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The need of breaks and break activities during a school day

A guideline about student breaks, created in the Erasmus+ KA210 project 'Scheduling and Student Democracy for Inclusion and Learning'
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Introduction

One of the first documented references to the introduction of breaks in schools dates back to the 19th century when education reformers, such as Friedrich Froebel, the founder of the modern kindergarten, advocated for them. In schools inspired by Froebel's philosophy, regular breaks were an integral part of the daily schedule. Later, in the 20th century, studies in the field of psychology and education demonstrated the importance of breaks for students' health and well-being, as well as their academic performance. This research contributed to the consolidation of the idea that regular breaks during the school day are beneficial for students.

This guideline provides a summary of the scientific literature on breaks, their importance for students, and recommendations. At the end of the guideline, summarized information on the practices of the project countries is provided.

Break as an important tool for physical activity and cognitive performance

Anthony Pellegrini (2008), in his book "Recess," highlights that frequent breaks help students become more attentive and focused. A study from the Albert Einstein College of Medicine in New York, which involved over 11,000 children aged 8 to 9, found that students who received at least 15 minutes of break per hour were more attentive and performed better in class.
Research has also established a link between higher dopamine levels and improved concentration. When schools offer a variety of appealing break activities, students' dopamine levels can increase, which benefits their health and enhances their learning opportunities (Hansen, 2016).
Cognitive performance is positively influenced by physical activity and an active lifestyle (Mandolesi et al., 2018). At school, break activities are crucial for promoting physical activity. While breaks alone simply allow for movement, organized activities during these times can help students become more physically active beyond what is achieved in physical education classes.

Regular participation in physical activity is essential for healthy growth and development in children (Australian Government Department of Health, 2017). Physical activity also contributes to children's social, cognitive, and psychological well-being. However, many primary school children (aged 5–12) do not get enough exercise (Telford et al., 2016; Schranz et al., 2014). For example, a 2018 report card covering 49 countries estimated that only 27–33% of children met the World Health Organization (WHO) guideline of 60 minutes of moderate to vigorous physical activity daily (Aubert et al., 2018; McCarthy, N. et al., 2021).

In the United States, about 24% of children aged 6 to 17 meet this standard each day. In Europe the percentage of children complying with WHO recommendations is generally low, with observed gender and geographical differences (i.e. ranging in girls from 2% in Cyprus to 14.7% in Sweden and from 9.5% in Italy to 34.1% in Belgium among boys) (Masini, A et al. 2020).

In Australia, physical activity declines from Grade 2 to Grades 3–6, especially among girls. This trend highlights the need for policies and practices to prevent a drop in moderate-to-vigorous physical activity (MVPA) during class and break times, particularly for girls (Nicole McCarthy et al., 2021). This point is critical, as studies show that 42% of children's physical activity occurs during breaks, 32% during sports lessons, and 26% during after-school activities (French et al., 2019).
Since children spend many hours at school, the classroom is an excellent setting to promote physical activity, providing access to all children regardless of age, ethnicity, gender, or socioeconomic status.

Previous systematic reviews have shown that classroom-based physical activity benefits students' activity levels, classroom behaviour, cognitive function, and academic achievement. Several mechanisms may explain this: acute physical activity increases the release of neurotransmitters, raising physiological arousal and attention, thus boosting cognitive performance. Moreover, continuous aerobic activity supports the growth of new blood vessels and neurons in areas of the brain responsible for memory and learning. Improvements in executive functions and attention, in turn, can enhance academic performance in preadolescent children (Masini, A. et al., 2020).

Break as an important tool for social competences

There is clear evidence linking games and break activities to students' learning abilities and overall health (Hansen, A. 2016). These activities play a vital role in developing social, cognitive, and physical skills (Jarrett, O., 2009; Hasanefendic, K. et al., 2020). During games, students have the chance to build skills in conflict resolution, leadership, and following rules, all while interacting with other students and adults (Hasanefendic, K. et al., 2020). School breaks and playgrounds should thus be designed to encourage social interaction and communication through engaging activities. This is especially important since children learn in many ways: using their whole body, engaging their senses, and imitating others (Säljö, R., 2014).
To support the opportunities for games and break activities, breaks should last around 20‑30 minutes. While short in-class breaks are beneficial, they do not provide the same benefits as longer breaks for games and physical activities (Hasanefendic, K. et al., 2020).

Dr. Olga Jarrett (2002) compared children's behaviour on days with and without breaks, finding that 60% of students (including those with ADHD) were more focused and achieved better results on days with recess. For many children, particularly those who are hyperactive, breaks offer a valuable outlet for their energy. Outside, children can do things not allowed in the classroom, such as make noise or be messy, and they can exercise agency over their actions. These periods of relaxation improve concentration, helping children learn more effectively.

To create optimal conditions, schools must offer attractive break activities. Staff should be trained in the importance of breaks for students' development and learning (Castell, O., 2002). Teachers and school leaders should also design breaks and activities to create a positive learning environment (Hasanefendic, K. et al., 2020).

Break organization and structure are especially crucial for students with neuropsychiatric functional problems (NPF), particularly those with Autism Spectrum Disorders (ASD) (Kovalevskiene, I., 2017). Recommendations include:

- Ensuring there is a space for children to spend time during breaks
- Grouping children by age during breaks
- Informing children with ASD in advance about any new break activities
- Supervising students during breaks
- Ensuring students know how to behave during break times

A structured environment helps students learn, choose activities during breaks, and understand what, where, and when things are happening.
According to RF-SISU Dalarna, Sweden (2024), teachers should organise short physical activity breaks (1‑5 minutes) during lessons to stimulate students' cognitive abilities.

***Recommendations**:*
1. Organize and encourage active breaks during lessons and between lessons.
2. Provide opportunities for students to actively move, communicate, and play.
3. When organizing break spaces and activities, consider the needs of students during breaks (ADHD, ASD, and others).

Lunchbreaks

To promote the best possible learning conditions, regular meals have been shown to be a key factor, as highlighted by the Association of UK Dietitians (2024). Fibre, in particular, plays an important role in supporting mood and attention. Scientific studies have demonstrated that children aged 6–11 perform better on attention and memory tests two hours after eating a breakfast high in fibre compared to a high-sugar breakfast (Mahoney et al., 2005). Lunch is especially crucial for students who may not eat properly at home. Without a balanced diet—including sufficient fibre, omega-3, iron, zinc, magnesium, and other nutrients—students' academic performance can decline due to reduced spatial and short-term memory (Association of UK Dietitians, 2024).
An article published by Burton M. et al. (2022) emphasises the importance of allowing enough time for students to eat lunch, as too short a break can negatively affect eating habits and nutrient intake. Research shows that rushed lunches can reduce the intake of essential nutrients, increase the speed of eating, and disrupt children's ability to self-regulate their food intake and appetite. Longer lunch breaks encourage children to consume more nutritious foods, such as fruits, vegetables, and milk, with younger students often needing extra time due to socialising and other non-eating activities. According to the Swedish Food Agency (2018), students should have at least 20 minutes of designated time to eat, in addition to time for collecting food and clearing dishes. Lunch should be scheduled at a regular time, ideally between 11:00 and 13:00, and it is recommended that students and teachers eat together. This approach reduces stress, ensures all students eat properly, and transforms lunch into a pedagogical opportunity. In addition to providing energy and nutrition, these meals can foster relationships between students and staff and encourage curiosity about farming, ecology, and related topics (Swedish Food Agency, 2018).
During a seminar in Gagnef, Sweden 2024, the Swedish organisation RISE (Research Institutes of Sweden) pointed out the same as the Swedish National Agency for Education did 2013: '*The school meal is part of education. The meal is important for health but is also a prerequisite for well-being and learning. Regardless of how much effort the school invests in skilled educators and good teaching materials, it is difficult for a hungry student to absorb knowledge*' RISE (2024) recommends treating lunch as an integral part of education, introducing what is known as the "Pedagogical Meal," in which teachers eat alongside students. The aim is to act as role models, guide students towards healthy eating, and ensure a pleasant mealtime environment. The benefits of pedagogical meals include improved relationships, a more supportive educational environment, increased security with adults present, reduced dropout rates, and higher completion of studies. Pedagogical meals offer both short- and long-term social benefits.

***Recommendations**:*
1. Create conditions for students to have a quality lunch at school.
2. Provide sufficient time for lunch, at least 20 minutes to sit down and eat.
3. Implement Pedagogical Meals in school.

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Comparative analysis

As part of the Erasmus+ project “Scheduling and Student Democracy for Inclusion and Learning,” a comparative analysis was conducted using scientific literature and data collected from schools in the participating countries: Kaunas Versvu Gymnasium (Lithuania), Gagnefs Kommun (Sweden), and Liceul Teoretic "Lucian Blaga" (Romania). The table below outlines key differences between the education systems of these countries. We hope this data will help readers gain a clearer understanding of how educational approaches vary across the European Union.

	Lithuania	**Sweden**	**Romania**
Break duration, min	10, 20 min	10-30 min	10, 20 min
Lesson duration, min	45 min	35-120 min	50 min
Lunch duration, min	20 min	30-60 min	20 min
Organized breaks	no	yes	no
Possible outdoor/indoor activities during breaks	yes/yes	yes	yes/yes
Lunch is organized at school	yes	yes	no
Pedagogical meal	no	yes	no

Comparative analysis in project schools

During the project, a mobility event was organised in Gagnef kommun. Both teachers and students reflected on their experiences in Swedish schools regarding the structure of breaks and lunches. Summarising these reflections, it was noted that the organisation of breaks (and the available facilities) in Swedish schools in Gagnef exceeded expectations. Students were particularly impressed by the range of activities on offer. Teachers showed interest in how breaks were managed as a pedagogical strategy and the additional benefits for students. Most Lithuanian and Romanian students appreciated the longer breaks (one hour), although they found that the other breaks between lessons were too short. The time allocated for lunch, as well as the lunch menu itself, received especially positive feedback.

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