Abstract
Stress and anxiety experienced at school is negatively correlated with school achievements and mental health. Experiencing stress and anxiety is common for young people of school age from all over the world. Previous experiences have significant influence on children’s self-efficacy and their self-confidence. Students’ school experiences are the main subject of this text.

This article presents results of longitudinal studies among children from primary school. In 2016 a questionnaire was distributed among children in 2nd and 3rd grade (N=82). In 2019 the same survey was conducted among the same children in 4th and 5th grade (N=82). After several years of education students declare higher levels of stress and anxiety and lower levels of self-confidence and beliefs in their abilities in situations when they are evaluated at the board. Results of the research disclose a disquieting tendency in school experience.

Keywords: education, school experience, stress, anxiety, self-confidence, self-efficacy

Theoretical Background to the Research
School, especially primary school, should be recognized as a safe, friendly place and excellent environment for education and self-development. Nowadays school experiences are not free from stress and anxiety is experienced by students, even
the youngest pupils. There are many situations which cause unpleasant feelings at school, one of which is evaluation of children's knowledge and skills (Philips, 1978).

Stress and anxiety in school has been examined over the years by scientists from various disciplines. A relationship between anxiety and academic achievement among early elementary school children has been shown (Grills-Taquechel, Fletcher, Vaughn, Denton & Taylor, 2013). There are many factors related with school life that can increase stress and anxiety among students. Fairbrother (2003) recognized academic stressors as too many assignments, competition with peers, failures and poor social relationships. According to research conducted in 2011 (Agarwal, 2011), academic stress had a significant negative correlation with academic achievement and mental health. Stress and anxiety among students can be related to self-confidence and student beliefs about their capabilities when faced with school tasks, which can be described as self-efficacy.

Self-efficacy is a concept created and developed by Albert Bandura (1982). In short, it can be considered to be an individual's belief in their innate ability to achieve goals. In the school context it could be described as a child's belief in their ability to do school tasks. A high level of self-efficacy decreases fear and inhibition of action. According to Bandura (1977) there are four main sources of self-efficacy: mastery experiences, vicarious experiences, verbal persuasion, emotional and physiological states. As a result of these factors it may be considered that fear and stress experienced at school have an impact on students' beliefs about themselves. Bandura's theory has been the foundation of other research conducted in the area of education. Indeed previous experience, others' experience and support from the environment are significant in self-efficacy creation and in increasing a child's beliefs in their capabilities (Usher, & Pajares, 2006).

Children's beliefs about themselves are also related with social aspects of being part of a class. Students' self-efficacy is strongly correlated with anxiety about peers and shyness (Matsuhima, & Shiomi, 2003).

Students with high self-efficacy tend to have higher optimism, health parameters and more effective personal adjustment, show better academic performance, and are better at coping with stress. They have higher satisfaction and commitment to remain in school (Chemers, Hu & Garcia, 2001). By contrast, relationships between low self-efficacy, a sense of futility and depression have also been demonstrated (Bandura, Pastorelli, Barbaranelli & Caprara, 1999).

Regarding changes in student self-efficacy as a result of school experience, according to an investigation conducted in 2007, elementary school students
reported stronger self-efficacy than did middle school and high school students (Pajares, Johnson & Usher, 2007).

During three years of education in school, a child’s skills and knowledge is examined many times and the success of this evaluation, as well as the support the child receives from the teacher, or the experience of their peers, has an influence on the child’s beliefs about him/herself in the future.

**Research Process**

**Main Research Problem**

At the beginning of the research process the author asked the question if over three years of education students have the same experiences in relation to situations when their knowledge and skills are evaluated. The main area of experiences considered related to students’ beliefs about themselves, their self-confidence, self-efficacy and feelings.

**Sample**

As this was a longitudinal study, selection of the sample was non-random, due to necessity of following the same group of children over several years. In the first part of the research participants were 100 students of primary school (at the beginning of 2nd and 3rd grade), including 44 males, ranging in age from 7 to 9. All were students of early education. Three years later participants came from the same sample from the same primary school, however then numbering 43 males and 39 females (N=82), aged from 10 to 12 in the second level of primary education (end of 4th and 5th grade). To ensure reliable results only the 82 children who took part in in both parts of the research were included.

Participants of the investigation are children born in 2007–2008, growing up today, in the reality of universal internet connection and new technologies, living in a small city in heart of the Silesian Agglomeration in Poland. The research is located in a public primary school in Czeladz, with an undifferentiated environment. The building is surrounded by housing estates and old mining districts, where the low cost of living are benefits for people who do not earn enough money to live in more expensive places.

At this school most of teaching staff are experienced and conservative teachers with long work experience. Both the teachers working there and the institution are well perceived by the local society.
**Procedure**

The research method was a diagnostic survey using a questionnaire created by the author. The questionnaire items used a 5 point Likert scale (from “always” (1) to “never” (5)). Included were 28 items from the areas of feelings, emotions and beliefs about themselves. There are also 12 questions with statement describing feelings and emotions, from unpleasant feelings (e.g.1 – “totally stressed”) to pleasant feelings (e.g. 5 – “totally calm”).

The first part of the investigation was conducted in September 2016 and the final part was conducted in May 2019 (after children had completed almost three years of education).

**Data Analyses**

Statistical analyses include descriptive statistics (measures of the central tendency: mean, standard deviation) and differential significance tests. As the research was conducted twice on the same sample it is necessary to use a paired t-test (Wilcoxon Signed-Rank Test). According to procedure of differential significance tests it is necessary to test normality of differences distribution (The Shapiro-Wilk Test).

**Main Results**

Table 1. presents the main results of the research conducted in 2016 and 2019. All of these results are statistically significant, there are significant differences between examination in 2016 and in 2019.

**Table 1. Students’ feelings and beliefs in relation with evaluation at the board. Chosen results**

<table>
<thead>
<tr>
<th>Item</th>
<th>Interpretation on Likert Scale</th>
<th>Results in 2016 (mean, standard deviation):</th>
<th>Results in 2019 (mean, standard deviation):</th>
<th>Results of Wilcoxon signed-rank test</th>
<th>p (α=0.05)</th>
</tr>
</thead>
<tbody>
<tr>
<td>When I am examined at the board…</td>
<td>1- I am embarrassed very much 5- I am not embarrassed at all</td>
<td>4.07 SD=0.94</td>
<td>3.13 SD=1.18</td>
<td>Z=5.04</td>
<td>p=0.00</td>
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<tr>
<td>When I am examined at the board…</td>
<td>1- I am afraid very much 5- I am not afraid at all</td>
<td>3.93 SD=1.06</td>
<td>3.02 SD=1.14</td>
<td>Z=6.56</td>
<td>p=0.00</td>
</tr>
</tbody>
</table>
According to the results of survey, in 2019 children indicated that “evaluation at the board” was more terrible and embarrassing than in 2016. After 3 years of education children found that evaluation at the board was a situation that makes them feel rather unconfident (2.93), afraid (3.33), embarrassed (3.18). In 2016 their answers was located higher on the level of pleasant emotions. In 2019 children confirmed they are often nervous when answering at the board, while in 2016 they had usually chosen the answer “sometimes” on the same question. In 2019 they are often afraid and embarrassed because of prospect of defeat.

The rest of the results also show significant differences between frequency of stress, fear and low self-confidence in situations when they are being evaluated. Older children experience these feelings more often. Other results likewise confirm higher levels of stress in association with written tests after three years of school experience (presented in Table 2).
Table 2. Students’ feelings and beliefs in relation with evaluation by the written tests. Chosen results

<table>
<thead>
<tr>
<th>Item</th>
<th>Interpretation on Likert Scale</th>
<th>Results in 2016 (mean, standard deviation):</th>
<th>Results in 2019 (mean, standard deviation):</th>
<th>Results of Wilcoxon signed-rank test (p(\alpha=0.05))</th>
</tr>
</thead>
<tbody>
<tr>
<td>When I write a test…</td>
<td>1 – I am nervous very much 5 – I am totally calm</td>
<td>3.99 SD=0.98</td>
<td>3.29 SD=1.18</td>
<td>(Z=3.95) (p=0.00005)</td>
</tr>
<tr>
<td>When I am writing a test I am stressed</td>
<td>1 – always 5 – never</td>
<td>3.78 SD=1.24</td>
<td>3.06 SD=1.34</td>
<td>(Z=3.47) (p=0.00005)</td>
</tr>
<tr>
<td>When I am examined at the board I am afraid I will not be able to answer</td>
<td>1 – always 5 – never</td>
<td>3.96 SD=1.28</td>
<td>3.13 SD=1.08</td>
<td>(Z=3.93) (p=0.00008)</td>
</tr>
</tbody>
</table>

In the questionnaire there was a question about children’s preferences in the area of evaluation. The researcher asked if students like to answer at the board.

Table 3. Students’ preferences in the area of evaluation at the board

| Do you like to answer at the board? |
|-----------------------------------|-----------------------------------|-----------------------------------|
| 2016 (N=82) | 2019 (N=82) | 2016 (N=82) | 2019 (N=82) | 2016 (N=82) | 2019 (N=82) | 2016 (N=82) | 2019 (N=82) |
| yes | no | yes | no | yes | no | yes | no |
| 55 (67%) | 27 (43%) | 27 (33%) | 55 (67%) |

In 2016 most of them (67%) had answered “yes” to the question if they like to answer at the board. After 3 years of education most of them said “no” to the same question.

Table 3 presents one of the most interesting results of this research. Children were asked to answer the question if they have ever forgotten at the board what they had learned.

Table 4. Reasons of difficulties during evaluation at the board. Students’ opinion

| Have you ever forgotten what you had learned during evaluation at the board? |
| What do you think is the reason for this situation? |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Stress | anxiety/fear | peers’ presence | fear about marks |
| 7 (8%) | 23 (28%) | 3 (3%) | 10 (12%) | 4 (4%) | 5 (6%) | 0 (0%) | 3 (4%) |
As explanation of this situation the children indicated various factors. These are similar in both parts of the research, however in 2019 there were more indications. Children experience the influence of stress, anxiety and the presence of peers. In 2019 some people pointed to “fear about marks” as a reason for lapses of memory.

**Research Extension – Qualitative Research**

An additional aspect of the researcher’s investigation is the approach of primary education teachers, who had worked with the evaluated children at the first level of education (1st-3rd grades). After the second part of the investigation (2019) the researcher conducted two interviews with primary education teachers who had worked earlier with the participants of the research. After three years of teaching and observation they know the examined students very well. The main aim of this part was to consider teachers’ opinion about changes in childrens’ beliefs and reasons for these differences. Interviews were conducted as structured conversation with main areas of consideration framed as general questions.

The very first conclusion concerns differences between levels of education in Poland. According to teachers, at the stage of early school education (grades 1–3) children perceive the evaluation process and the school environment as a more friendly and safe space than later. They are evaluated using descriptive assessment, which usually underlines also the good aspects of a child's work and points to ways to improve their skills. All education should be individualized and focused on the student. A calm and pleasant atmosphere is also considered very important, especially at this first level. Over several years of learning children experience problems and difficult moments (e.g. a failed exam). According to the teachers, bad experiences could also increase the level of stress and fear in children’s beliefs.

Teachers also mentioned the approach of parents and pressure. Over several years of learning children can experience many situations where parents have an impact on their beliefs. Children would like to make their parents proud of them, rather than disappointed. One of the ways to gain parental satisfaction is getting good grades.

With age children perceive themselves and society in a different way than earlier. The second level of school education (grades 4–8) could be considered also as the beginning of adolescence. Children notice that they are all the time observed and evaluated by peers. In this period acceptance of peers, and positive feedback from school mates are valuable for young people. This is why (in teachers’
opinion) the children could be more embarrassed and afraid answering at the board. Children compare themselves to others and school marks could serve to make social comparisons.

Discussion

Findings from both parts of this study are comparable with other research. The school environment is not free from stress and anxiety. An investigation conducted in 2010 in China (Hesketh, Zhen, & Lu, 2010) showed that taking exams is highly related with stress and experience anxiety. In Chinese elementary schools over 80% of children from 9 to 12 (N=2191) declared feelings of stress and anxiety in case of evaluation. Most of them experienced somatic symptoms of stress and anxiety such as headache, stomachache or sickness.

According to the results of the current research older children believe less in their capabilities than children from early elementary education. This confirms results of research conducted by F. Pajares, M. Johnson and E. Usher (2007) where the researchers noted that the level of self-efficacy is higher among younger students. There is no conclusion that this effect is caused by any specific factors. It could be also be a natural tendency of children growing up, related with adolescence and changes in cognitive and emotional development. Even if this tendency is natural and common for children this discovery could play a very significant role in the learning process and become an interesting issue for teachers who would like to improve children’s self-efficacy.

Researchers Margolis and McCabe (2006) offer a recommendation for teachers who would like to support children’s beliefs in themselves. They suggest dealing with three sources of self-efficacy: enactive mastery, vicarious experiences and verbal persuasion. In their opinion the best way to increase the self-efficacy of children is to create opportunities for students to make small gains, to celebrate even the smallest successes with them, to support them through positive communication and to motivate them to make an effort.

Conclusion

Results of the research presented in this article put emphasis on a significant problem in Polish education. After three years of school experience children declare a higher level of stress, anxiety and a lower level of self-confidence. In situ-
ations of being evaluated at the board they feel stressed, nervous and embarrassed more often than earlier. They lost pleasure in being examined. This tendency is compatible with results of research conducted by other scientists and points to the significant role of teachers in increasing children's self-efficacy and students' pleasure in education.

This article should also be a source for teacher reflection. It is really important for teachers to be aware of students’ feelings and emotions in situations when the child is being evaluated. Only with full consciousness of children's experiences can changes be made in education and especially in the evaluation process.

References