5.42	2.16
19.03	9.38	2.03	Vocational training, attainment %	17.37	22.84	0.76
			PhD graduates, attainment %	0.08	0.08	1.10

Table no3 Gender representation in education and skills. Source: World Economic Forum(2020)

This approach is closely identified with the work of Makwana and all. (2021) during the researching. The article clearly identifies the factors influencing the decision to select a career in STEM occupations related to emotional intelligence.

In addition to surveying the literature on STEM women occupations, we also reviewed work (Jiang, 2021) carried out on STEM domain: 6.7% of the high ability non-STEM women explain 13.7% of the gender wage gap in college graduates.

As noted in a recent report (Barbieri, 2021), Romania has been at the forefront of developments in gender STEM interest. This success is often attributed to Romania`s position, but the factors catalogued in the report reveal a more complex picture.

II. Research Methodology

Research objectives

In this research we have pursued the following objectives:

- Determination of the level of emotional intelligence in the investigated subjects and its comparative study by gender.
- Comparative establishment of the way of perceiving and expressing emotions.
- Comparative study of empathic capacities in girls and boys.
- Comparative study by gender of the capacities of regulating and using emotions.

Research hypotheses

- We assume that in the research group girls have a superior capacity of influence than boys.
- We anticipate that girls have an emotional intelligence superior to boys.
- We anticipate that there is a difference between girls and boys in terms of perceiving and expressing emotions.
- We anticipate that girls have an empathic capacity superior to boys.
- We anticipate that there is a difference between the sexes in terms of regulating emotions and their use.

Research participants

In this research, the subjects are second-year students (19-20 years old), in a university with the scientific field of STEM education. All those enrolled in the research participated on a voluntary basis, on the principle of completing the research tools online. Also, the number of subjects by sex, namely 45 boys and 45 girls, has been imposed since the beginning of the research. Since it was difficult to identify the target group only within a single faculty, only membership in the university was chosen at the general criterion level. The completion of the research tools was done within a didactic activity, the tests being administered at the same time for all subjects.

Instruments and procedure

For this research were used 3 research tools Emotional intelligence test (1), The Moon emotional intelligence test(2) and Questionnaire for self-knowledge (3), all adapted and rendered before. Prior to data collection, research tools were pre-tested to measure internal consistency for both tests (Cronbach Alpha Moon test-0.74, Cronbach Alpha Questionnaire for self-knowledge-0.76). The first test includes 10 items that consist in presenting situations (scenarios) in which a person can find himself ensuring as much as possible the transposition of the individual in the situation and some concrete ways to react in the situations indicated by the questions. The Moon emotional intelligence test comprises 47 items, organized in 5 scales: perception of emotions (items

1-5 and 13-15), expressing emotions (items 6-12), empathy (items 16-22), adjusting emotions (items 23-37), the use of emotions (items 38-47). Questionnaire for self-knowledge, questions regarding the influence attitude were used. The last test included 15 items, and the scores are interpreted as low scores (0-5p), average scores (6-10p) and high scores (11-15p).ati in 5 scale: perception of emotions (items 1-5 and 13-15), expressing emotions (items 6-12), empathy(items 16-22), adjusting emotions(items 23-37), the use of emotions(items 38-47). Questionnaire for self-knowledge, questions regarding the manipulation attitude were used. The last test contains 15 items, and the scores are interpreted as low scores (0-5p), average scores (6-10p) and high scores (11-15p).

III. Results

According to the first hypothesis, according to which we assume that the girls have a superior capacity of influence than boys, we compare the scores obtained by our subjects at the test, using the T test:

Table 1. One-Sample Statistics

	N	*Mean*	*Std. Deviation*	*Std. Error Mean*
MABoys	45	8.6667	1.3817	.2060
MAGirls	45	9.7556	1.5099	.2251

Table 2. One-Sample Test

	t	*df*	*Sig.(2-tailed)*	*Mean difference*	*95% Confidence Interval of the Difference*	
MABoys	42.077	45	000	8.6667	8.2516	9.0818
MAGirls	43.342	45	000	9.7556	9.3019	10.2092

It is observed that girls have an average of the scores higher than that obtained by boys, so we deduce that they have a better influencer capacity than boys. This is mainly due to the fact that girls show more diligence in achieving their own goals, they are more emotionally organized. Being at the age of 20s, girls more than boys have a tendency to use all the resources necessary to achieve the goals, the end justifies the means. Possessing a lot of charm, the girls consider that this is the main weapon through which they manage to influence the attitude of those around them. Being dominated, at this age, by an emphatic spirit of competition, girls more than boys tend to identify more quickly the weaknesses of others, thus using them to influence. Of course, the results are applicable to this research group, and we cannot generalize, our study being limited to subjects between the ages of 19 and 20.

We can also say that the mentioned abilities appear at this age and manifest themselves quite strongly.

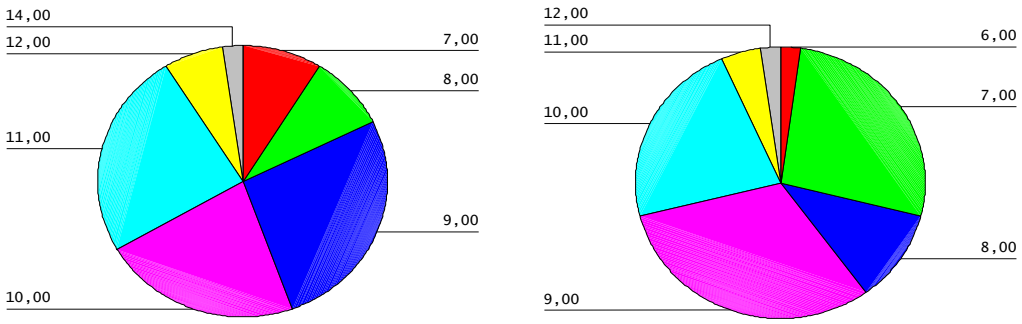


Figure 1. Distribution of the scores for the manipulative attitude test (girls and boys)

The first hypothesis of our research is confirmed – the skills of influence are present, and girls have these abilities better developed than boys. This can be explained based on the differences in their personality but especially on the account of the ways of solving or ensuring their own age-specific needs. Thus, girls, much more balanced from a psychic point of view compared to boys of the same age, will resort more often to manipulative low abilities when necessary to satisfy their needs for self-realization, esteem, belonging and love, safety. If these needs could not be met, girls would easily resort to the behaviors and attitudes typical of the manipulator, namely: simulation, conspiracy, flattery, criticism. In boys, unlike girls, age-specific needs do not manifest themselves with the same intensity as in girls and that is why they are supposed to use their manipulative skills whenever they have to do so, without making this a permanent purpose to use. Several studies have been used to explain the factors on so few female are representated in most STEM education fields (González-Pérez et. Al, 2020; Prieto-Rodriguez et.al, 2022; Casad et.al, 2021), but, in particular ways, the results can be useful to resolve the problems understanding the complexity of female roles (Barbuto, 2007). This results together form a framework for describing female participation in STEM fields and were particularly useful when linked to their intented learning approaches but imposible because sociocultural factors (UNESCO, 2020) or because they often do not consider to be closely linked to culture of females jobs (Calitz et.al.2020).

According to the second hypothesis, we anticipate that girls have an emotional intelligence superior to boys. To demonstrate this, we compared the averages of the tests used on the samples of girls and boys in the Emotional intelligence test, using the T test:

Table 3. One-Sample Statistics

	N	*Mean*	*Std. Deviation*	*Std. Error Mean*
EI Boys	45	91.5556	27.7124	4.1311
EI Girls	45	102.56	28.8535	4.3012

Table 4. One-Sample Test

	t	*df*	*Sig.(2-tailed)*	*Mean difference*	*95% Confidence Interval of the Difference*	
EI Boys	42.077	45	000	8.6667	8.2516	9.0818
EI Girls	43.342	45	000	9.7556	9.3019	10.2092

About the distribution of the results for the Emotional Intelligence test (girls-left and boys right figure):

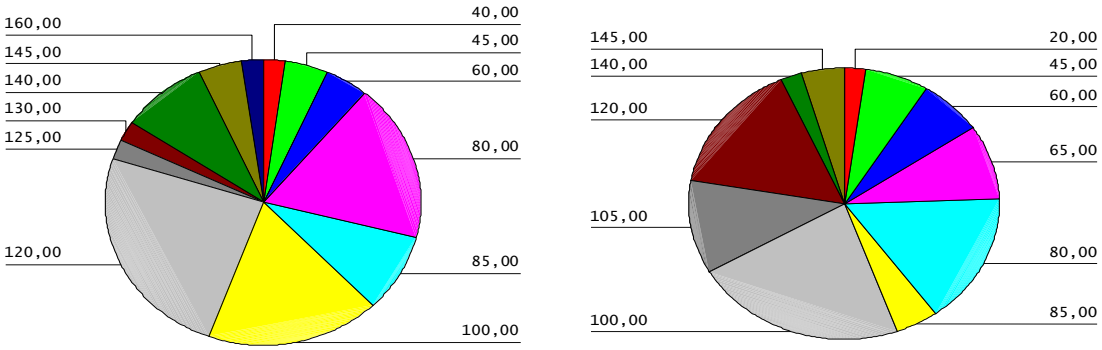


Figure 2. Distribution of the scores for the Emotional Intelligence Test (girls and boys)

We see the existence of a difference between the two averages, the average of the scores obtained by the girls being 102.56, and the one obtained by the boys being 91.56. Thus, the scores obtained by girls are higher than those of boys, which shows a higher emotional intelligence, our hypothesis being thus confirmed. Girls are better connected with their own emotions, and they can control them better, they can self-regulate them more effectively. From this point of view, it can be appreciated that girls, having that manipulative ability, can use the appeal to emotions in their manipulative activity. The appeal to emotions can be used to determine the achievement of a persuasive goal and if this call is adapted to human needs the result is maximum.

Girls have the ability to effectively manage their emotions in relation to their personal goals (career, family, education, etc.). The goal lies in achieving goals, with a minimum of inter- and intra-personal conflicts. As a rule, people with a high score of emotional intelligence have a satisfactory social balance in human relationships, are sociable, sympathetic and caring in interpersonal relationships, have, about themselves, a good image (Stewart-Williams, 2021).

Having an average emotional intelligence means having the ability to identify one's own emotions, assuming the responsibilities involved in the identified emotions, learning compassion and empathy. So women leaders can encourage others girls to pursue STEM career (Downey et.al, 2006). In an earlier study, Ramchunder and Martins (2014) distinguish the predominant result about female skills than male skills about self-efficacy, emotional intelligence and leadership style as attributes of leadership effectiveness. Van

Oosten et al. (2017) have identified a lots of factors to change the few STEM female involving like to engage in professional development, encouraging outcomes, coaching.

Unlike boys, girls have the ability to control, depending on their intended purpose, their feelings and those of others, the ability to differentiate between them in order to be able to coordinate their own actions. The second hypothesis of our research is confirmed.

In the third hypothesis of our research, we anticipated that there is a difference between girls and boys in terms of the ability to perceive emotions. To this end, we have compared the averages obtained by the two sexes at the scale of perceiving emotions in the EQ Moon test.

Table 5. One-Sample Statistics

	N	*Mean*	*Std. Deviation*	*Std. Error Mean*
Moon1Boys	45	10.2444	2.7399	.4084
Moon1Girls	45	9.0000	3.1479	.4693

Table 6. One-Sample Test

	t	*df*	*Sig.(2-tailed)*	*Mean difference*	*95% Confidence Interval of the Difference*	
Moon2Boys	25.08	45	000	10.2444	9.4213	11.0676
Moon2Girls	19.179	45	000	9.0000	8.0543	9.9457

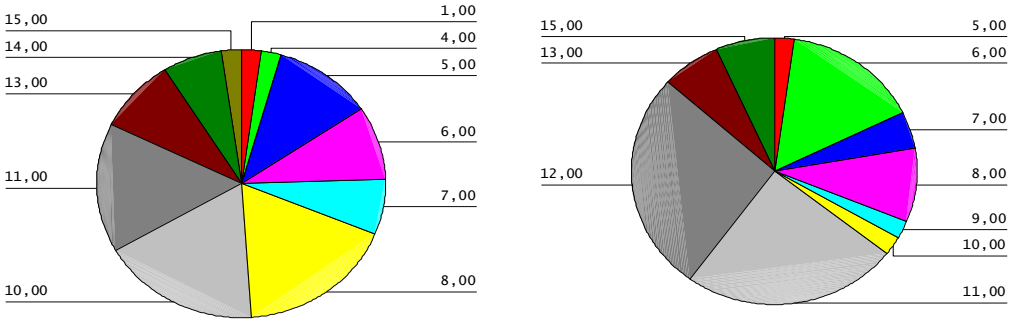


Figure 4. Distribution of the scores for the Moon1 test (girls and boys)

The average score obtained by boys is higher than that obtained by girls, which shows that, at this age, boys have a greater capacity to perceive emotions than girls, although apparently it could be considered the opposite. This indicates that boys, unlike girls, have the ability to identify their emotion from their own more developed thoughts, feelings and physical states, they also have the ability to distinguish between precise and imprecise or sincere and insincere emotions. This is due to the fact that they, the boys, are more practical and easily notice the important changes inside them but also in the surrounding environment. Unlike boys, girls are more internalized, which causes them to

be more suspicious and reserved in perceiving and externalizing feelings (Berra and all, 2020).

As a rule, students who manage to perceive and express their emotions properly are more relaxed biologically, have a low level of stress hormones which makes them more psychologically relaxed.

We also anticipated that there is a difference between the sexes in terms of how emotions are expressed.

Table 7. One-Sample Statistics

	N	*Mean*	*Std. Deviation*	*Std. Error Mean*
Moon2Boys	45	10.2889	2.7272	.4065
Moon2Girls	45	7.3333	2.0671	.3081

Table 8. One-Sample Test

	t	*df*	*Sig.(2-tailed)*	*Mean difference*	*95% Confidence Interval of the Difference*	
Moon2Boys	25.308	45	000	10.2889	9.4696	11.1082
Moon2Girls	23.799	45	000	7.333	6.7123	7.9543

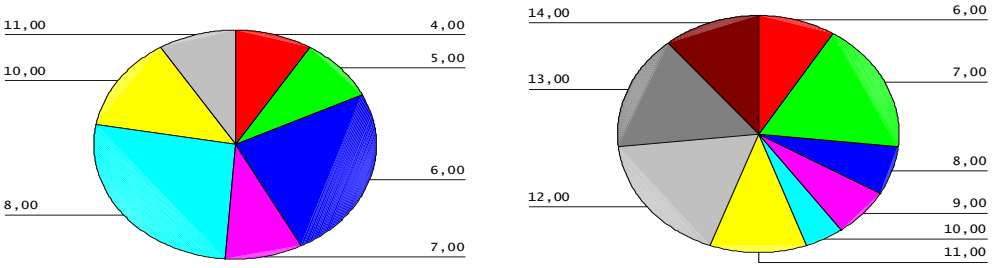


Figure 5. Distribution of the scores for the Moon2 test (girls and boys)

The difference between the two averages is quite high, also in favour of boys, who averaged 10.29 compared to girls, 7.33. Again it seems strange, but it seems that studentship is a special period, when boys have a greater capacity to express emotions, girls being a little more internalized. At this age, certain feelings fuelled by frustration (injustices, sufferings, insults, etc., caused by others) manifest themselves prominently and especially in girls, which make feelings to be internalized or masked by certain reactions and behaviors more or less predictable.

In terms of empathy, girls have an empathic capacity superior to boys:

Table 9. One-Sample Statistics

	N	*Mean*	*Std. Deviation*	*Std. Error Mean*
Moon3Boys	45	9.3778	3.5694	.5321
Moon3Girls	45	10.8667	2.5990	.3874

Table 10. One-Sample Test

	t	*df*	*Sig.(2-tailed)*	*Mean difference*	*95% Confidence Interval of the Difference*	
Moon3Boys	17.624	45	000	9.3778	8.3054	10.4501
Moon3Girls	28.048	45	000	10.8667	10.0859	11.6475

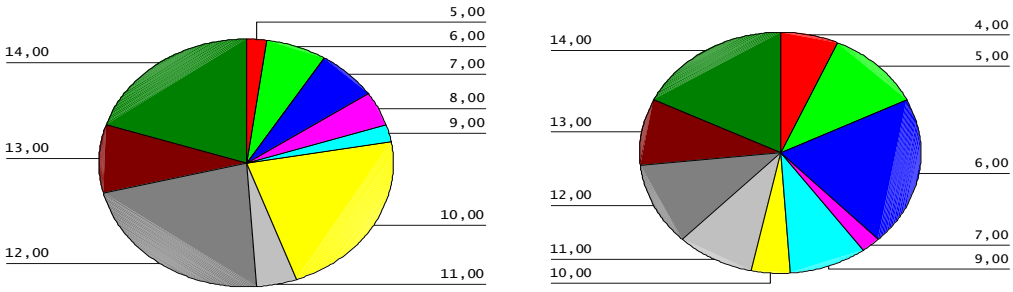


Figure 6. Distribution of the scores for the Moon3 test (girls and boys)

The average of girls is 10.87, higher than that obtained by boys, at 9.37. Girls are more able to transpose themselves into another person's states, to empathize and understand another person, they are more sensitive. It has also been found that girls are more generous, altruistic, tend to give help to the people who surround them, have a well-defined prosocial behavior, are generally well adapted socially.

Boys, at this age, are more concerned about themselves than about those around them, considering that empathy is the prerogative of girls, as they have much more dynamic preoccupations and are always running out of time. In general, boys empathize more with other boys than with girls, while girls have the ability to empathize with everyone, regardless of gender.

In general, people with a high level of empathy combine the affective experience, which is rich and nuanced, with cognitive flexibility, by using and applying various appreciative criteria adapted to the situation. As a rule, the assessment of empathic empowerment must be largely aimed at attitudes towards the successes, joys of others and the degree of emotional involvement in the achievements of others (UNESCO, 2018).

Also we anticipated that there is a difference in the regulation of emotions between girls and boys:

Table 11. One-Sample Statistics

	N	*Mean*	*Std. Deviation*	*Std. Error Mean*
Moon4Boys	45	21.1778	5.6500	.8422
Moon4Girls	45	21.9333	3.5188	.5245

Table 12. One-Sample Test

	t	*df*	*Sig.(2-tailed)*	*Mean difference*	*95% Confidence Interval of the Difference*	
Moon4Boys	25.144	45	000	21.1778	19.4803	22.8752
Moon4Girls	41.814	45	000	21.9333	20.8762	22.9905

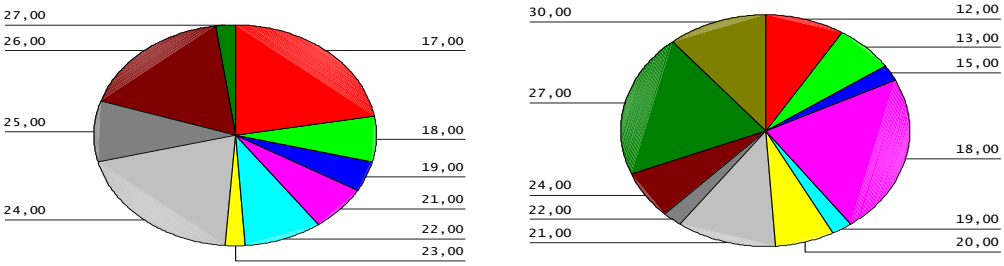


Figure 7. Distribution of the scores for the Moon4 test (girls and boys)

Girls regulate their emotions better than boys, which correlates with the restraint in expressing emotions shown by them. The regulation of emotions, rewards the ability to be both pleasant emotions or feelings, as well as those less pleasant. According to the research, it appears that girls, unlike boys, tend to monitor their emotions much better, which allows them to have the ability to manipulate both their own emotion and that of others. This phenomenon is mainly due to the ability of girls to hide those feelings of inferiority in relation to boys. For girls, shyness as well as the fear of not seeming ridiculous causes the appearance of difficulties in expressing and externalizing emotions. Controlling emotions seems to be vital for girls of the age. Boys, being more nonconformist, regulate their emotions more difficult, which, to some extent, predisposes them to vulnerability to manipulation.

The last hypothesis of our research also anticipated that girls have a superior ability to use emotions.

Table 13. One-Sample Statistics

	N	*Mean*	*Std. Deviation*	*Std. Error Mean*
Moon5Boys	45	14.8222	1.4661	.2186
Moon5Girls	45	15.3556	2.1123	.3149

Table 14. One-Sample Test

	t	*df*	*Sig.(2-tailed)*	*Mean difference*	*95% Confidence Interval of the Difference*	
Moon5Boys	67.819	45	000	14.8222	14.3818	15.2627
Moon5Girls	48.767	45	000	15.3556	14.7210	15.9901

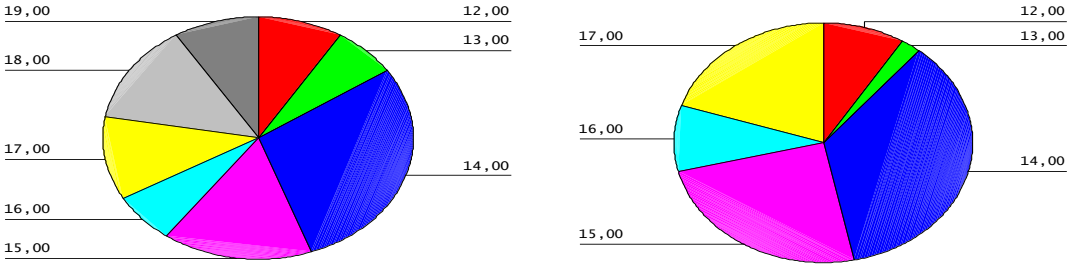


Figure 8. Distribution of the scores for the Moon5 test girls and boys)

Indeed, girls make better use of their emotions, know better how to dispose of them, control them and use them to get what they want. This allows students to know better the meaning of emotional states depending on the situations and relationships in which they occur (the lag between sadness and loss), the ability to understand emotions and to use them in relationships with others. Boys, being more rational, more practical, use less of emotions, rarely resort to feelings to gain an advantage.

Conclusions

In this research the results are revealed. Girls have an emotional intelligence superior to boys and there is a difference between girls and boys in terms of perceiving and expressing emotions. Thus, girls tend to be affirmative expressing their feelings directly, naturally, they are sociable, socially balanced, sometimes they can have exaggerated emotional reactions to a situation. Despite this, test results have shown that boys, unlike girls, have the ability to perceive and use emotions within the relationships they establish, much higher. This could be explained by the fact that boys are able to immediately recognize the differences between feelings and actions, to master their anger, and to tolerate their frustrations unlike girls, to whom emotions sometimes take the place of reason. In contrast to this findings, Stewart-Williams and Halsey (2021) found that bias and discrimination are a key factors in STEM choices, also educational experience and life priorities are more likely related to men STEM career. The same authors argue that it can be responded with a family-friendly policies, sufficient support about pursuit of happiness, eliminate the socio-cultural causes linked to the traditional female roles, the main sources of the gender disparities in STEM domain.

Girls have an empathic ability superior to boys. This indicates that girls, unlike boys, are able to listen to others look from the perspective of others, to put their feelings in tune with others, they have altruistic behaviors that give them a dose of generosity that is sometimes lacking in boys. Generosity and altruism also derive from the desire, conscious or unconscious, to associate one's own feelings with that of others, to be receptive to the sufferings of another, as if it is in temporary oscillation with one's own person, with personal experience about suffering. This results are sustained also by Riney and Ku (2021) and Meshkat and Nejati (2017) who found that female students are more responsible than men students about academic emotions and their implications for success in STEM.

Furthermore, the idea to share emotional intelligence in STEM raises another issue about increasing female students to create best teams (Schneider et al., 2018). Also, female STEM learners are working and learning to perform as leaders using the socio-emotional perceptions to create meaning during COVID-19 crisis (Ziegler et al., 2020) or to rechange outcome expectations by mentoring other girls to become better learners (Peterson, 2020). This theme includes solutions presented in evidence-based understanding of girls' barriers about future opportunities in STEM domain, building a global framework for information-sharing, documents best practices, forces public private partnerships, focusing and mentoring of disadvantaged females (United Nations Children's Fund, 2020).

Acknowledgements

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The Romanian Higher Educational System – before and after the Bologna moment. Case study of a Romanian university

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Abstract

The article represents part of a wider research initiative that aims to follow the main structural changes that happened within the Romanian universities determined by the implementation of the Bologna Process.

The literature review consists in the description of the main turning points of the Romanian Higher Education System in the post-communist period, with two distinct subchapters: one that refers to the pre-Bologna period and one on the post-Bologna period until present day. We follow the main legislative changes and their effects on the Romanian Higher Education System, structural modifications, external influences, even on student number evolution.

The second part of the paper is a quantitative analysis of the evolution of four selected bachelor programs from a Romanian University, starting ten years before the Bologna Process implementation until present day. Using document analysis, we follow two main parameters: the number of teaching hours for each program and the number of disciplines for each program. The aim of the research is to identify the changes that occurred within the selected programs in the investigated period, with emphasis on the Bologna Process implementation moment (2005).

The data show that each of the programs selected had particularities on the evolutions of their curriculums, some differences can be noticed between pre and post Bologna periods. Due to the fact that all the bachelor programs were restructured after the Bologna moment into 6 semesters from 8 in all of the analyzed programs, we had expected to find clear decrease in the number of teaching hours per program and the number of disciplines per program, but, surprisingly, this was not a general tendency.

Keywords: Bologna Process, higher education system, curriculum

Introduction

The aim of the current paper is to follow the main structural changes that happened within the Romanian universities determined by the implementation of the Bologna Process.

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The literature review consists in the description of the main turning points of the Romanian Higher Education System in the post-communist period, with two distinct subchapters: one that refers to the pre-Bologna period and one on the post-Bologna period until present day. The main legislative changes and their effects on the Romanian Higher Education System are followed, with their structural modifications, external influences, even on student number evolution.

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1. Romanian higher education in the post-communist period

Higher education has seen a major increase since 1990, which continued up to 2007. This evolution was due to changes in Romanian Higher Education System after the Revolution from 1989, the establishment of many state universities, the establishment of private universities as well as the very large increase of students studying at higher education institutions (Dănăcică, Belaşcu, & Ilie, 2010).

1.1. The pre-Bologna period:

Tertiary education in Romania has become mass education. The Ministry of Higher Education in Romania has stated that in 1990 Romania had 56 state and 28 recognized private universities.

This process is closely linked to a phenomenon that later influenced the evolution of higher education systems in Europe, namely its massification and internationalization, which generated the need to ensure the quality of education processes and gave rise to the establishment of independent quality assurance agencies in higher education. This opened new opportunities for universities to demonstrate, outside the national context, that they offer quality study programs that are certified and reliable.

According to the National Institute of Statistics, the number of students enrolled in higher education has significantly increased between 1990 and 1999, more than 2 times (INSSE, 2022). Based on the same publication the number of universities increased from

186, in 1990, to 632, in 1999 (INSSE, 2022). Also, the number of teaching staff grew by 101% (Miroiu et al., 1998) following the evolution of tertiary education at national level.

During this period, the major objectives of educational reform at university level were: (1) Development of a coherent framework of educational policy; (2) Entice foreign partners to finance education; (3) Adoption of educational laws and legal regulations; (4) Restructuring higher education system to cope with new social, political and economic needs (Reisz, 2006).

The World Bank undertook the first explorative mission to help the government's endeavors to improve the education system between 1991 and 1993. Experts from the Institute of Education, together with officials from the government and experts from the World Bank, conducted an institutional and procedural plan for a systemic reform of the pre-university education system in Romania. The reform of the Romanian education system started between 1994-1995, before the new Law of Education was regulated. The new law came into force in September 1995, but there were some Regulatory requirements, and it was amended in 1997. The first reform initiative began in October 1994 and was co-financed by the World Bank and the Government of Romania. In 1995 the second major reform program started with funding from the European Union - Phare and was aimed at restructuring vocational / vocational education (OECD, 2000).

Until 1996, the Romanian Ministry of Education implemented part of the objectives of the educational reform, namely: curricular improvement by updating the lists of subjects according to labor market requirements, changing teaching methods, organizing international conferences by universities, provide faculties with modern equipmentIt. It was also during this period the number of private universities increased. Later, from 1997 to 1999, these objectives were completed with: gradually improving access to academic education, improving the quality of scientific research and higher education, deconcentrating the academic and financial governance of higher education by growing academic sovereignty and institutional responsibility and enhance relations between universities and the business community. Higher education in Romania has undergone multiple transformations since the 1990's as a result of the complete change of the country's political and governing system. „This transition from a totalitarian, centralized to a democratic regime has meant overcoming a number of obstacles" (Curaj et al., 2015).

Along with updating the legislative framework, a number of specialized institutional bodies were created, in order to help the Ministry of Education implement the regulatory reforms - "National Commission for Authorization, Accreditation and Academic Evaluation which deals with the authorization/accreditation of higher education" (Nicolescu, 2002).

Romania had one of the smallest number of students in Europe, reported to 100,000 inhabitants. In 1995 Romania had around 1,400 students/100,000 inhabitants, compared to other European countries in which there were reported more than 1.500 students (for example in Hungary), almost 2.000 in Poland, more than 3.000 in the United Kingdom and France, over 4.000 in Norway (UNESCO, 1998).

An important step towards restructuring Romanian education system was the Bologna reform, in 1999 Romania signed the Bologna Declaration (Curaj et al., 2015). The Bologna Declaration is the result of increased competitiveness between European higher education bodies and the universities from the rest of the world (Nokkala, 2012).

In the Bologna Declaration, ministers expressed their intention to: adopt a system with easy-to-read and comparable grades; to implement a system based mainly on two main study cycles (Bachelor and Master); to create a transferable credit system (ECTS); to support the teachers, students, researchers and administrative staff mobility; and to promote quality assurance.

The participation of countries that are not members of the Bologna System has decreased since 2010 (Asderaki, 2018). This shows the importance given, possibly diminished in some cases, by the non-member states to this forum. The events stopped at a political dialogue. Events stopped at a political dialogue. No set of recommendations similar to the EEA's internal work plans has been created, except for a statement of shared principles and values and the recognition of changes and challenges in higher education.

1.2. Bologna Process Values and the contemporary Romanian Higher Education System

Before 2005 (before the Bologna Process was put into practice) higher education in Romania was organized into programs of study of 4-5 years (finalized by a bachelor's degree diploma), Colleges of 3 years and in-depth studies of 1-year, complementary master studies of 1-2 years and doctoral university studies – without a limited study period. Complementary master studies were intended for bachelor's degree graduates who wanted to gain knowledge in another field/ profile (Damian, Blaj, & Sturza, 2005).

Before the Bologna Process was implemented, educational disciplines for bachelor's degree programs were distributed into four years of study, were the first and second year were considered basic, thus forming the foundation of the four years study cycle (Sadic & Diogo, 2015). After the Bologna Process was put into practice these disciplines were redistributed, some remaining at the bachelor's degree programs, some being moved to master's degree programs as optional or alternative disciplines.

Starting with the academic year 2005-2006, Romania, as part of EHEA, has reorganized higher education by introducing a three-cycle degree structure (Matei, Cristache, Marin, & Rotaru, 2017). Furthermore, Romanian education has seen liberalization of its first study cycle and its transformation into mass higher education and opened a pass to internationalization of study programs (Korka, 2009).

Some of the main objectives of the Bologna Process were: „(1) Adopting a system of diplomas that is easy to read and compare; (2) Adopting the two main study cycles; (3) Establishing a credit system; (4) Encourage mobility; (5) Encourage European cooperation in quality assurance; and (6) Encourage the European dimension in higher education" (Garben, 2011).

Later, the Prague Communique (Communiqué de Prague, 2001) introduced three new priorities, referring to lifelong learning, the essential role of students in institutions of higher education and the promoting the attractiveness of European Higher Education Area. These were followed by the Berlin Communique (Berlin Communiqué , 2003), that completed with the inclusion of a third cycle (doctoral studies) in the structure of the higher education system and emphasized the synergy between the European Research Area (ERA) and the European Higher Education Area (EHEA).

According to the European Higher Education Area (FQ-EHEA) qualifications framework, the first cycle will have a minimum of three years with a range of 180-240 credits (Kozma, Rébay, Óhidy, & Szolár, 2014), while master's degrees should have from 60 to 120 ECTS credits.

Every two or three years Ministers responsible for higher education from the signatory countries meet to assess progress on mutually agreed objectives and to agree on priority actions for the next period. Decisions are made by consensus. Although these decisions are essential for advancing the Bologna process, they are not legally binding for the countries.

According to this higher education reform (since 2010), in The European Higher Education Area, it should be facile for students to relocate in another country in order to continue studying or seek employment. EHEA should provide „Europe with a broad, high-quality and advanced knowledge base and assure further development of Europe as a stable, peaceful and tolerant community" (Council of Europe, 2022). Ministers of education of the countries involved in the process have adopted several documents, but (as international treaties are usually not binding) these are not legally binding. Therefore, each country and their higher education community has the free will to approve the principles of the Bologna Process, even though „the effect of *international internal pressure* should not be underestimated" (West, 2019).

The goal is not to have the one single higher education system in all European countries. The balance between unity and diversity is one of the most valued features in Europe. The Bologna Process seeks to make it simpler for people to participate in mobility programs (West, 2019), from one education system to another, therefore seeking to build bridges. Therefore, the specific nature of each education system should be maintained even if educations systems became similar. Otherwise, if the system would be the same, going elsewhere to study will make no point.

The "translation" of one system to another should be facilitated within the Bologna Process, and therefore contribute to increasing the students and academics mobility and increasing employment across Europe.

Between 2005-2010 Romanian Higher Education System was reorganized according to the Bologna Declaration, In March 2005 the Minister of Education and Research issued Order no. 3714 regarding the introduction of the Diploma Supplement in the certification of graduating a cycle of university studies (The Romanian Government Web Page, 2005). The European Transferable Credit System becomes mandatory in Romania, with all its

components, starting with the academic year 2004/2005 according to Order of the Minister of Education and Research no. 3617/2005 issued on March 16th, 2005. This period is characterized by a decline in students in public institutions caused by the university system homogeneity.

Five years after The Bologna Process was introduced in Romania, ANOSR (ANOSR, 2009), the main student organization in Romania states that the program regarding student mobility was not sufficiently developed, the result being unsatisfactory from this point of view, and internal mobility is almost nonexistent.

The main challenges for a student wishing to study for one or two semesters in partner country within the ERASMUS program are related to financial incentives, including loans and grants for students, the financial aspect being often one of the informal criteria in the selection process. In addition to this not to be neglected aspect, there is the problem of recognizing competencies obtained abroad when the student returns home, in proportion of 38% of students having problems recognizing or equivalenting the credits obtained under the mobility program (ANOSR, 2009)

In 2011, the Romanian education system legislative framework was entirely revised, and has passed through several amendments and completions, improving new strategies for alignment to the European strategy and standards regarding the Education System (Matei et al., 2017).

Between 2005 – 2013 a slight drop in the number of public universities and of private universities was noted (Table 1).

Table 1. Number of universities in Romania

	2005/2006	2010/2011	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
Higher-educational institutions, from which:	103	108	107	103	101	98	96
public	56	56	55	55	55	55	55
private	47	52	52	48	46	43	41

Source: *HG nr. 376/2016, with subsequent amendments; Higher Education. UEFISCDI Report 2016-2017.*

The decreasing trend of higher education institutions is linked to the number of students that has decreased in recent years. Thus, the number of students registered at universities in the undergraduate cycle in 2016/2017 has decreased significantly in recent years: compared to the corresponding values in 2011/2012, the decreases were over 10% in state higher education and over 60% in the private higher education.

Romanian education policies are in line with the European Commission and member state's initiative on the progress of education systems in order to achieve the European Union's priority objective in terms of developing a knowledge-based economy (Matei et al., 2017).

In Romania student participation to Erasmus program compared to the EU average, remains quite low (General Directorate for Education, Youth, Sport and Culture, 2011).

Most attractive fields of study for foreign students are health and social sciences, business and law. At the opposite end are teacher training programs or science programs, mathematics and Computer Sciences. Romanian schools of medicine draw a relative high number of foreign students, mostly due to the low study fees in comparison to other countries (Georghiou et al., 2015).

Internationalization of higher education requires measures from the universities, such as: development of curricula, introduction of more courses in English, measures to promote international study programs to make the educational offer known to students from other countries. In 2017, 5.4% of the total of students enrolled in state universities were foreign students (6,890 students in the EU and EEA and 18,132 students in non-EU countries). They came from 121 countries (27 EU / EEA countries and 94 non-EU countries). Most of these students were enrolled in undergraduate programs (Stancu, 2016).

At governmental level, mobility fonds should be increased, and certain financial support schemes should be provided for students wishing to study in another country. In recent years, Romanian higher education institutions have made significant efforts to promote internationalization, but Romania still has a very low mobility ratio among EU countries. Half of the students who have come to Romania in mobility in recent years come from the following countries: France, Turkey, Italy and Spain. One third of the incoming mobilities are in the fields of: business administration, language and literature, mechanical engineering, medicine and modern applied languages. One third of the outgoing mobilities are in the fields: medicine, geography, language and literature, business administration, architecture and visual arts (Stancu, 2016).

Since 2006 The Ministry of Education prepared an annual report in which are underlined: the national admission systems and their impact on the attendance of different social groups in university education and graduation rates; the way countries are classified classifying the countries according to the admission criteria applied; a set of proposals for recommendations for public policies in the field. In order to increase equal access to university education and ensure the autonomy of higher education institutions, the ministry, through its subordinate structures, conducted an analysis of higher education admissions systems and made proposals to increase equal access to university education and ensure the autonomy of educational institutions. (Ministry of Education, 2021)In recent years, a major emphasis has been placed on the requirements of employers and the development of students' skills in relation to them. Thus, institutional partnerships were established in order to organize internships for students, internships and volunteering (Broek et al., 2017)

Starting with 2014 The European Commission started a cross-national analysis regarding education and training benchmarks in which is monitored also the professional career of graduates and the improvement of the quality of information on the activities

of graduates, as well as the lifelong learning after initial education. And also a great importance has been put on the career guidance of young people. They are advised in choosing their studies. In many cases, they choose their profession to please their parents and to be on trend, without considering their own skills. This has led in recent years to an increase in dropouts after a year of college (Education and Training Monitor, 2014)

Some strategic priorities of higher education starting with 2021 are (Publications Office of the European Union, 2021):

a) Ensuring a legal framework for a better functioning of higher education system;

b) Supporting students and implementing social programs by providing scholarships to students from disadvantaged groups, improving accommodation conditions, strengthening material base, building student dormitories, improving counseling centers and career guidance;

c) Quality assurance by improving performance standards and increasing competitiveness;

d) Correlating study programs with the needs of employers through
implementation of joint projects between universities and companies
as well as the insertion of graduates on the labor market;

e) Internationalization of higher education by developing programs in foreign languages, increasing mobility, continuing cooperation with EU member states, SEE-states and third country states;

f) Developing and integrating an education information system by collecting reporting data on various platforms (ANS, ESOP, INS, RMUR, etc.);

g) Encouraging lifelong learning by training and developing lifelong learning programs in line with the needs of the labor market;

h) Autonomy, transparency, decentralization, and accountability - ensuring the academic freedom to manage programs and research.

There are currently more than 45 states included in the European Higher Education Area (EHEA). These countries are implementing reforms in higher education based on common values - such as academic autonomy, free mobility of students and staff etc. (EDU, 2019)

The Ministry of National Education organized, between April 4-5, 2019, in Bucharest, the Meeting of the Bologna Follow-Up Group/BFUG). In this context, the Ministry of National Education emphasized the role of the Bologna Process in the development of higher education and its evolution in the 20 years since the adoption of the Bologna Declaration (1999) (EHEA, 2019)

Methodology

Our research interest is to find out what the main changes produced by the Bologna Process within the Romanian Universities. The data presented in this article is part of a wider initiative that will analyze these changes from multiple perspectives: macro changes in the universities' structure, changes at the level of faculties and departments,

changes in the curricula's, changes from the perspective of the teachers, changes from the perspective of the students. Multiple qualitative and quantitative instruments will be implemented: document analysis, both quantitative and qualitative, questionnaires and in-depth interviews.

With the data presented below we follow the curriculums of four bachelor programs within a Romanian university, using quantitative document analysis, the aim being to extract the changes that were implemented in the general structure of those programs, and more specifically the evolution of the number of disciplines and the number of total hours dedicated to direct educational activities. Our study case university being a comprehensive one, we have selected the four programs from different domains: one social sciences program (SS), one natural sciences program (NS), one economic sciences program (ES) and one physical education program (PE).

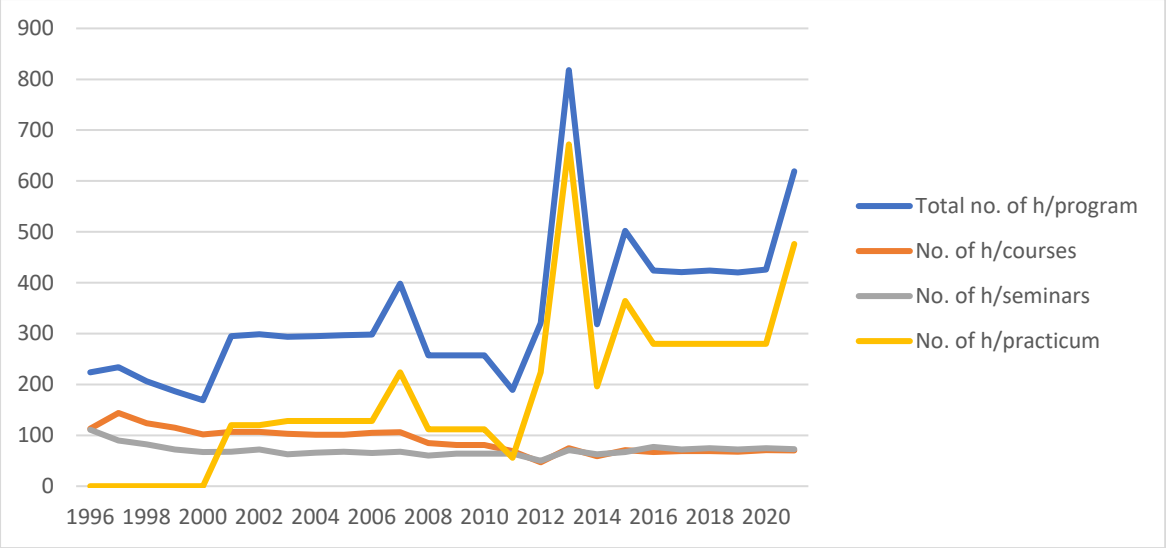
The two variables taken into consideration within the quantitative analysis were: (1) the number of hours per program (split into total number of hours per program, total number of hours for courses, total number of hours for seminars and total number of hours for practicum activities), and (2) the number of disciplines (split into the total number of disciplines per program, the number of mandatory disciplines, the number of optional disciplines and the number of facultative disciplines.

The timeline taken into consideration is 10 years before the Bologna Process was implemented in Romania (1995 or 1996) and the present (2021). Both sets of data presented below resulted from the archive of the curriculums of the four programs.

Changes in the curriculum structure after the Bologna Process – a Romanian university study case

First, we have analyzed the evolution of the number of hours dedicated from direct didactic activities. The data was collected by year and the direct didactic activities were collected as the total number of hours per program, the total number of hours for courses, the total number of hours for seminars and the total number of hours for practicum activities.

Figure nr. 1. Evolution of the number of hours dedicated on didactic activities, SS program



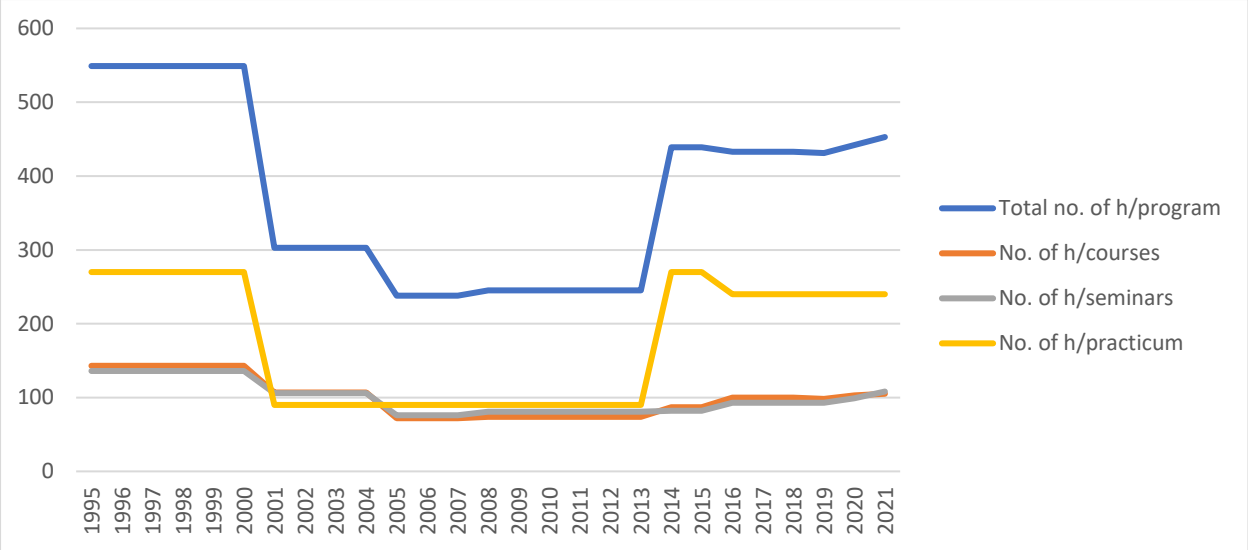
Source: elaborated by the authors

Within the Social Sciences program analyzed (SS), in regard to the evolution of the number of hours, it can be observed that it started with higher numbers of course and seminar hours in 1996-1997 and continuously but slowly dropped the number of hours on these two categories, with small variations, but there are no significant differences in pre and post Bologna periods, even if the number of study years changed from four years to three in 2005.

The category that had a great fluctuation during the analyzed period and influenced greatly also the total number of hours of the program was the practicum. The figure no.1 shows that the program started with no clear practicum activities, changed that in 2001 when clear allocation of practicum hours is made in the curricula. The first generations after Bologna are characterized with an increased number of practicum hours, then in 2011 there is a drop again, followed by a strong tendency of increased practicum hours. From 2016 until 2020 there is a stable but high number of practicum hours followed again by an important increase.

It is remarkable that even if the pre-Bologna curriculums were structured in four years of study, the mean of the period for the total number of hours per program (244 hours) is significantly lower than the mean from the post-Bologna period (390 hours). The main reason for this difference is the increased number of practicum hours introduced within the program.

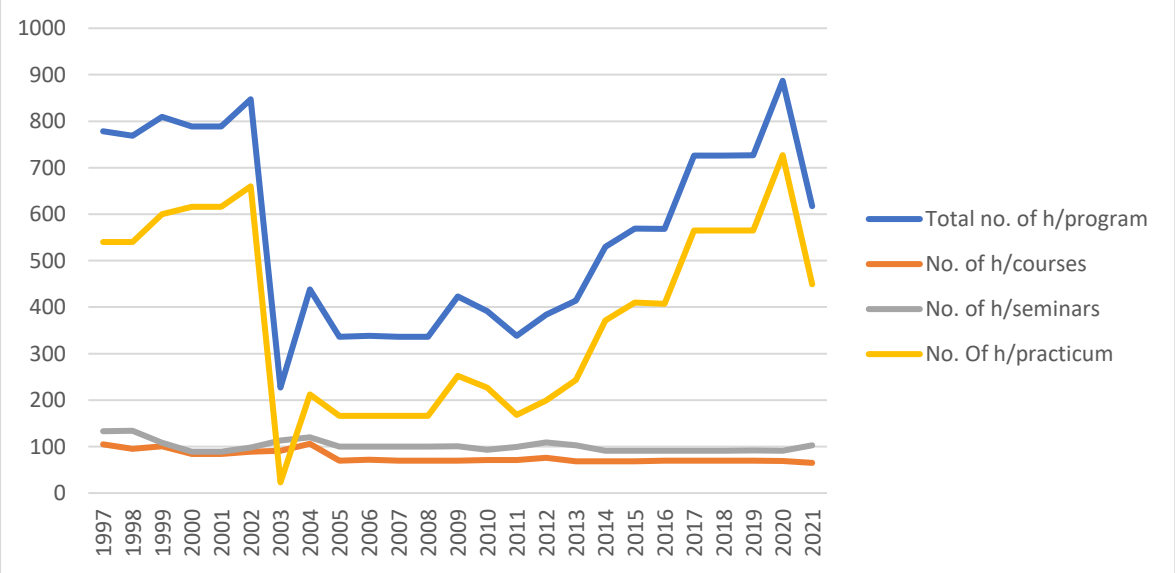
Figure nr.2. Evolution of the number of hours dedicated on didactic activities, ES program



Source: elaborated by the authors

The Economic Sciences program (ES) analyzed had a slightly different path during the investigated period. The total number of hours dedicated to direct didactic activities was high and constant during 1995-2000, with an important decrease between 2001-2004, mainly due to less practicum hours included in the program. The 2005 moment is also characterized by a decrease of the total number of hours, but in this case the number of practicum hours remained the same as before and the number of hours dedicated to courses and seminars were lower. The immediate post Bologna period is characterized by relatively stable curriculums from the total number of hours perspective, from 2014 an important increase of the practicum hours also determining an important increase of the total number of hours per program. Comparing the means of the total hours per program in the pre and post Bologna periods, the post Bologna period has significantly less hours in the ES program (334, compared to 460 in the pre-Bologna period).

Figure nr.3. Evolution of the number of hours dedicated on didactic activities, PE program

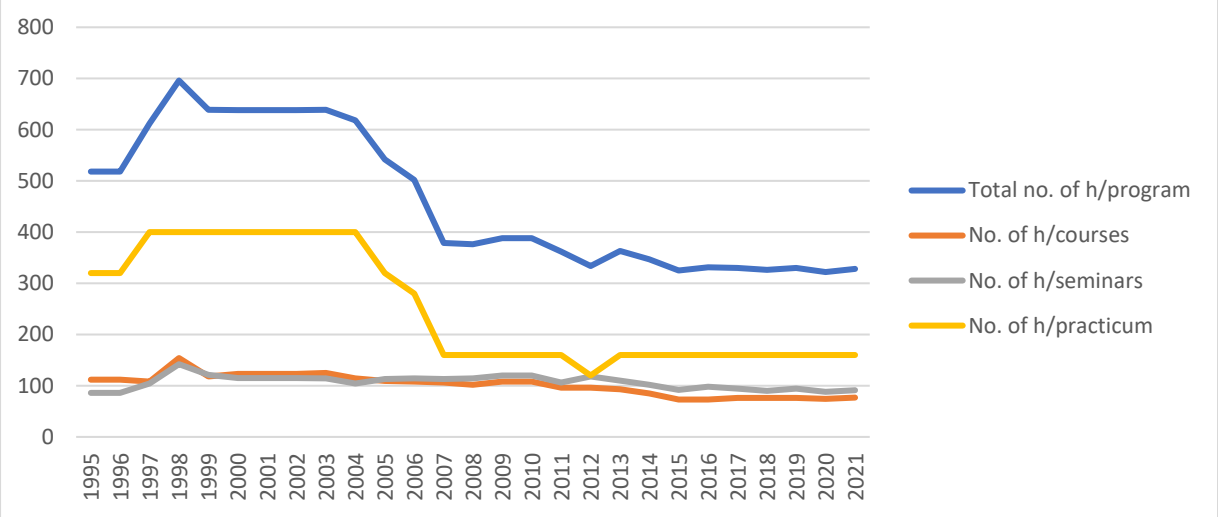


Source: elaborated by the authors

The Physical Education program (PE) has registered important variations of the total number of hours per program. The pre-Bologna period was mainly characterized by high numbers on all categories (courses, seminars, and practicum hours). A transition period started in 2003, when due to the decrease of practicum hours to almost a third, the total number of hours per program was also diminished to one half of the before period. The 2005 moment brought a relative stable period on the number of hours per program until 2013 when a constant increase in practicum hours generated important differences in the total number of hours per curricula, a peak being registered in 2020, when the program had a total number even higher that in the pre-Bologna period (887 hours per program). The 2021-2022 academic year registers a tendency of decline.

Even if there are important differences in the number of courses (pre-Bologna mean – 94, post-Bologna mean – 69) and seminars (pre-Bologna mean – 110, post-Bologna mean – 96), the most important influence on the dynamic of the curriculum from the perspective of the total number of hours was influenced by the high variation of practicum hours.

Figure nr.4. Evolution of the number of hours dedicated on didactic activities, NS program

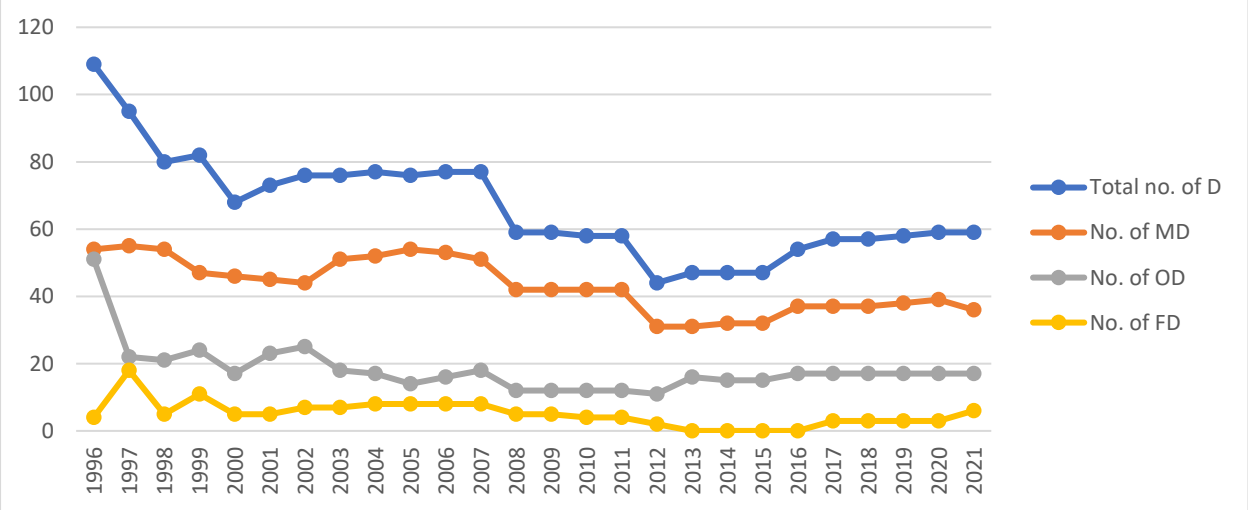


Source: elaborated by the authors

The most linear evolution in regard of the number of hours from the curriculum was observed within the Natural Sciences program (NS). The pre-Bologna period registers significantly more hours per program, than the post-Bologna period (pre-Bologna mean – 615, post-Bologna mean – 369), mostly influenced by the reduction of the numbers of semesters from 8 to 6 and consequently the reduction of the total number of practicum activities (pre-Bologna mean – 384, post-Bologna mean – 174). The Bologna moment (2005) registered a transition period until 2007, followed by a stable period until present within the NS program.

The second part of the analysis investigates, for the same selected bachelor programs and in the same timeline, the number of disciplines in the curriculums, following the total number of disciplines per program (D), the number of mandatory disciplines (MD), the number of optional disciplines (OD) and the number of facultative disciplines (FD). Probably, for the non-Romanian readers, a clarification needs to be made here: optional disciplines are a list of disciplines from which the student must choose a minimum number to have the minimum of 30 ECTSs and facultative disciplines are those that are offered for the student but are over the required minimum ECTSs and the student has the freedom to attend or not.

Figure nr.5. Evolution of the number of disciplines, SS program

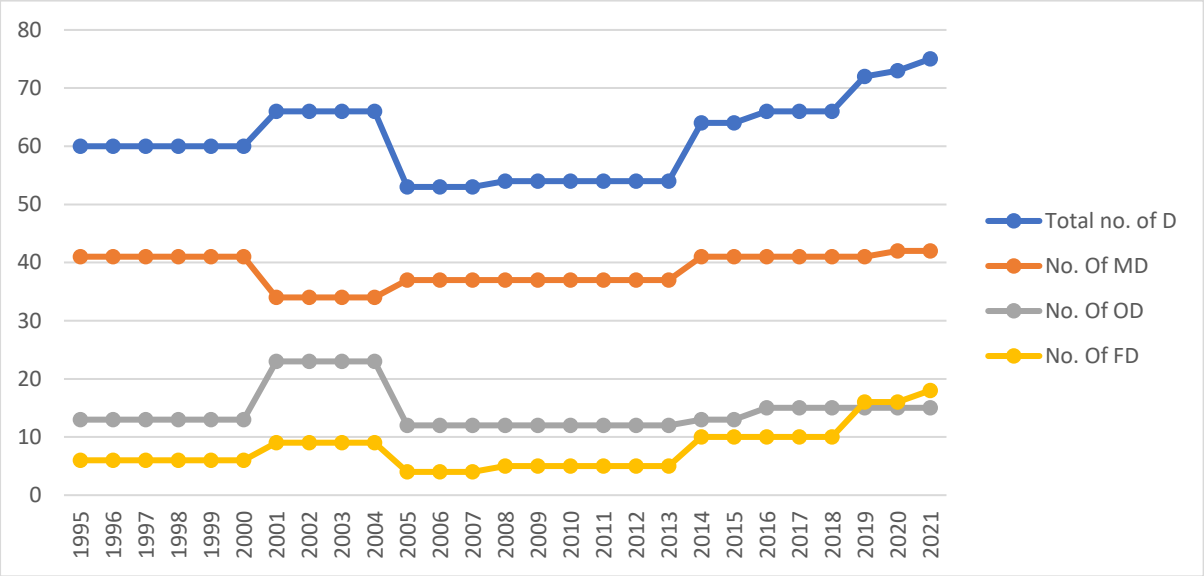


Source: elaborated by the authors

Figure no. 5 shows the evolution of the number of disciplines for the SS program. Regarding the total number of disciplines, an almost constant decrease in numbers can be noticed, only the last period (from 2016 to present) being a period of growth from this perspective. The comparison pre and post Bologna shows clear differences from this perspective (pre-Bologna mean of the total number of disciplines – 81, post-Bologna mean of the total number of disciplines – 58), this being explained easily by the reduction of the total number of semesters.

The MDs follow almost in parallel the evolution of the total number of disciplines, the ODs, excepting 1996 when their number was high, have a relatively stable evolution , and for the FDs the pre-Bologna period was instable, with high variations from generation to generation, and after it can be noticed a tendency for decreasing their number in the curriculum, except in the last year from the analysis (2021), when their number grow again

Figure nr. 6. Evolution of the number of disciplines, ES program

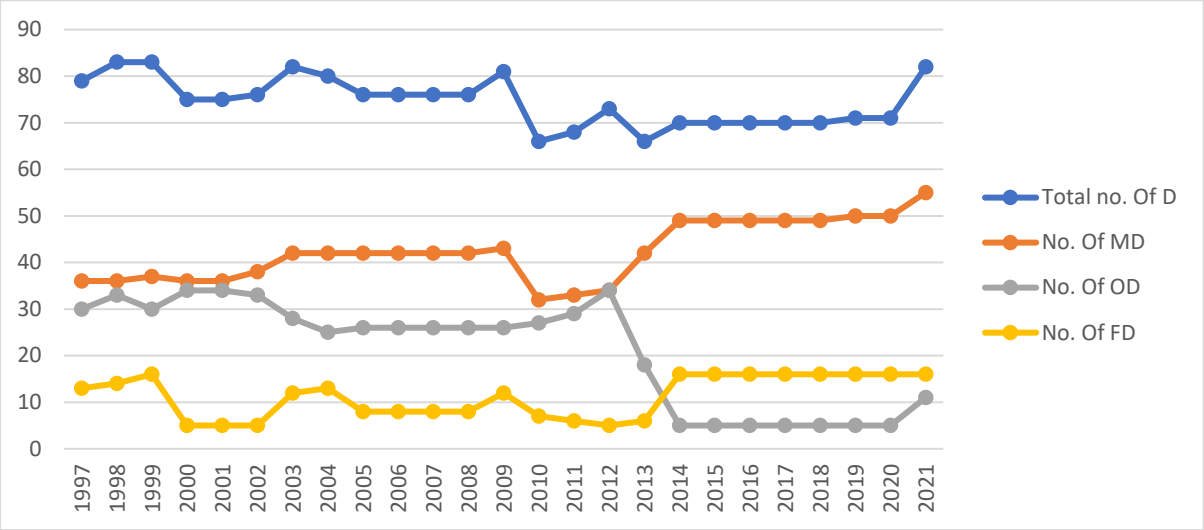


Source: elaborated by the authors

In the case of the ES bachelor program, the evolution of the total number of disciplines pre and post Bologna is different. The 1995-2000 period is characterized by constancy, followed by a noticeable increase during 2001 and 2004. The Bologna moment is characterized by a clear reduction of the number of disciplines (from 66 to 53). The following years (until 2013) are stable from the perspective of the total number of disciplines. The 2014 curriculum registers an important increase, the total number of disciplines being again at the peak level of the pre-Bologna period. After this moment, the tendency of growth is constant, the 2021 curricula having considerably more disciplines than the peak of the pre-Bologna period (75 compared to 66). The evolution is interesting, mainly because the bachelor program was adapted to the Bologna structure of 6 semesters, instead of 8 before 2005.

The evolution on type of disciplines has also some particularities in the case of the ES program. The 1995-2000 period is characterized by constancy in the numbers of the different types of disciplines. From 2001 until 2004 the curriculum registers an interesting evolution that determined the decrease of the MDs and the increase of both the ODs and FDs. The Bologna moment had the opposite effect, increasing slightly the MDs and decreasing consistently the ODs and FDs. The 2005-2013 period is stable in all the three categories and from 2014 a tendency of growth on all types of discipline is notable. The last period (2018-2021) had an important growth in FDs at the curricula level.

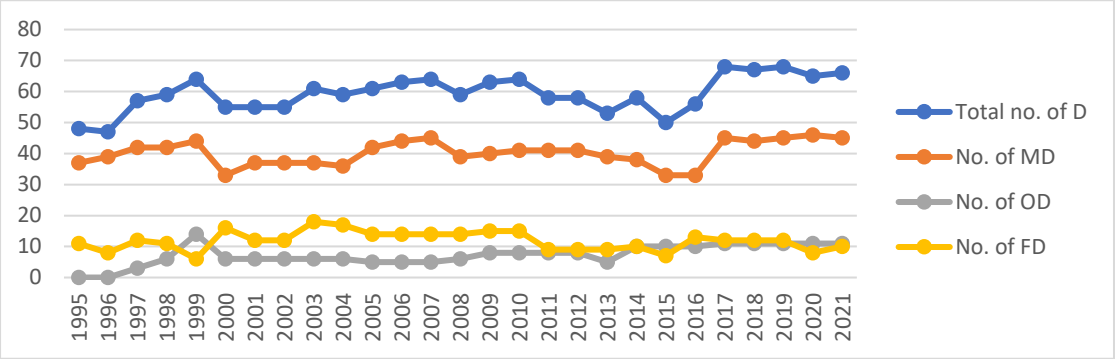
Figure nr.7. Evolution of the number of disciplines, PE program:



Source: elaborated by the authors

The PE bachelor program has also a different evolution compared to the first two analyzed, from the perspective of the number of disciplines. As shown in figure no.7 the total number of disciplines had some variations during the investigated period, but the transition from pre to post Bologna period was stable. But when we look at the different types of disciplines, we notice periods of high variations. In relation to the MDs, the 1997-2000 period was stable, a growth being noticed between 2001 and 2033, followed again by a stable period until 2009, here including the transition period. In 2010, the number of MDs dropped, a process of growth following until 2014 (from 32 to 49), growth that exceeded the pre-Bologna period. The last period was stable, only the 2021 curricula increased the number of MDs noticeably. The historical of the ODs is different, starting with high numbers and small variation in the 1997-2004 period, continuing with a stable period that began at the Bologna implementation moment. The 2012 curriculum registered growth in the number of ODs, followed with a significant drop until 2014 (from 34 to 5). The last period had constant low number of ODs, only in 2021 growing to 11. The FDs had also a different path, starting with growth between 1997-1999, than an important drop between 2000 and 2002. Growth is noticeable in 2003 and 2004, followed by a relatively stable period from the Bologna implementation moment until 2013, with a peak in 2009. From 2014, the number of FDs grew significantly from 6 to 16 and remained stable until 2021.

Figure nr.8. Evolution of the number of disciplines, NS program



Source: elaborated by the authors

The NS bachelor program had also an interesting development in the investigated period. From the perspective of the total number of disciplines per program, there are a multitude of short time variations, without noticing something specific at the moment of the Bologna system implementation. The mean is slightly higher in the post-Bologna period (61 compared to 56). Only the last period, starting from 2017 seems to be stable in the variation of the total number of disciplines.

The number of MDs follow closely the line of the total number of disciplines, but the variations are not as abrupt. The ODs have strong variations in the pre-Bologna period, followed by longer stabile periods with some variations in the post-Bologna period. The FDs have variations until 2000, when they have a stabile path with a growth tendency until present.

Conclusions

The document curriculum content analysis shows very different path of evolution for all the four bachelor programs investigated.

Considered the first variable – the number of hours per program, the most predictable program, with no important variations was the Natural Sciences program, that had, as expected, proportionally lowered the number of total hours once the changes were made from 8 to 6 semesters in the Bologna system. Also, the Physical Education program had an almost similar path, but with more visible variations, especially in the practicum hours, that influenced implicitly the total number of hours per program. The Economic Sciences bachelor program, even if it registered a lower mean in the post-Bologna period, due to the high numbers of practicum hours, the differences were reduced. The most unusual evolution is at the Social Sciences program, where the mean of the total hours is higher in the post-Bologna period, mainly due to the important increase of the practicum hours.

As a general conclusion from the number of hours variable, the tendency was, as expected, of reducing the total number of hours per program, but because the accent was on increasing consistently the number of practicum hours, the differences were mainly not proportionate with the reduction of the bachelor program general structure. The

focus on practicum hours shows that the adaptation to the labor market demands represented a priority of all programs in the post-Bologna period.

Looking at the second variable - the number of disciplines, the tendency to reduce the number of disciplines at the Bologna system implementation start was noticed at two of the programs (Social Sciences and Economic Sciences), the other two not being affected importantly by the change from this perspective. Even if the Bologna Process implementation was characterized by lower numbers of disciplines, in the last few years (mostly after 2015), the tendency of growing the number of disciplines can be observed in all the bachelor programs taken into the analysis. In the Natural Sciences program, for example, the mean of the total number of disciplines results as higher than in the pre-Bologna period. Especially the facultative disciplines show growth, demonstrating that in the last years the curriculums are design in a more customizable manner, in order to permit the students to choose disciplines that are of interest and that can form also transversal competencies.

The presented data is, as we've stated before, part of a more complex research initiative, and clearly as it is, having limitations. Further bachelor programs should be analyzed, in parallel with the masters' programs. The curriculum should be analyzed also from a qualitative perspective, investigating what specific disciplines were introduced or extracted from the curriculum etc.

The general conclusion at this stage is that different programs developed differently in the investigated period, some being more than other influenced by the Bologna system implementation, but some structural changes can be noticed: the growth of practicum hours and the growth of the facultative disciplines mainly.

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2

Adapting to a new education era: overcoming challenges in preschool education during pandemic times

Elena Marin•

Abstract

The art of teaching consists in adapting the structures, contents, teaching strategies, classroom management issues, as well as managing the conditions imposed by the contemporary contexts of society, the constant adaptation of the strategies, used by the teacher, to the needs of the children, while trying to find a balance between the traditional training method and the use of technology. The challenges brought by the context of the last years, in terms of the protection and safety of our health due to the COVID 19 pandemic, have put the education system to the test from all points of view: from a technological point of view, the lack or poor training of teachers in terms of digital competences, the poor functionality of certain school platforms used, etc. However, teachers have implemented ideas that give value to the teaching act, by reinventing themselves, striving to find innovative solutions so that the teaching activities can continue to take place. The aim of this paper is to identify the biggest challenges faced by Romanian teachers in preschool education in the pandemic context, understanding how they managed to adapt and what solutions they found and applied for carrying out the teaching activity. In this respect a questionnaire was developed and distributed among pre-school teachers during November 2021 – January 2022. The results of the research identified a series of difficulties faced by the participants, generated by a multitude of elements such as: lack of technological equipment, low digital skills, difficulties in organizing and supporting the learning activity. An essential aspect regarding the online teaching activity with kindergarten children was the reluctance and non-involvement of parents, many parents not agreeing with the use of the computer and the internet for a long time.

Keywords: education, emergency remote education, teachers` skills.

Introduction

Working with pre-schoolers most of the time requires an integrated approach, in which the main tool is undoubtedly free play or didactic play. Taking into account the pandemic context and the way in which the activities in kindergartens have been carried out since March 2020, when the Ministry of Education and Research took the decision to suspend the face-to-face courses, the education system had to turn to new practices and methods to continue its activity. Even though the preschool institutions were the first ones to return to face-to-face teaching, it encountered one of the most challenging situations during online teaching mostly because of the very young age of the pupils.

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Although digital education is not at all a new concept, technology being integrated and used during the educational system was a challenge, which produced and still produces transformations, with numerous advantages, but also with risks to which children are exposed by carrying out the instructive-educational process through technology (Barnett, 2021). The use of new technologies, tools and digital resources offers new opportunities, making the teaching-learning-assessment process much more attractive and efficient, ensures an interactive and diversified learning experience, but the exclusive use of means of communication through education has put and still puts an enormous pressure on the Romanian education system, because: (Botnariuc, 2020)

- the school system is just to some extent prepared due to the fact that some teachers are not sufficiently prepared to use technology on a daily basis at work;
- the curriculum provides limited transposition into emergency remote teaching activities;
- the digital education technology did not manage to fully respond to the needs of the educational system.

Online education has come with a great challenge in terms of professional development and teacher training for this form of education, especially in the case of pre-school education (Gayatri, 2020). Preschool education, like all other branches, has known a completely different structure, another form of organization and manifestation, a different approach, producing radical transformations in terms of content and the way of carrying out activities, but especially in terms of the socio-emotional development of children (Barnett & Jung, 2020).

One of the most important changes brought by the pandemic is perhaps the transformation of non-formal and informal education into formal education, in fact a fusion of these three different forms of education, an aspect viewed from the perspective of the place of activity, the role of the teacher, the participants involved in the instructive-educational process, but also the contents, the instruments and the resources used. Thus, by carrying out the instructive-educational process in the online version, the formal education that used to take place exclusively in school, passed into the sphere of non-formal education, which implies the presence of the teacher but in another context – outside school environment, and also with the influence and involvement of family members that were present during classes (Gelir & Duzen, 2021). In this period, a positive aspect of the continuous development of technology was the existence of a wide variety of digital tools and resources that facilitated the access to information and promoted an educational system based on active, interactive and much more attractive learning for children (Yıldırım, 2021).

With all the advantages offered by technology, the influence of the teacher for preschool education underwent changes that limited his interventions by decreasing the possibility of intervention that the teacher could have had in order to address certain undesired behaviours, and reducing the possibility of individualizing certain work tasks, or limiting the intervention in certain situations (Timmons, 2021).

The biggest challenge in the case of activity with kindergarten children is precisely the management of distance learning situations, a challenge for both teachers, parents and children (Pascal & Bertram, 2021). In the case of pre-schoolers, parents, grandparents, family members also become part of the instructive-educational process, through direct or indirect involvement in certain activities of the teacher with children, having the role of guiding, pointing or directing.

Equally provocative is, in an uncertain context, the formation of a tribal class, based on attachment. Therefore, in order to form a tribal class, realizing the importance of social intelligence, it requires the trust and cooperation of teachers, parents, children, but also of the representatives of the institution's management. Building a tribe is an art form, guided by empathy, tuning and human sensitivity. Therefore, the tribal class must be firmly founded in the hearts and minds of the teachers who will be the tribal chiefs and in those of the parents and principals who will support them (Cozolino, 2017).

Regardless of the place of activity, the same author identifies four key aspects of learning, namely (Idem, 2017):

- ✓ Secure and confident relationships
- ✓ Reduced stress and emotional activation
- ✓ Balanced focus on thoughts and emotions
- ✓ Creatively building stories

Whether it is in the group room or online, the relationships between the teacher and the children and the relationships between children are essential for the harmonious development of the pre-schoolers and especially for the creation of the group personality, in which there is inclusion, that there are certain common goals to be achieved, and the responsibilities are shared (Dias, et al, 2020). Children will interact much more easily with each other, they will integrate information about the world around them much easier when they know empathy and compassion, when they communicate constantly and openly and have a common purpose. This strengthens compassion, trust and cooperation (Su, et all, 2022). Children have an innate curiosity, and in the case of pre-schoolers this curiosity acquires quite large dimensions, so through the activities they conceive for online lessons, the teacher for preschool education must keep this curiosity ablaze, cultivate their creativity, because when students are motivated to learn, they naturally assimilate the skills they need to perform their tasks. Their self-control increases as creative ambitions expand (Robinson & Aronica, 2015).

If the training in the classroom focuses on teaching methods that are based on learning through discovery, self-expression and activities in small groups, in the online version these things are very difficult to achieve, so the teacher is forced to find complementary and sometimes alternative activities that will satisfy these children's learning needs. The art of teaching is to find a balance between traditional teaching and emergency teaching, caused by the pandemic (Perwitasari, 2021). Although constrained by many limitations imposed by carrying out the activity in the pandemic context, the teacher, through the multitude of roles it plays, is in a continuous learning and

improvement process, so she/he must find the most effective resources, tools, contents, strategies to keep the children's interest awake and to motivate them to learn, because to be a wonderful teacher is to find your own way to do things [...] children neither need nor want teachers like identical automatic robots (Beadle, 2020).

The implication of COVID-19 in the teaching activity

The educational process has suffered a major disruption due to school closures, quarantine, restrictions imposed on protection against the virus, with school activity experiencing different, fluctuating and uncertain stages regarding the venue. Thus, in the guide issued by Unicef (UNICEF, 2020), the report entitled: `*Creating resilient education* systems *in the context of the COVID-19 pandemic*` we identify the following principles of activity planning in conditions of uncertainty**,** which ensure a better management of learning situations so as to respond to various local contexts:

- ✓ Extensive community involvement
- ✓ Focus on mission and long-term goal
- ✓ Focus on controllable elements
- ✓ Encouraging the exchange of information at local level
- ✓ Clear and frequent communication

As in other countries, the Covid-19 pandemic has significantly disrupted the instructive-educational process, while amplifying numerous inequalities existing in the Romanian education system, but at the same time it has opened new perspectives, identifying new ways of teaching- learning-evaluation, new ways of communicating with children and families and creating new roles to increase the general level of well-being of children / students (Edelhauser & Lupu-Dima, 2021). Surely many of the teaching resources and methods used in the emergency remote education period, from the point of view of health protection, will find their place and become part of the activities carried out during the face-to-face activities or will be used in interdisciplinary activities (Pramling Samuelsson, 2020).

A great challenge for teachers was the selection or creation of learning resources necessary for the teaching activity, in a context of continuous modification of the way of achieving learning. Online learning has experienced an upward dynamic, being achieved through individual learning experiences or guided by the teacher, in both synchronous or asynchronous learning settings, using a range of devices such as mobile phones, laptops or computers with internet access. That is why, pupils, were able to participate and learn from any location, being spatially independent (from anywhere) to learn and interact with their teachers and peers (Christmas & Grosseck, 2020).

As Malta Campos & Vieira, (2021) commented that both communities, families, but also the teachers and especially the children that have experienced life under the pandemic have different life conditions that may affect their ability and willingness towards learning. That is why schools must open more to their children needs while

parents need to implement new routines with their children that can help children make a split between school and home's spaces and times.

Moreover, at a Romanian context, Guţu and Sava (2021), highlighted through their study the presence of a positive link between preschool teachers' perceptions and their practices in enabling wellbeing. A statistically significant difference was perceived between teachers' practices in urban vs. rural settings meaning that in rural backgrounds teachers tend to use strategies to tackle this more often.

Methodology

Research objectives

Assuming that the suspension of face-to-face courses (an on-off process between March 2020 to October 2021) directly influenced the achievement of instructive-educational objectives in preschool education and that teachers in pre-school education, who carried out online activities, have encountered difficulties in carrying them out, this research aims to investigate how teachers managed the learning situations, in preschool education, in a context of u emergency remote education. In this respect a questionnaire was developed and distributed among preschool teachers during November 2021 – January 2022. The questionnaire was developed taking into consideration the knowledge provided by the literature review.

The following objectives were tackled:

1. to highlight the impact of carrying out the teaching activity in an emergency remote education system in preschool education;
2. to highlight the challenges faced by teachers and their level of digital skills regarding carrying out online activities;
3. to highlight how teachers managed the difficult learning situations and emphasizing the importance of keeping pupils` motivation for learning;
4. to highlight the importance of the pupil's family in supporting the teachers and in motivating the pupils to attend online activities;

Participants and research method

A total of 50 participants responded to the questionnaire among which 40% of them are preschool teachers working in rural areas and 60% of them working in urban areas. All teachers stated that during the pandemic times they have been involved in remote teaching activities. All respondents are female which could be identified as a characteristic of the Romanian preschool education system. The questionnaire was made available online through Google forms and was distributed through online platforms/social media pages dedicated to teachers and also e-mails were sent to teachers or educational institutions regardless of the geographical area.

All the questionnaire items that were considered for this paper were closed ended. The data received through the questionnaire administration was analysed using frequency analysis. The present study does not claim to generalize the captured data nor

by their interpretations in terms of cause and effect, the main limits being given by the characteristics of the group of participants reduced numerically, relatively homogeneous structurally and without variation regarding the institution/environment of origin. However, the procedure used captures a real moment with novelty features at the personal and organizational preschool level, which can substantiate an intervention of education improvement / optimization and can highlight lessons learnt.

Study limitations

The results of the present study should be considered in the light of the main limitation of the research approach and that is the composition of the group of respondents. Having a small number of respondents that it is not a statistically representative sample, we cannot generalize results at the level of the entire Romanian population of teachers in preschool education. In this sense, we consider useful as future research directions to focus on the expansion of the study on a larger sample all across the country. Also, we find useful to carry out a qualitative / mixed research methodology that could give a more in-depth knowledge of challenges that pre-school teachers have encountered.

Results

To carry out this study, we conducted descriptive (frequency) analyses on a few items after data collection and before analysing the hypotheses to assess how respondents felt about remote education and how they had acclimated to the conditions of the virtual world.

From the start we collected data on the most used means of communication between teachers and their class pupils/kids` families, teachers mentioned online platforms for conferences such as Zoom or Google Meet, or applications for asynchronous communication such as WhatsApp or Facebook Messenger and online tools and applications and largely Kinderpedia platform. The most widely used asynchronous communication application was WhatsApp, through which teachers sent parents various worksheets and video-audio materials. The present study identified significant differences between rural and urban areas in terms of availability of technological tools, availability and involvement of parents in the educational process, but also the level of digital skills of preschool families. In rural areas, when the context did not allow online activity (lack of internet access, lack of technological equipment, non-involvement of parents), teachers said that they have shared worksheets, personally taking them to the children`s house, made various video recordings that they transmitted to pupils when they had the opportunity to meet face to face.

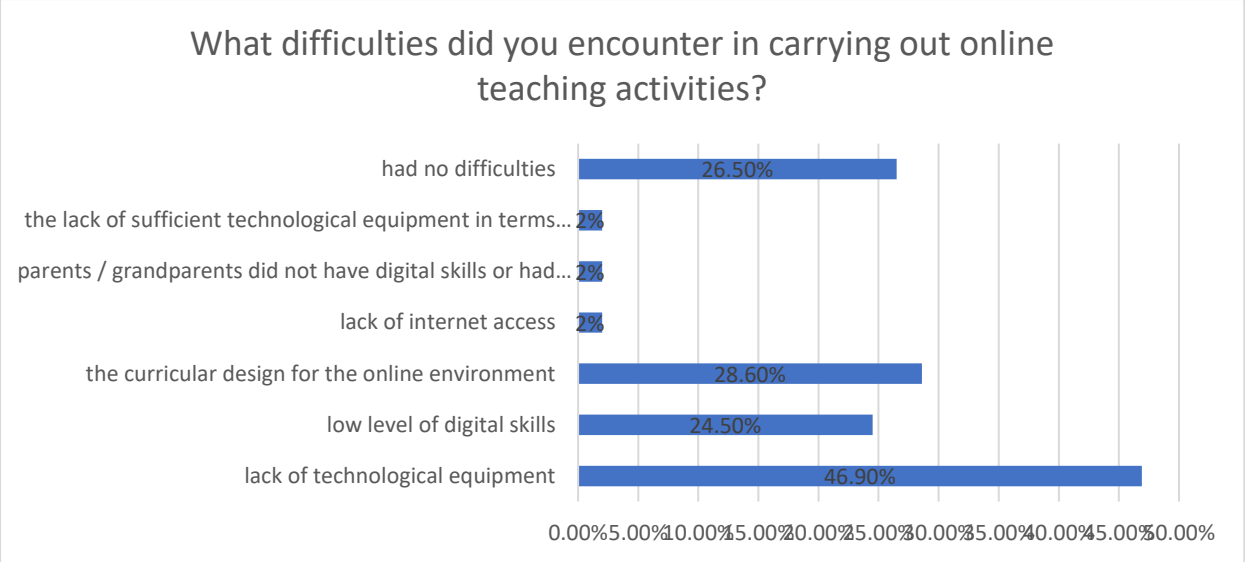

Figure 1. Difficulties encountered in carrying out the online teaching activity

In carrying out remote teaching activities, teachers have encountered a number of difficulties. Thus, about 47% of the respondents faced the lack of technological equipment, approximately 25% of the respondents encountered problems in carrying out their activity with a low level of digital skills.

An essential aspect in the situation of emergency remote education is the fact that in rural areas there are many children who come from disadvantaged families and do not have technical means to carry out the teaching activity in the online environment. Another difficulty faced by over 28% of respondents was the curricular design for the online environment. With little share, the teachers also pointed out other difficulties such as: lack of internet access, the impossibility of children to participate in the online activity due to the fact that parents / grandparents did not have digital skills or had to go to work, the lack of sufficient technological equipment when there were numerous family members.

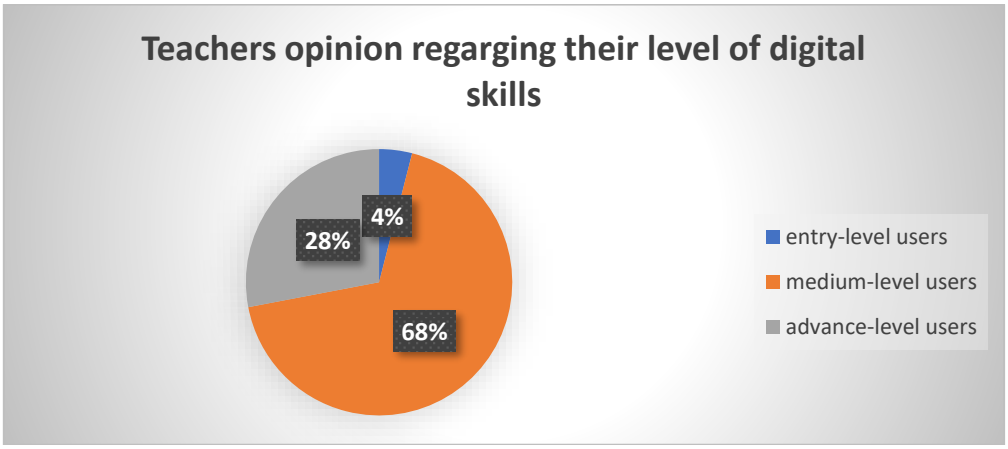

Figure 2. Teacher's level of digital skills

The level of competences to use new technologies was the second major difficulty faced by teachers. Thus, 68% of the respondents consider themselves medium-level users, meaning that they were able to make use of the computer but faced limited digital abilities. Only 28% of the teachers admitted being advances users and felt confident in accessing online application to foster the learning process. satisfied with their abilities in carrying out activities. 4% of the teachers express their limitation when using digital tools underlying the fact that they need to go through a process of improving their knowledge in the field of technology, in order to apply it in the teaching activity. In this respect, we consider necessary that teachers must be able to attend certain courses in order to acquire digital skills necessary to carry out the online activity because applying new technologies to the educational field is key for today's teachers. Moreover, it is important to provide the necessary technological equipment for each education institution for carrying out with the emergency remote education. A step forward that fulfils this requirement was done through a Romanian Government Emergency Ordinance no. 144/2020 who states as measures the purchase of technological devices and the distribution of non-reimbursable external funds that were a necessity for the implementation of teaching activities carried out during 2020/2021 school year, a year characterised by the risk of SARS-CoV-2 coronavirus infection.

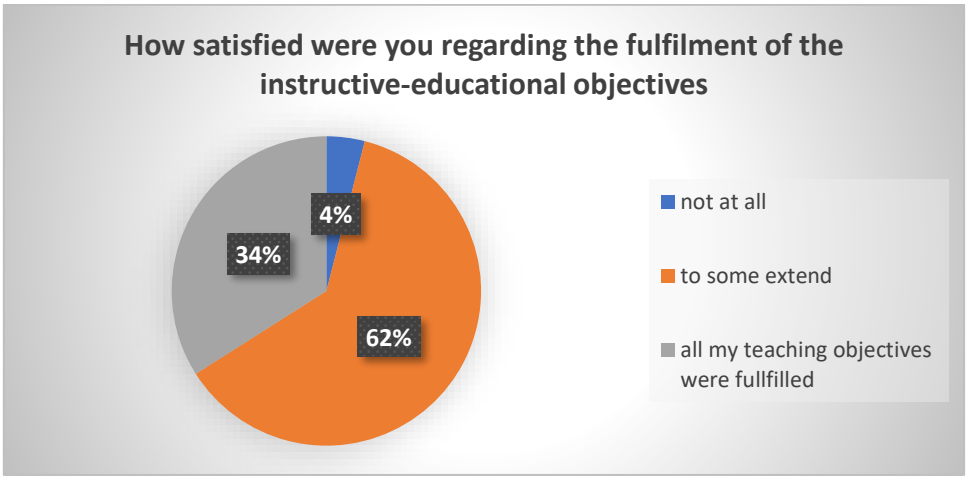

Figure 3. The degree of fulfilment of the instructive-educational objectives

During the teaching activity in the online environment, in terms of the efficiency of distance learning, the activity of pre-schoolers was certainly the most affected of all levels of education, being a `difficult test` for pre-schoolers or even impossible, in most cases. The responses of the teachers suggest that the difficulties encountered in carrying out the teaching activity directly influenced the achievement of the instructive-educational objectives. Thus, only 34% of the respondents fully achieved the proposed objectives, 62% of the respondents partially and 4% did not reach the proposed objectives at all.

In the case of pre-schoolers is very difficult to fully achieve the educational objectives, in the opinion of many of the respondents because this form of education is inappropriate

for children aged 3-4 years old. Unlike previous years, where the use of a pre-packaged curriculum was common, teachers now felt the pressure to build the best curriculum for their pandemic-teaching requirements, meaning that teachers have to select materials from multiple sources they found online, and also be able to create their own materials using the online application that are available to use on the internet.

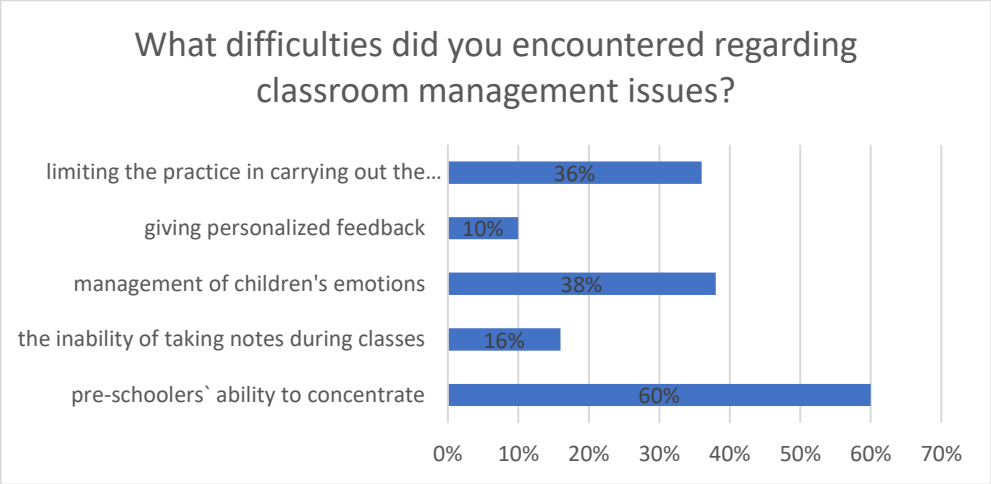

Figure 4. Difficulties regarding classroom management issues

Although the children were active and eager to respond, the age of the pre-schoolers, their ability to concentrate, their attention, patience are only some of the factors that raise problems in terms of carrying out the teaching activity in the emergency remote education.

The management of learning situations, in the case of pre-schoolers, is even more complicated because they are very easy to distract, so 60% of the teachers surveyed agreed that the biggest challenge in terms of classroom management was pre-schooler ability to focus on the provided learning task. The second difficult aspect that teachers (38%) identified was the management of children's emotions. It is very difficult to provide support, to help the child overcome certain states, to understand specific emotions, since certain things cannot be delivered through technology. Children need feedback, they need their work to be appreciated, they need validation for everything they do, to strengthen their self-esteem and increase their self-confidence. The limitations of online education, as well as the lack of authentic dialogue or the impossibility of tracking and correcting children's behaviours and reactions are one of the most common limitations of the emergency remote education.

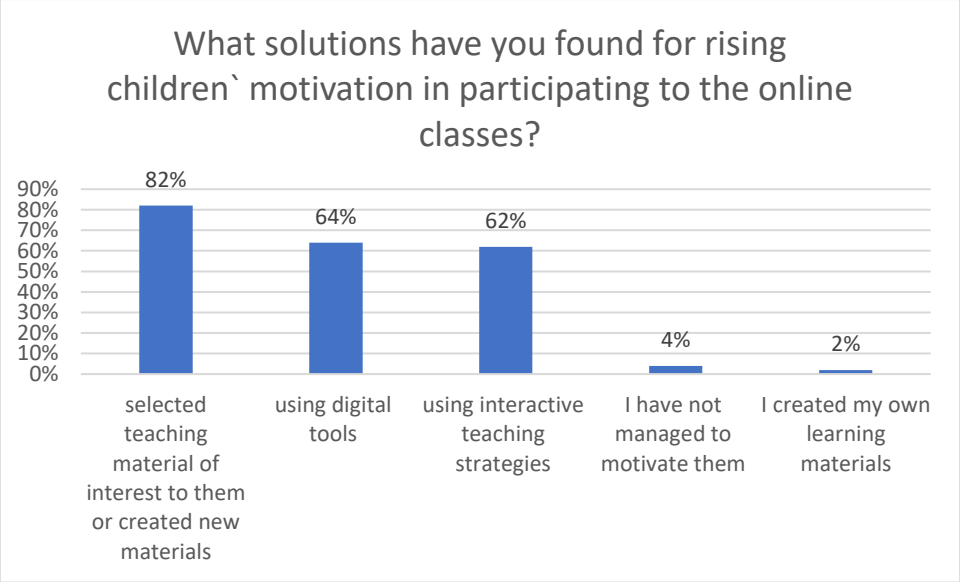

Figure 5. Solutions for rising children` motivation

Although is it very difficult to manage and conduct of remote education with pre-schoolers, several solutions for rising children` motivation arose. Digital teaching and learning resources are numerous, but of particular importance is the selection of those that are captivating and interesting enough for children, but especially adapted according to the individual peculiarities of the children and the educational objectives.

In order to get them to engage in the activity, the teachers looked for ways as varied as possible. Thus, 82% of the respondents stated that they have selected teaching materials online or they have created their own materials. In selecting and designing these materials, the teachers took into account the age of the children, as well as the wishes and recommendations coming from children own interest, and they varied from: stories, role-playing games, educational games, various video-audio recordings, etc.

The use of digital tools was, as specified by 64% of the teachers, the most used way to win the interest of children and get them to get involved in the learning activity. Only 2% of the teachers stated that they prepared their own materials, that is consistent with their previous declaration regarding their limited digital skills.

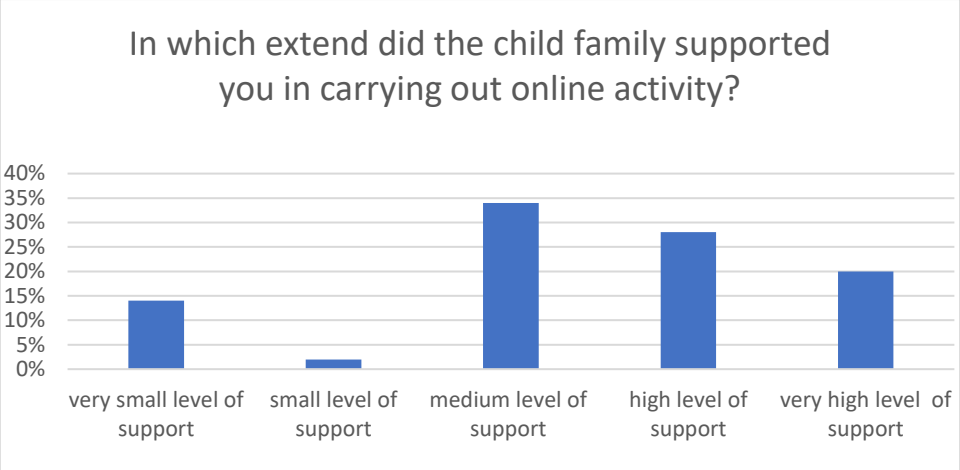

Figure 6. Family support in carrying out online activity

Opinions are very dispersed regarding the involvement of parents or other family members in the online activity, online education being viewed with reluctance by both teachers and parents especially at this age level. As mentioned before, the support of children in carrying out the online activity was closely dependent on the level of digital skills of the children's family members, the possibility to access to the internet as well as the technological equipment available in the pre-schooler family. 28% of the teachers that responded appreciated family support in accruing out remote education to a high level of involvement and support of children in teaching activity, while 20% appreciated it to a very high level of support.

Conclusions

The present study reveals that in the context of the SARS-CoV-2 pandemic, moving education to the online environment as the only option to continue the teaching activity, found both teachers and parents unprepared.

Carrying out emergency remote education was a great challenge for everyone: teachers, students, parents, since the traditional way of carrying out the educational act was replaced in a very short period with remote education. Thus, without prior training, each educational partner has experienced major transformations of its role, encountering difficulties that have affected the quality of the instructive-educational process.

The results of the research identified a series of difficulties faced by the participants, such as: lack of technological equipment, low digital skills, difficulties in organizing and supporting the learning activity. An essential aspect regarding the remote teaching activity with kindergarten children was affected also by the reluctance of parents, who, at least at first, did not agree with the use of the computer and the internet for a long period of time giving into consideration the young age of their children.

Although it has been tried and even found solutions for the continuity of the teaching activity, in most cases, it cannot be remembered, one of the fundamental problems of the

Romanian education system, amplified by the pandemic, namely the inequality of chances to education of children, especially for those in rural areas.

Moreover, in alinement with Martín-Sánchez (2022) research it is evident that beyond making it difficult to train certain skills among pre-schoolers or to carry out a practice-based assessment, one of the major disadvantages of this form of education is that it is impersonal, unlike the classical form, where children, in the group room, interact and establish relationships, developing their social life.

Coming unexpectedly, as a necessity, the remote education has brought besides disadvantages a series of opportunities to capitalize on, opening new horizons for us to achieve the educational act. So, despite the various obstacles encountered, technology has supported the learning process, making possible the continuity of education in a context where the primary concern of mankind has shifted towards health issues.

Among the advantages of online learning are:

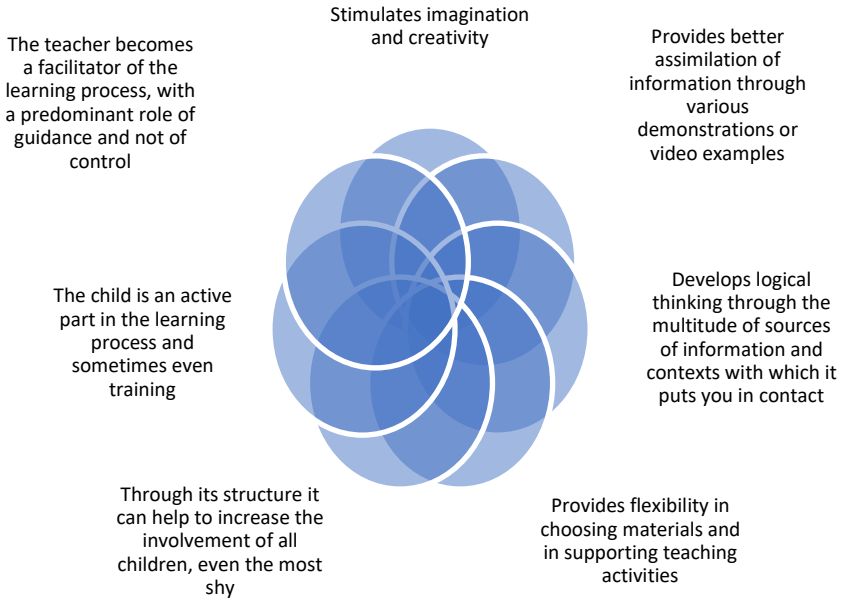

Figure 9 The advantages of online learning

Even if the effectiveness of online learning among pre-schoolers is not the same as that achieved in the case of the higher levels of education, we believe that a rethinking of the entire national education system, in the context of digital evolution, can be a good way of delivering learning situations that can stimulate and develop children's logical thinking.

The experiential situation that the pandemic situation had arose could be seen as a landmark for envisioning how to achieve a symbiosis between the classical and the modern education system. This finding goes hand in hand with Jalongo (2021) research that states that the community needs to show –by a strong financial commitment and by providing updated policies and relevant practices—that children education is a global priority. Moreover, remote education has to be seen as an alternative to go on with the

teaching activity in situations similar to the pandemic that may arise in the future (Fogarty, 2020).

Several challenges identified in this study are discussed in other researches and put together can help provide a clearer picture of the situation by mapping lessons learned. Firstly, related to the need to provision by the Ministry of Education of certain courses in which teachers participate in order to acquire digital skills necessary to carry out the online activity allowing them to use new teaching methods in order to respond to the needs that the new kids generation have (Vulpe & Pribac, 2021). Secondly, another urgent need is related to the technological devices that each institution should possess and them pass it on to each pupil/family for carrying out the online activity (Ionescu et al, 2020). Also, the need to adapt the curriculum was put to an emphasis, teachers agreeing that have substantially changed the curriculum, not only to the extent that they worked virtually, "in front of the camera", but by also editing video materials, searching for new and engaging apps to work with pupils (Bilbokaitė-Skiauterienė & Bilbokaitė, 2021). Nevertheless, teachers see the training of parents in using online content related to education and safety measurements in online as a high necessity. This idees converges other research ideas that states the need for training programs for parents that will enable them to be better prepared to respond to their kids need in terms of technology usage (Guerrero& Forment, 2019; Graf et al., 2014)

In order to close the gap that exists between the level of education and the new generation of kids that are born digitally native the Romanian educational system should incorporate innovative teaching methods. Consequently, it can be claimed that the epidemic was seen and still can be seen as a challenge for educational institutions, since both students and also parents and instructors have already felt the effects.

It is hoped that effects that this pandemic has had upon the education system will help shaping a more sustainable development of the education system, allowing students and instructors to advance their knowledge, abilities, and skills in order to enhance society's future through excellent education.

All in all, the Covid-19 pandemic, which primarily affects people who are most vulnerable and originate from underdeveloped or underprivileged situations, shows problematic elements of education systems around the world. The educational community, on the other hand, asserts that it has adjusted in a positive way.

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From teaching economics as a subject to entrepreneurial competencies in the Post-Soviet countries

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Abstract

Transition from the Soviet type of economy to a new market system showed the necessity in reforms at the secondary school level. Based on a literature review, this paper aims to reveal how the thinking about teaching economics has changed over the past three decades (1991-2021), and how this has affected teaching economics as a school subject in the Post-Soviet countries. The article illustrates these with the cases of Russia and Kazakhstan. For this paper, a narrative literature review methodology was adopted and scanned studies included only those published in English and Russian.

Keywords: teaching economics, entrepreneurial competencies, Post-Soviet countries

1. Introduction and context

Following the collapse of the Soviet Union, parallel to the establishment of the capitalist economy, education shifted from teaching economics to some interested students to developing entrepreneurial competencies of all students.

The education system and, in particular, economic education in the countries of the former Soviet Union was "designed to provide specialists for the planned economy" (Osipian, 2004, p.3). An extensive system of secondary schools for vocation and technical education and training operated in the country (Zajda, 1979). These schools provided knowledge and skills accordingly to the logic and requirements of the Soviet labour market, the main goal of which was to prepare human resources for the planned economy – a large number of workers with incomplete professional skills and mid-level technical staff for numerous industrial and agricultural enterprises (Faudel, 2006). Moreover, in the Soviet Union, almost the entire population did not possess private property, there were no individual entrepreneurs, people worked only for the state through hired labour, and it was not possible, and even necessary to imagine other ways of earning money

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(Altunina, 2019). Schools following the state political ideology prepared "good Soviet citizens" educating in students such values a*s "loyalty, hard work and respect for learning" whereas such competencies as "critical thinking and decision making" were not developed (Elder, 1998, par. 2). The economic education of young people was also limited by realization of the state interests in the field of industrial and agricultural production. As stated in Elder (1998), "Economically literate" students were those who understood and accepted the economic roles of citizens and state as decreed by communist ideology" (par. 2).

The changes in the political-economic system resulted in the reinterpretation of values, as well as the appearance of new competencies (including knowledge, skills and attitudes). The population of former Soviet countries had a different attitude to private finances and private ownership that was different from one of the Western capitalist countries (Kozhabergenova & Kopp, 2021). The leading role in teaching economic theory in Soviet times was played by the Marxist political economy. Socialist society strived to establish communism, which is characterized by communal ownership of goods, no competition, and no private property (Marx & Engels, 2004), and excluded commodity money relations and the possibility of personal enrichment by appropriating someone else's unpaid labour (Atsyukovskiy, 2014). These features contradict to conditions of the market economy based on private ownership, private property, privately owned capital, private initiative, and competitiveness (Samuelson, & Nordhaus, 2010). The transition from the Soviet type of economy to a new system showed the necessity in reforms at the school level (Faudel, 2006) and "change in economic instruction from Marxist political economy to Western economics" (Osipian, 2004, p.3).

This is also supported by studies revealing that the gap in the level of economic and financial literacy between advanced capitalist countries and former Soviet countries is still noticeable. According to the 2014 Standard & Poor's Global Financial Literacy Survey (Klapper, Lusardi, and Van Oudheusden, 2015), the number of financially literate adults aged 15 and above in the Post-Soviet countries (e.g., Kazakhstan – 40%, Russia – 38%) was almost twice less than in the countries with developed and advanced economies, such as Denmark, Norway, and Sweden with 71% of the financially literate population.

Based on a literature review, in this paper we aim to reveal how the thinking about teaching economics has changed over the past three decades (1991-2021) and how this has affected teaching economics as a school subject in Post-Soviet countries. We illustrate these with the cases of Russia and Kazakhstan.

There are several types of literature reviews and different approaches to their implementation. For the paper, we used a narrative literature review methodology and scanned studies, including only those published in English and Russian.

2. Teaching economics and entrepreneurial competencies

This chapter shortly presents the situation and changes in teaching economics and entrepreneurial competencies in general in the world.

There is a significant number of studies focusing on the historical perspectives of teaching economics as a subject: they have revealed that the appearance and development of economics as a subject is related to the development of the market economy (Szreter, 1961). Since the market economy did not develop in the Soviet Union, economics as a subject also did not appear in their curriculum.

According to Szreter (1961), economics as a subject was introduced in schools earlier than in universities. In 1805 political economy was taught to the cadets at Haileybury College, whereas Oxford, Cambridge and the University of London "established chairs in the subject" only in the 1820s (Szreter, 1961, p. 21). As stated by Parrish (1967), in USA colleges and universities, the political economy started being taught as a separate subject after the 1870s. Whereas, in Russia (that included Kazakhstan in those times), economic education for schoolchildren was introduced into the school curriculum during the Soviet period in the 1920s as a part of labour education, which in turn was a part of the communist education (Garmanova, 2013).

Some studies focus on the teaching of economics as a subject in the curriculum of secondary and high schools: as separate disciplines "Economics" and "Business economics", both compulsory and optional, in the USA (Walstad & Watts, 2011); economics and business studies as an options for the students aged 14-18 in the UK (Ofsted, 2011); "Civics" and "Home-economics" (Grades 7-9), "Contemporary society", "Politics and Economics" and "Commerce" (Grades 10-12) in Japan (Yoshino, Morgan, & Wignaraja, 2015); as part of the social studies course in the elementary and middle school and as a separate elective course in Korea (Jang, Hahn, & Park, 2014). According to the literature, in the Post-Soviet countries, school economic education is presented mostly as optional "Economics" subject in curriculum of secondary and high school. This is going to be elaborated on in Chapter 3.

As noted in the literature, entrepreneurship is recognized as a strong driver of sustainable economic growth, innovation, and competitiveness, an important component of contemporary economy and economic development in every country (Harper, 2003; Acs et al., 2008; Illés, Dunay & Jelonek, 2015). Entrepreneurial competencies are commonly considered as special skills that are necessary for effective entrepreneurship, for instance, as noted in Mitchelmore and Rowley (2010), entrepreneurial competencies are "a specific group of competencies relevant to the exercise of successful entrepreneurship" (p. 93). Some authors distinguish risk-taking as significant competency for a successful entrepreneur (Wagener et al., 2010; Makhbul, 2011; Estay et al., 2013). In the opinion of Schneider and Albornoz (2018), the development of entrepreneurial competencies refers not only to skills and knowledge but also to "change of the ego, motives and traits, characteristic adaptations and identity" (p. 15). However, there is no comprehensive unified list of entrepreneurial competencies agreed upon by the world education society (Mitchelmore & Rowley, 2010; Glackin et al., 2017). Besides, there is no consensus on "whether entrepreneurs are born… or entrepreneurial skills can be taught" (Henry et al., 2005; Kirby, 2004; Glackin et al., 2017). However, as cited in

Kyndt & Baert (2015), according to some authors such as Volery et al. (2015), and Wagener et al. (2010), entrepreneurial competencies are associated with the competencies that are "changeable, learnable and attainable through experience, training or coaching" (p. 14). Hence, the idea that entrepreneurial competencies can be taught is supposed in the works of different authors (Kuratko, 2005; Dickson et al., 2008; Bartulović & Novosel, 2014; Glackin et al., 2017). According to Leffler (2009), in schools, entrepreneurship education is mainly regarded and designed as additional or extracurricular activities and realized in form of students' projects.

3. Teaching economics and development of entrepreneurial competencies in the Post-Soviet Russia and Kazakhstan

This chapter presents teaching economics and development of entrepreneurial competencies at secondary schools on the example of the two biggest Post-Soviet countries (regarding territory) – Russia and Kazakhstan.

During the Soviet period introduction of economic education in Kazakhstani schools had similar path as that of Soviet Russia, since there was a centralized educational policy coordinated by Moscow (Pak, 2010). According to Garmanova (2013), the school economic education in Russia may be presented by two big periods – the Soviet period and the modern time. During the Soviet period (the 1920s-1980s, during which period Kazakhstan was part of the country) school economic education for students in Russia was presented as: 1) topics in the cycle of Social studies such as "History", "Economic Geography", "Basics of Soviet State and Law"; 2) separate economics-related subjects – optional/extracurricular courses such as Basics of economics of socialist industry, and Basics of socialist agriculture; 3) communist labour education that contained topics about economy and production organization (Garmanova, 2013). Besides mentioned subjects, school economic education was implemented through the discipline "*Obschestvovedenie*" (science of society). This course combined topics dedicated to history, law and economics (Mikheeva, 2010).

In the modern period (from the 1990s), similar paths of development of school economic education in Russia and Kazakhstan began gradually diverge.

Russia

In Russia, from the 1990s, school economic education was manifested in: 1) teaching the basics of economics in secondary school subjects such as "Economic Geography", "*Obschestvoznanie*" ("Social Studies"), "History", "Economics", and extracurricular economics courses; 2) economic education as a part of labour education; 3) courses in the organizations of additional education (Alekseeva, 2003).

According to the literature, the course "Economics" as a separate subject was introduced in secondary schools at the beginning of the 1990s (Mikheeva, 2010; Moskvina and Snurnitsyna, 2018). In their study, Moskvina and Snurnitsyna (2018) attribute this to the start of work of various organizations, in particular, such as the Interregional Public Organization "Junior Achievement Russia", which began its work in

1991 and introduced various courses in the areas of "economics and management". At present, the organization's main aim is the education of economically literate young people who are ready for active and successful work in various sectors of the economy. Along with this, in the 1990s, another non-profit organization "International Centre for Economic and Business Education" started its work in Russia. This organization issued new educational and methodological complexes and trained teaching staff in the field of financial and economic education. According to Mikheeva and Zhurkina (2019), in 1994-2008, a project "Teaching economic and business disciplines in secondary schools, technical and general universities" was coordinated and implemented by Russian Higher School of Economics (HSE). The directions of this project included training and retraining of economics teachers, development of teaching aids and textbooks, and creation of regional professional organizations of teachers of economic disciplines. The work of these organizations led to the creation of several textbooks: Lipsits "Economy without secrets" (1993); Lyubimov, Ranneva "Basic of Economic Knowledge" (1997); Avtonomov "Introduction to Economics" (1998); Ivanov "Baisc of Economic Theory" (1999) (Kuznetsova,2006; Mikheeva, 2010; Moskvina and Snurnitsyna, 2018).

Today, economic education in Russia is mostly represented by the course "Economics" in high school that is taught as a separate subject at the basic and profile levels, but it is not a compulsory discipline (Kuznetsova, 2006; Romanova, 2015). As noted in Egorov, Subbotin and Sizova (2015), in Russian education economic training at school level can be implemented throughout all the years of study in accordance with the following steps:

1. Primary economic education – acquaintance with economics on a preparatory level, elementary concepts in Grades 1-6.

2. General economic education – implementation in basic curriculum of all schools including those with economic and financial profiles in Grades 5-11;

3. Third stage economic education – optional implementation in comprehensive secondary schools in Grades 10-11 and compulsory implementation in secondary specialized schools such as lyceums, colleges, etc. (Egorov, Subbotin & Sizova, 2015).

Meanwhile, as noted in the literature, there were several attempts and experience in teaching the basics of business and entrepreneurship but such work was not always systematic more often there was a single successful experience (Kalinina & Topeshkina, 2007), and mainly at the higher level of education in the pre-professional and professional training: for instance, elective course programmes "Basics of Business and entrepreneurship" by Lipsits and "Basics of entrepreneurship" by Simonenko (Trusova, 2012).

In 2008 by the initiative of several Russian universities Russian Association of Entrepreneurship Education was created, and its major goal was development of educational materials for teaching entrepreneurship at secondary vocational education, undergraduate, graduate and postgraduate programmes (Pesotsky, Grigorieva, & Chistova, 2021). However, according to Pesotsky, Grigorieva, and Chistova (2021), this

initiative was not successful since only "few universities of the country implement the model of "entrepreneurial university"" (p. 967). As stated in Ponyavina (2018), today, entrepreneurial education for secondary school children is implemented by private specialized business schools and organizations such as Kinder MBA, Matrix career, Kidburg, Kidzania, etc. However, entrepreneurship education at a secondary and high school level in Russia is still developed without the participation of the state (Ponyavina, 2018).

Kazakhstan

In Kazakhstan economics as a separate subject in schools began appearing only during the period of independence after 1991. In 1994, the Public Fund "Junior Achievement Kazakhstan" was established (USAID, 2005). The main purpose of this program was to develop entrepreneurial spirit and business skills among young people. Since 1996, general education schools had been developing and implementing programmes of the Public Fund "Junior Achievement Kazakhstan" on economic and business education for schoolchildren through partnerships between educational institutions and business structures. The programmes were focused on seven key areas: economics, entrepreneurship, business, ethics, financial literacy and career development skills. In addition to providing educational programmes and materials, the Public Fund "Junior Achievement Kazakhstan" conducted workshops and seminars for economics teacher educators and economics teachers, organized school fairs, economics Olympiads for schoolchildren and conferences for economics teachers (USAID, 2005; Shestel, 2017)

According to Shestel (2013), in 2010-2011, the optional course "Basics of economics and financial literacy" was introduced in secondary schools for Grades 4-11. The programme of this course was developed in 5 versions:

1) short 17-hour course in Grades 4-6 (half a year, 1 hour/week)
2) short 17-hour course in Grades 7-9 (half a year, 1 hour/week)
3) 34-hour course in Grades 5-9 during (1 year, 1 hour/week)
4) 34-hour course in Grades 10-11 (1 year, 1 hour/week)
5) professionally oriented 68-hour course in Grades 10-11 (1 year, 2 hours/ week) (Shestel, 2013)

Along with this, according to the address of the first President to the people of Kazakhstan "Third Modernization of Kazakhstan: Global Competitiveness" (2017), one of the priority directions of the country's development was effective employment and growth of business activity with improvement and expansion of business environment. In order to implement these objectives new school subject "Basics of entrepreneurship and business" was introduced in Grades 10 and 11 in 2019 (GOSO, 2018). This course consists of 68 lessons during 1 school year including 30% of theory and 70% of practice. The programme of the course includes theoretical lessons, practical tasks in the form of a game, analysis of business cases, and business games (NCE RK, 2019).

Conclusion

Conducted analysis of the literature allows us to conclude that teaching economics continues to develop in schools in the Post-Soviet countries. For the last three decades, in particular, economics has been introduced as a separate school subject, and methodological discussions are underway on approaches to teaching this subject in schools. In the course of the discussion among researchers, there are more and more supporters of a professionally oriented practical approach instead of the theoretical one. As a result, there is an understanding of the need to develop entrepreneurial competencies in the course of teaching economics.

In conclusion, summarizing the main features of teaching economics as a subject in Post-Soviet countries:

- Russia and Kazakhstan have followed two separate paths when it comes to teaching economics: according to the literature, in the case of Russia the practice is more colourful, while in Kazakhstan it is more homogeneous.
- An important difference between the two countries is that entrepreneurial competence development concept appears in the Kazakhstani educational policy documents whilst in Russia according to the literature the state does not participate in school entrepreneurial education and it is implemented through private business schools and organizations.
- In both countries the teaching of economics has changed significantly after the communist times, they tried to give response to the new challenges.

However, the literature analysis showed that majority of studies were focused on experience of one country, therefore it would be valuable to conduct further research in a comparative aspect.

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Some aspects of the children-friendly school with holistic approach

Judit Torgyik•

Abstract:

This paper reviews the characteristics of a good school, emphasising the role of human relationships in the learning process and how relationships can be developed. It highlights the importance of taking human needs into account at school and the importance of the teacher's personality in creating a quality classroom atmosphere and education. It concludes with the idea that a good school takes a holistic view of the child's personality and needs, and that teachers can provide for this.

Keywords: the importance of social relationships, human needs at school, supportive school climate, the teacher's role, humanistic, positive pedagogy

Introduction

The great school is the dream of each child and parent. It is what is good to attend, where it is good to learn and where the teaching material and the attention to the people's human needs are in an appropriate harmony. A modern school of the 21st century shall establish a balance between the attention to the child's features of his/her age and the developmental psychology, as well as the meeting the requirements of the curriculum in general. Several studies have been completed worldwide to understand what can make the school, teaching, and learning more effective and humane (MacGilchrist, Myers, Reed, 2011, Levine, Lezotte, 2001). The mentioned studies focus on the basic human needs and the general psychological and social needs of the participants of school, teachers, and students during the development of the educational process.

This article is a narrative literature review that focuses on exploring some of the features of a quality school. The research question is, what characterises a good school in the 21st century? The hypothesis: a good school is based on three main factors: 1) the development of social relationships, 2) the consideration of the human needs of students in the educational process, 3) and the educator who plays a crucial role in creating the development.

The importance of the above factors is also supported by international literature, which increasingly emphasises the consideration of the students' perspectives following

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a holistic approach. This can only be achieved if the teacher has professional competencies to facilitate the right atmosphere and balance the curriculum and learners.

Relationships in schools

A school is not just a place for teaching, learning and developing skills but a complex system of human relationships. The years spent in school socialising and the institutional education develop social skills and behaviour. Meanwhile, new friendships and relationships are established, and the class community is growing. It got clear during the pandemic, when online education was typical, that the relationships with the mates of the same age are significant in children's life. Learning at home was a lonely activity; most children missed their classmates and the experience with their friends. Many children wait for school after the summer vacation because they can meet their friends again (Torgyik, 2021). The students learn how to approach other people, express their feelings and their empathy, the helping others, care for each other, and develop interpersonal skills during the school years. The learning process occurs in a complex system of human relationships and the school provides the social context. The school is supposed to be the community of students and its quality influences the children's learning and well-being. The experience of mutual trust, the relationships based on acceptance, and the community are essential for the children from the point of healthy personality development. A good school can be characterised by positive interpersonal relationships and tries deliberately to guide the human relationships in the appropriate direction during the teaching process and provide safety for the students.

It is well-known from the psychological studies that friendship and friends mean support, protection in stressful situations and during the management of difficulties while contributing to the children's personal development and general well-being (Morris, 2009). A coherent class community provides the feeling of belonging somewhere and acceptance, while the exclusion from the group, and the isolation increase the risk of eliminating school and learning. The appropriate relationships in class mean preventing bullying (Aronson, 2009). The class is the place to exercise social skills every day.

A qualitative school encourages and develops the relationships and shapes the social competencies with targeted pedagogical measures (Torgyik, 2020). Student relationships can be created by various methods, cooperative techniques, and pair and team-works. Cooperation with others is essential for each child, especially for ones with unbeneficial conditions, being at the edge of society or under the risk of exclusion, living with a disability, having a different cultural background or belonging to another ethnical or language group for it can provide a kind of chance to be accepted, taken into a community and understood for them. It is vital during the inclusion to improve the cooperation instead of competition within the class to improve performance and social relationships. The students' speaking time increases during the events of cooperative learning, the feelings get more attention, and the individual opinions can be expressed. Such kinds of

conversation can provide an opportunity to understand the partner, interpret the thoughts and feelings together, and learn from each other.

Further opportunity to improve relationships is the so-called group of conversation, which can be at the beginning or the end of the day or the week. Any of them is suitable to teach children more deeply and understand each other, as well as improve their acceptance, discreetness and tolerance (Maholmes, 2014). A conversation is constructive based on understanding, listening, and empathy. The students who know each other better are more ready to be friends and support each other. The relationships based on mutual trust and acceptance represent a social reserve that can be activated even after school if necessary. Good relationships provide the feeling of belonging to a community, as well as the feeling of being accepted (T. Slee, Skrzypiec, 2016).

The frequent application of cooperative techniques is supposed to be important from another point of view as well. Studies (Maier, 2000) have found that if the students' activity increases within the teaching and learning process, it can significantly improve their learning performance. A student is not just a receiver but an active creator of his/her knowledge during the learning. The students help and explain to each other; each group member can contribute to the common work with his/her ideas, points and part. Atkinson (2014) thinks that students like more and feel more exciting the learning if they have a chance for more activities or can process a topic, they are interested in. It is the teacher's duty to provide as many opportunities as possible for the students to cooperate, share their experiences and ideas and contact each other during the teaching process (Jacobs, Renandya, 2019).

A simple method to improve social connections is the „Buddy Bench" used in more European schools (e.g., UK, Croatia). The idea originated in the US; one schoolchild was the inventor. Buddy Bench Croatia – a Croatian project that aims to strengthen the students' connections. On the schoolyard of elementary school, a colourful bench was placed; students were instructed to sit there if they were alone and liked befriending; furthermore, if students saw someone there, they could invite them to play and chat. The main aim was to boost positive interactions and facilitate tolerance and friendships.

Psychological studies also confirmed the effect of the Buddy Bench. According to an observation and questionnaire survey conducted at primary schools in the US (Griffin, Caldarella, Sabey, Heath, 2017), students were happy to use the Buddy Bench, and most of them had a reasonable opinion about the instruction, to be seen at school next school near as well. Researchers have observed that this has reduced the number of lonely students, increased social cohesion, acceptance among students, and more new friendships.

Students' human needs

A qualitative school also focuses on the students' physical and mental well-being. Its everyday practice is based on the consideration of the basic human needs while trying to understand the children and focusing on the person with his/her features originating

from the anthropological characteristics. Due to the fact that a human is a rationally thinking creature, is guided by his/her emotions and has a dual nature, all of it shall be considered during the teaching process. The needs were learnt in humanistic psychology, and its application and distribution are typical for the practice of humanistic pedagogy. The human needs were described by Maslow first and improved by others later. One of them was Professor Skiera (1994), who identified seven primary human needs in connection with the child and the school; and called them existential motives. They are 1) the requirement for emotional protection, safety and contact, 2) the need for appreciation and recognition, 3) the need for new experience, knowledge, skills and capabilities, 4) the freedom, 5) the responsibility for us and others, 6) the need for esthetical experience, 7) the need to express the internal conditions spontaneously. They can be parallel to the system described by Maslow from many points because the two conceptions overlap each other.

Undoubtedly, a children-friendly school provides protection and safety for everyone. The students want to feel safe during the teaching and learning process, which can be guaranteed by the pleasant school atmosphere (Klein, 2002), the acceptance, the lack of aggression and violence, and the stability of the environment (Skiera, 1994). Acceptance and inclusion are essential in school life, and all students shall be affected independently by their personal and cultural features (e.g., gender, age, family or social background, place of residence, language and ethnicity, as well as skills). Inclusion is a kind of ethical measurement of a school and represents the rate to what extent a school is fair.

The lack of acceptance, the refusal, the exclusion, the mockery, the condemnation, and the humiliation are very dangerous for any child in the pedagogical practice (Hunyady, M. Nádasi, Serfőző, 2006, Aronson, 2009). It can cause and result in psychosomatic symptoms, bad feelings, elimination of school and severe cases, even leaving of education and early drop-out. The unpleasant school experience can cause problems, mainly because the school aims to make children like learning, maintain curiosity, prepare for lifelong learning, and maintain the desire for learning. If a student is rejected by his/her mates or pedagogues, it can be completely opposite to the declared purposes of the school. Several examples show the severe results of school bullying, the feeling of being threatened, the anxiety and the fear. Children growing up in a safe, caring, accepting environment are more active and braver in the learning process, and as the teachers observed, they learn more (Atkinson, 2014).

Unlike “black pedagogy”, positive pedagogy is much more effective and based on acceptance, respect, and improvement of valuable human characteristics. Positive psychology (Szondy, 2009, Harzer, Weber, Huebner, 2021) and the school applying positive pedagogy (O’Brien, Blue, 2018) focus on the person’s strengths and try to improve them within the teaching process (Lander, 2020, Kumar, Mohideen, 2021). The desire for praise and recognition is typical for everyone within their family, friends, school, or workplace. The positive feedbacks facilitate the improvement of personality, give power, motivate and help to go on the selected way in every field during the learning

process. The recognition and support of good characters provide the feeling of being precious and helpful support during the completion of duties. The encouragement and the praise of positive points advance learning and provide help and encouragement in case of failure or adverse events. Recognising and appreciating positive personal characters improve the students' self-confidence. A good school believes in the child's ability to develop and his/her internal power and skills. It is not looking for the faults but instead uses the person's positive features as a foundation (Réthy, 2007).

One of the features of a qualitative school is the chance to live freedom (Skiera, 1994) for both the teachers and students. The studies on work psychology verify its importance. A person feels much better if he/she can choose the tools, the methods, the speed of work and has the freedom of choice during the work or learning (Klein, 2002). It provides the feeling of consideration of freedom, autonomy, individual ideas, and it can establish a strong foundation of motivation in teaching and learning. It requires great flexibility to meet the need for freedom during the teaching process to provide a chance for the students' ideas and purposes in the lesson. The provision of responsibility facilitates development. A child can develop through duties and practical tasks (Bábosik, 2004). The assignment of duties and responsibilities is a form of recognition, for it means that the teachers believe in the student and know he/she can complete it.

The improvement of emotional life and emotional education in school has been more and more critical than any time before due to the success of Goleman's (2019) book on emotional intelligence. The improvement and maintenance of positive emotions contribute to the balanced improvement of the whole personality. (Best, 1998) It is vital to verify it because education at school tends to emphasise the cognitive area.

The inappropriate management of emotions and the fact that the reasons behind our emotions are identified can cause several problems or even diseases. A school emphasising negative things can cause stress, anxiety, and bad feelings. (Darling-Hammond, Cook-Harvey, 2018) The correct emotional control is connected to the proper self-understanding, the appropriate social relationships, as well as the more effective stress management. Dynamic education may have several forms. The conversation, the response to the emotions of own and others, the artistic activities, and the different forms of playing belong to it. The arts, the beauty and harmony provide peace (Gal, Gane, 2018), but art can provide the chance to express ourselves and is an excellent opportunity to show our emotions at the same time. The teaching process shall focus not only on the development of sense but on the more expressed consideration of emotions, reactions to them, experience and understanding of emotions of own and others as well. A child has a holistic approach, and his/her physical, mental, cognitive, emotional and social development facilitates the harmonic personality.

Paying attention to human needs and developing the whole personality has a long tradition in reform pedagogy. Waldorf, Montessori and Freinet schools approach children holistically, in addition to the cognitive sphere, the social-emotional area is considered in pedagogical work. Their characteristic feature is that they seek to strike a balance in

teaching between academic, emotional and social areas. They strive to love learning and give them more freedom during the educational process. Waldorf schools space a particular emphasis on art, music, and the beauty of the school environment.

However, in many EU member states, much has been taken over from the practice of the reform pedagogy in „traditional schools," and educational institutions have become more child-friendly. Today the European Union is also promoting a whole-school approach, which is expected to improve students' mental health and well-being. (Cefai, Simoes, Caravita, 2021)

Another needs-based model of the theory of education was established by Bábosik (2004), who divided the human needs in school into 1) biogenic, 2) psychogenic 3) sociogenic needs and describes education focusing on these factors. While the biogenic needs are born with us, the psychogenic ones are of mental origin. The sociogenic needs are connected to the person's social nature. The correct diet and enough sleep can be mentioned as part of the first ones, and they are the factors that provide the essential biological conditions for effective learning. It is clear that a hungry, feeling cold and undernourished child can hardly concentrate on learning. A sleepy student gets tired more quickly and might have problems with concentration and difficulties during the lesson.

Bábosik (2004) says that the needs for variety, creation and collection belong to the category of mental needs. A child requires new things, the change, the type that can be satisfied by the school with the help of different duties, various teaching methodologies and a wide choice of learning. There are several chances to create, produce new things, be creative during school life.

The need for love, friendship, as well as fairness belongs to the group of sociogenic needs in this model. As it has already been mentioned, the improvement of relationships based on positive things and mutuality, the support of friendship among students, the application of cooperative techniques and the elimination of exclusion are essential pedagogical duties in education. A real and good friendship features are mutual trust, support, empathy and forgiveness. (Morris, 2009, Maholmes, 2014) The shaping and improvement of interpersonal relationships, the development of social skills, the application of cooperative techniques, and the provision of common experience help students feel better at school, support each other in the learning process and contribute to meeting their social needs. The friends can help each other with schoolwork and out of school with advice, sharing their knowledge and support. (Maholmes, 2014)

An excellent example of the development of social relations is the KIP (complex instruction program) introduced at the school in Hejőkeresztúr, Hungary. (K. Nagy, 2015). In doing so in heterogeneous groups, students spend less than about 20% of them performing cooperative tasks. Teamwork builds on interdependence and positive interactions with creative, divergent thinking. All group members have a responsibility, and disadvantaged children, those with unfavourable status in the classroom, can also show their skills. This program, initially from the US, was developed at Stanford

University to improve learning performance. The students at the school in Hejőkeresztúr come from different ethnic groups; many of them are Roma. In the experience of educators, students prefer to go to school, there is more interaction and friendship, and the level of acceptance has increased since the program was introduced. The success of the program is shown by the fact that many pedagogues have been trained to use the method since its inception, and a methodological center has been established at the University of Miskolc.

The student's whole personality, physical, mental, social and emotional needs, and different dimensions of learning shall be considered during the teaching process to make a school more humane, more adjustable to children, loveable and more effective. The knowledge and identification of human needs within the school system make the teacher's work more effective and the school more successful.

The teacher's role

The extent of the attention to the child's needs and the development of the community depends on the teacher and his/her knowledge and professional skills very much. Namely, how the teacher knows the system of human needs and what pedagogical methods and techniques can apply to develop holistically and encourage them at school. The child is influenced by his/her personality and acceptance. The teachers play a vital role in the pedagogical process, their personality and professional competencies affect the students' well-being, mental health, success, school performance, future career, as well as efficiency of the school. A returning and frequently asked question of several studies, what features make a good teacher and what human characteristics, and professional skills are essential for him/her.

Rudduck, Chaplain, and Wallace (quoted by MacGilchrist, Myers, Reed, 2011. p. 90) have interviewed secondary school students about the features of a good teacher. According to their findings, a good teacher respects students, provides emotional support for them, provides challenging tasks, gives autonomy, and handles all students independently of his/her features and the students feel safe in his/her class. The items listed above are in harmony with the image of a teacher considering the system of human needs. If a pedagogue considers both the teaching material and students' physical and mental health, as well as their common well-being, it gets popular.

Looking for the features of a good school, the ideas about a good teacher could be detected. Primary and secondary school students were interviewed about their ideas on a qualitative school in Hungary (Torgyik, 2021). The students said a good school meant a good teacher and class community. We have to note that the students mentioned the positive human relationships as factors determining their attitudes and feelings toward school. They believe that a good teacher is empathetic, helpful, able to motivate, calls attention to the subject, fair, patient, and humorous. Mutual respect was necessary for the students, and they think a teacher shall not only teach the subject but provide emotional support for them as well. They shall pay attention to the teaching material and the student

as a human. They prefer those teachers who care for them and do not focus on the subject and the teaching requirements only. Emotional and mental support was a general requirement of students or the teachers.

Atkinson (2014) thinks a good teacher involves the students in learning and activates them continuously. He/she establishes a balance between the teacher's guidance, the facilitation and the activization. Sándor Klein (2002) had similar findings in his study and said that the teachers had an essential role in shaping the correct relationships and friendships and establishing a good class atmosphere. The teacher is a facilitator, the motivator, and the stimulator of learning. Knowledge can be gained from several sources nowadays, so the teacher's duty is not only to transfer knowledge, but to arouse interest and maintain useful relationships are much more critical than before.

McGuiness (2000) has found that the people working in professions of encouraging types, such as pedagogues, doctors, or nurses, have common social and psychological features that make them successful and accepted professionals. These features are the following: available, supporting, patient, understanding, humorous, enthusiastic, positive, considerate and having time for the other person.

Learning in school requires a unique atmosphere, which teachers can provide. The pleasant atmosphere provided by the teacher makes the correct foundation for the educational process and decreases the anxiety and the fears in learning. It gives safety, where the mistakes are not negative but the natural part of development. Under such circumstances, the student doesn't need to be afraid because they are aware of the fact that nobody hurts them and unconditional acceptance, positive support and encouragement can be felt. The student feels more protected in a friendly environment; the peace and the decreased stress support their learning to a great extent.

A positive class atmosphere is supposed to provide trust, where the teachers believe in the student and his/her skills and encourage and love their students. A pleasant atmosphere decreases the behavioural problems, the anxiety if any because the students can feel that they are accepted, their satisfaction with and link to school improvement and their performance is getting better. Darling-Hammond and Cook-Harvey (2018) having reviewed 78 studies about the school atmosphere, think that a pleasant atmosphere can compensate for the negative effects of poverty on performance. The acceptance and the pedagogue's support improve the performance and contribute to the students' success. It is especially important for students with an unbeneficial condition, disability or living in the minority. The pleasant atmosphere is based on mutual respect and acceptance, as well as a decrease in stress. The teachers in such an environment speak to their students with respect and expect the same from them. But it is also essential that the family and the parents respect teachers and institutional education, accept education, and cooperate with them regularly.

Hervainé (2015) underlines the attention to and the management of the students' problems, as well as the community from the students' points of view saying that these factors can contribute to the students' school environment. She states that the application

of positive methods of psychology is required to improve students' well-being. The mental care and the care for human relationships make the students like learning. Klein (2002) underlines the care for students for it facilitates personality development. According to Carl Rogers' personality-oriented approach, the teacher's competence, authenticity, empathy and unconditional acceptance can encourage student development. If an educator is more empathetic to the students, the students are more likely to accept each other. (Rogers, 2002) The teacher's accepting attitude is essential.

The Carl Rogers School in Budapest is an excellent example of putting the principles of humanistic psychology into practice. In their pedagogical program, they emphasise that the first element of education is the creation of a calm, relaxed atmosphere and acknowledging all students, regardless of their characteristics. Safety and empathy are created for the students by the pedagogue who actively cooperate with the parents.

The teacher's care and attention facilitate the students' personal development and school performance. A caring educator is available not only during the lessons but he/she is supposed to be interested and friendly during the breaks and out of lessons. (Seary, Willians, 2020) He/she spends his/her time with students, cares for them and wants to develop them and that's why he/she provides duties and expectations. His/her attention can be detected in different ways, in the conversations, the careful listening, the help and the sensitivity toward the students' needs. The care makes the school human and qualitative.

Conclusion

To sum it up, we may say that a good school holistically approaches the students and pays attention to the teaching material and the student as a human with all his/her personality. It considers the student's wide range of human needs, cares for the relationships, and friendships and often applies cooperative techniques during the teaching and learning process. It improves the whole personality considering the physical, mental and social needs. A school can be made a qualitative and children-friendly place by pedagogues who provide an accepting and safe atmosphere, as well as the essential conditions for learning, having careful attitudes and facilitating the students' correct learning, mental well-being, and healthy development. Future research on a holistic approach can fundamentally address the areas mentioned above of how to develop social relationships, support human needs at school, and the teachers' role.

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Teachers' and students' perceptions towards the utilization of formative assessment rubric for supporting students' learning of organic chemistry

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Abstract

This study aimed to investigate the use of formative assessment rubrics for supporting the learning of organic chemistry in secondary schools in Rwanda. A mixed research approach was used to collect and analyze data. The target population was 210 senior five chemistry students and 15 chemistry teachers. However, 140 senior five chemistry students and 10 senior five chemistry teachers were purposively selected to participate in the study. The qualitative data were obtained from the interview while quantitative data were obtained from the survey questionnaire. The qualitative data were analyzed by discourse and interpretive approaches while quantitative data were checked by descriptive statistics.

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The results of this study showed that from rubric formative assessment, students understood instructors' expectations and encouraged individual learning. The students' knowledge retention was also increased. The instructors mentioned that they were able to grade the students' tasks fast with the help of an analytic rubric and good formative feedback was availed to students on time. The students were satisfied with the use of the formative assessment rubric and they affirmed that they were motivated and engaged in learning organic chemistry. It was recommended that chemistry teachers should use rubrics during formative assessment in organic chemistry.

Keywords: Formative assessment rubrics, students' learning, organic chemistry, motivation, performance.

1. Introduction

A formative assessment rubric is the grading criteria that clarify the expected standard for the achievement of a given activity. Rubrics make the learning objectives clear, makes grading more perfect and fair to promote students' learning (Andrade, 2005), and help students with self and peer assessment (Williams & Seddon, 2017). The study conducted on rubric-based formative assessment in portfolio process towards self-regulated learning revealed that rubrics have facilitated students to be active learners by promoting self-reflection and accountability in their learning (Tur *et al*., 2019). Another research conducted on students' perspectives on rubric-referenced assessment revealed that the use of rubrics in assessment potentially supports student performance (Andrade, 2005). In a focused group, learners expressed that rubrics helped them to focus on the expected ideas in their works and they produced an assignment of better quality and good grades (Andrade, 2005; Idris *et al*., 2017). For the study carried out in one of the public secondary schools in Brunei country located in South East Asia, the students were given work at the same time with rubrics, and the results proved that the rubrics enhanced learners' thinking skills, peer and self-assessment. The students were confident and motivated when doing their work because they knew the instructors' expectations (Idris *et al*., 2017).

In the context of Rwanda, one study on rubric-based formative assessment to support students' learning of organic chemistry in the selected secondary schools in Rwanda was conducted by Nsabayezu et al. (2012). It showed that through the use of rubrics, the students comprehend instructors' expectations, and their learning was improved, as well as knowledge retention was also greater than before. A rubric is thus crucial in this twenty-first century for self-oriented learning and students' self-assessment of the planned learning achievement.

Instructors at every academic stage examine the importance of formative assessment rubrics in improving the students' performance in their corresponding subject. Hence, they

use analytic rubrics to assess and grade students' works, such as laboratory reports, problem-solving abilities and science literacy levels (Jensen, 1995; Lebowilz 1998; Schafer *et al*., 2001). Some researches were done on the benefits of formative assessment rubrics in enhancing learners' performance, but studies on rubrics are still few (Chowdhury, 2019). Studies on the use of formative assessment rubrics in the education area are also still insufficient (Phu-ampai, 2019). Therefore, additional researches should be carried out to explore the effect of using formative assessment rubrics on students' achievement.

Several scholars have acknowledged organic chemistry as a difficult chemistry subject (Eticha & Ochonogor, 2013; O'Dwyer & Childs, 2017). However, students who desire to pursue a profession in chemistry and medicine must have enough understanding of organic chemistry (Treagust *et al*., 2018). The difficulties of organic chemistry hinder several students to continue their studies in a career where organic chemistry is taught (Eticha & Ochonogor, 2013). Various studies showed that organic chemistry is a difficult subject for students who pursue their education in this career, but the reason for difficulty may vary from one person to another (Treagust., 2018). The difficulty of organic chemistry for students is caused by teaching methods and teachers` lack of accurate awareness of their pupils' prior knowledge, misconceptions and there is no set of rules for solving problems. Therefore, the formative assessment rubrics in supporting secondary school students' progressive learning in organic chemistry should be one of the solutions.

2. Research questions

This research was guided by the following questions:

1. What are the students' perceptions of the use of formative assessment rubrics during their learning of organic chemistry in secondary schools in Rwanda?
2. How does the use of formative assessment rubrics support students' progressive learning in organic chemistry in secondary schools in Rwanda?

3. Methodology

The present study used a mixed research approach where the qualitative and quantitative data were called. A sample of 150 participants comprising of 140 students and 10 chemistry teachers selected on purpose from two secondary schools in Nyarugenge District of Rwanda was considered. The schools were selected based on the criteria that they are utilized as the site/center for the national examination. The students were taught the unit of organic chemistry namely, alkanes, alkenes, alcohols, carboxylic acid and ethers by the chemistry teacher. The students were trained on how to use a formative assessment rubric. Hence, every participant was assigned activities followed by a formative assessment rubric. The developed analytic rubrics were shared with students at the same time as assigned learning tasks. The learning tasks were solely related to the unit of organic chemistry. Every student

had time to present his/her findings on every assignment done and each presentation was marked referring to the provided rubric. In this way, the analytic rubrics were adopted in this study. This was done in three successive months. Afterwards, chemistry teachers and students were interviewed. The focus group interview was used to collect qualitative data. Additionally, questionnaires, which consisted of a set of questions aimed at collecting quantitative data, were also used. The questionnaire used contained 18 closed items to investigate the use of formative assessment rubrics in supporting secondary school students' progressive learning in organic chemistry. Besides, the questionnaire had also six open-ended items related to benefits and challenges experienced by chemistry teachers and students during the use of formative assessment rubrics while learning organic chemistry.

4. Ethical considerations

The participants of this study had time to sign the consent form. The anonymity and confidentiality of the respondents were preserved by not disclosing their identification in the collection of data, data analysis and presentation of findings. The interview environment and the identification of the respondents were private. The data were stored in a coded and locked computer, flash disk, memory card and even on the email of the researcher. The hard copies were kept in a locked room without access to everyone.

5. The rationale of the study

Through the findings of this study, students will improve self-confidence, motivation and a positive attitude toward organic chemistry learning. The current study will improve the instruction process. In addition to supporting students' progressive learning in organic chemistry and improving assessment strategies, the findings of this study will also help the instructors to be systematic when planning and assessing learners' activities. It will encourage students to be the owner of learning by developing critical thinking, self-assessment and improving the quality of their activities. The results of this study will also contribute to the existing literature on chemistry assessment approaches for future use by different researchers after publication.

6. Results and Discussion

This part represents the results and discussion revealed from the gathered data. The informed results are about students' perceptions of the use of formative assessment rubrics during their learning of organic chemistry; and the eeffectiveness of formative assessment rubrics in supporting students' learning of organic chemistry. The results are represented in the figures, and frequencies, percentages, variances, standard deviations and means were shown.

6.1 Students' perceptions towards the use of formative assessment rubrics during their learning of organic chemistry.

The figure 1 shows the results from five questions asked to explore the students' perceptions of the use of analytic rubrics during formative assessment in organic chemistry.

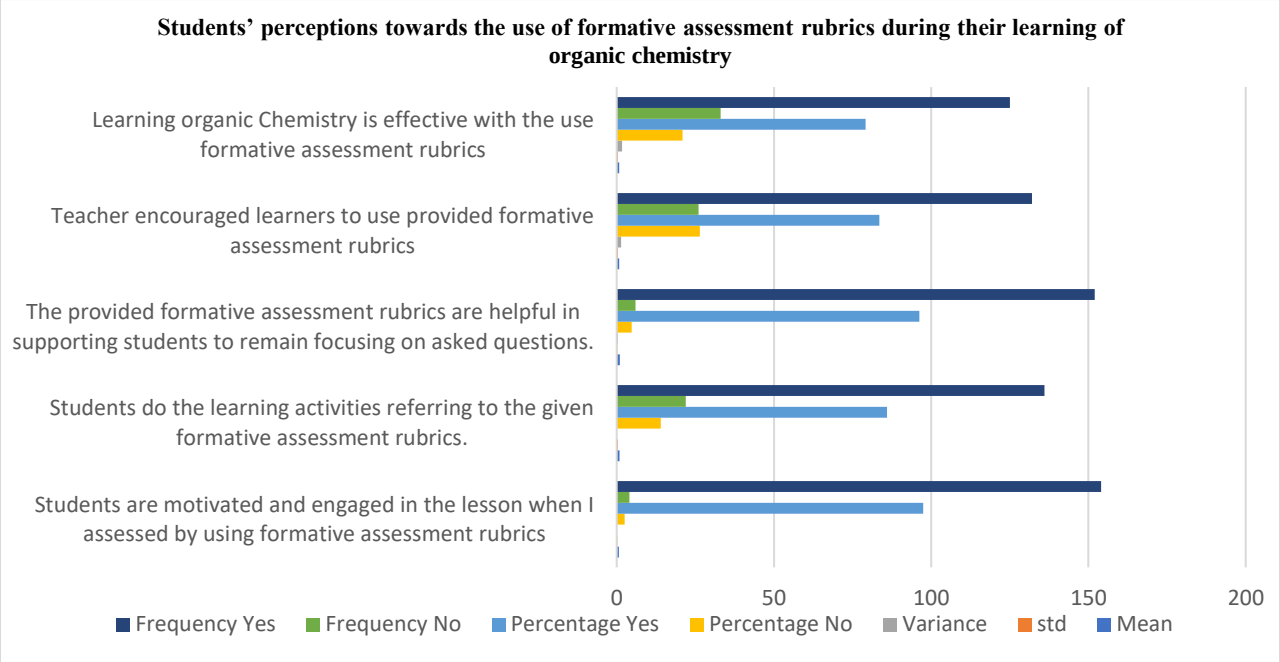

Fig 1. Students' perceptions towards the use of formative assessment rubrics during their learning of organic chemistry

The results in the figure 1 show that all contestants liked to be assessed with the help of formative assessment rubrics. 97.47% of the participants affirmed that they were motivated and engaged in learning organic chemistry. They added that when they accessed rubrics, they recognized the teacher's expectations. 96.2% reported that the instructions from the teacher helped support them to keep focusing on learning tasks while 86% expressed that they liked to do their learning activities referring to the provided formative assessment rubrics. 83.54% indicated that the teachers encouraged them to explore the provided formative assessment rubrics. 79.11% of the participants reported that learning organic chemistry was effective with the use of formative assessment rubrics. The majority of students confirmed that they were satisfied with the use of formative assessment rubrics in organic chemistry. They added that this helped to recognize the grade assigned to each level of accomplishment. The learners agreed that the provided formative assessment rubrics were effective to support their progressive learning in organic chemistry

The obtained findings on students' perceptions towards the use of formative assessment rubrics during their learning of organic chemistry are in agreement with the results of a study conducted by Chowdhury (2019) on the application of rubrics in the classroom, an

important tool for improvement in assessment, feedback and learning. He found that rubrics clearly define what is expected and what will be graded either in a virtual or physical class. It specifies that the evaluation will be agreed to specified criteria. With the aid of rubrics, learners openly understand the requirements to get good marks in a given learning activity. The results of the present study are also in good agreement with the research done on rubrics as assessment, evaluation and scoring tools. This study revealed that rubrics help learners to relate what they learned and what they are doing in the assessment and they become motivated and engaged in their learning. Yet, they help to remove many claims which can arise when students receive feedback from teachers (Muhammad *et al.*, 2018). The findings of the current study are also in agreement with the study conducted by Anglin *et al*. (2008) on improving the efficiency and effectiveness of grading through the use of computer-assisted grading rubrics.

To support the asked questions, the participants were requested to express how the use of formative assessment rubrics supported their progressive learning of organic chemistry. 97.2% highlighted that rubrics assisted them to recognize instructors' expectations, helped them to plan their learning, and promote their self-assessment and peer-assessment. They added that the use of rubrics promoted their learning by recognizing their weak point and monitoring their learning. In addition, they expressed that the use of formative assessment rubrics supported their learning; however, they needed enough time to be familiar with it. These results are in the same line with the findings of the study conducted by Chen *et al*. (2013) on the development and application of scoring rubrics for evaluating students' experimental skills in organic chemistry which revealed that the utilization of rubric materials helps to identify the students' weakness and strengths about the performance of chemical experiment (Chen *et al*., 2013).

6.2 Use of formative assessment rubrics supports students' progressive learning in organic chemistry in secondary schools in Rwanda

The following are results of the use of formative assessment rubrics to support students' progressive learning in organic chemistry in secondary schools in Rwanda. The asked items were related to the effectiveness of formative assessment rubrics in supporting students' learning of organic chemistry that results in supporting students learning of organic chemistry. The effectiveness of formative assessment rubrics in supporting students' learning of organic chemistry was investigated as shown on the figure 2.

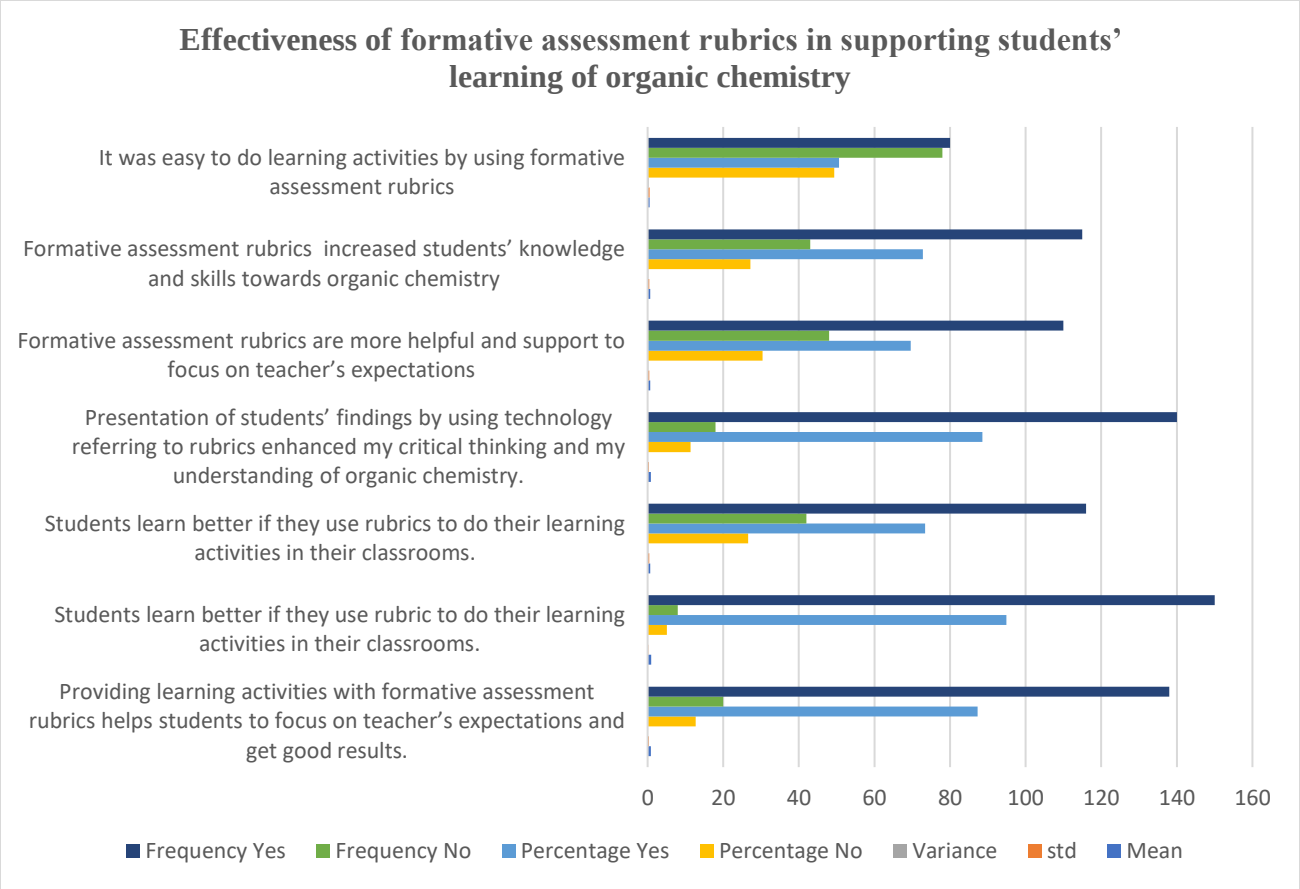

Fig 2: Effectiveness of formative assessment rubrics in supporting students' learning of organic chemistry

A good level of affirmation about the effectiveness of formative assessment rubrics in supporting secondary school students' progressive learning in organic chemistry was observed (Fig. 2). The responses on the asked seven items related to the effectiveness of formative assessment rubrics in supporting students' learning in organic chemistry show that 67.3, 85.3, 90.9, 70.4, 89.6, 71.62, 76.78, and 51.63% affirmed that formative assessment rubrics support secondary school students' progressive learning in organic chemistry. In addition, the contestants were asked what they enjoyed about formative assessment rubrics. For this statement, 87.8% of participants mentioned that their critical thinking was enhanced while using formative assessment rubrics to answer the asked questions. Rubrics improve learning and collaboration between students and instructors, promote active learning as well as accelerate the exchange of content and information. These results on the use of formative assessment rubrics to support students' progressive learning in organic chemistry in secondary schools in Rwanda agree with the reported study on the role of rubrics in testing and teaching which mentioned that rubrics are used to grade the quality of learners' works, make scoring more systematic and enhance students' knowledge retention (Popham, 2006). Indeed, rubrics inspire learners to reflect on their learning

advancement and facilitate teachers to modify the teaching approaches for addressing learning gaps where applicable (Muhammad *et al*., 2018). Nsabayezu, *et al*. (2022a) stressed that through the use of rubrics, the students comprehended instructors' expectations, their learning was improved, as well as knowledge retention was also greater than before. The rubric is crucial in this twenty-first century for self-oriented learning and students' self-assessment of the planned learning achievement (Nsabayezu *et al*., 2022b). The findings in this study are also in the same view as the findings of the study conducted by Andrade and Du (2005), who questioned 14 students after they utilized rubrics in class for solving tasks. Most of the participants replied that rubrics facilitated them to generate excellent work and got good marks in the learning tasks.

The study conducted about students' perspectives on rubric-referenced assessment showed that rubrics help to clarify learning approach and assignment, and students can check their learning progress by reflecting on what they are expected to do as they are written in rubrics (Andrade, 2005). The study conducted by Fay *et al*. (2007) on the rubric application to characterize inquiry in the undergraduate chemistry laboratory revealed that regular use of the inquiry rubric to direct choices in chemistry laboratory teaching facilitates students in selecting laboratory experiments.

6.3 Interview results

It was observed that formative assessments were done regularly. However, the students did not get rubrics for explaining the teacher's expectations and it seems that students did not recognize what the teacher wanted in their works. From observation, it has been realized that the majority of chemistry teachers who participated in this study did not share with students the rubrics at the time of classroom formative assessment. The students were interviewed to probe the effectiveness of accessing formative assessment rubrics during formative assessment. 90.71% of the interviewed students demonstrated that the use of formative assessment rubrics during formative assessment enhanced their critical thinking. They also expressed that they were aware of the expectations of instructors. They added that this method enabled them to learn and do self-assessments at any time and any place.

The students were also interviewed to identify the added value of using rubrics during formative assessment and the related challenges. 80.21% of them highlighted the added value of analytical rubrics that describe every level of achievement and identify the scores at each level. 24.79% of the participants added that the use of analytical rubrics helped them to understand the abstract learning tasks by identifying the required arguments in that work. The related challenges were identified by 79.9% of the interviewed students, who stressed that it is time-consuming and requires much attention. These results are similar to other studies which described that in teaching and learning strategies, rubrics explain educational

anticipations for learners and support in ensuring uniformity in scoring the learning tasks (Cox *et al*., 2015; Chowdhury, 2018). A well-defined rubric helps students to work co-operatively and, the effective use of rubrics in teaching science improves students' understanding and motivation toward science education (Delgado & Fonseca-mora, 2010).

Chemistry teachers were interviewed to express how the formative assessment rubric is important to them and the students, and its advantages and disadvantages. 97.27% of the participants said that rubrics helped them to clarify what they need in the students' works and easies the grading techniques. On the other hand, the students were able to include the key point in their work. The learners were actively engaged in the assessment. The use of rubrics helped instructors to be consistent in grading learners' works. It is in that perspective the rate of learners who claimed on grading strategies was minimized and they were able to do their self-assessment. They added that it should describe all levels of achievement. These results are in good affirmation with Andrade (2005) who stressed that a rubric used by an instructor to allocate marks is known as a scoring rubric, and is developed in collaboration with learners for improving the understanding and collaboration with learners, which enhances the teaching and learning processes.

Conclusion

The current study was conducted in two selected secondary schools in Nyarugenge District. Based on the findings, the study concluded that rubric-based formative assessment supports students' learning of organic chemistry. The results from the questionnaire showed that rubrics have the added value of helping students to understand instructors' expectations and making the scoring more consistent by encouraging individual learning, improving knowledge retention and engagement in learning. In addition, it was found that this approach helped the instructors to identify the strength and weaknesses of the learners and provide quick formative feedback to them, which makes the scoring techniques easy. The study was dedicated only to the unit of organic chemistry. Additional related studies to the other chemistry units are recommended.

Data availability statement

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request

Consent

Consent to participate and consent to publish) were obtained from all participants

Conflict of interest

The authors affirm that they have no conflict of interest to disclose

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