

spectra

126



School and Health

2 Gearing projects to schools' needs

There is now a large number of services that focus on health promotion and prevention in schools. To be successful and viable in the long term, these services need to be geared to the different syllabuses in each language region and to schools' needs.

3 Fresh air for bright minds

An investigation by the Federal Office of Public Health has revealed that the air quality in around two thirds of schools is insufficient, even though good air quality in classrooms is important for students' intellectual capabilities and health. Now schools and their teaching staff can access good ventilation recommendations and other resources such as the Simaria ventilation simulator.

4 "Bans reduce willingness to engage in dialogue and block discussion"

Barbara Bonetti has observed that there is less bullying in schools that permit and have rules for smartphone use than in schools that ban phones completely. In this interview, the Research Assistant of the Centro di risorse didattiche e digitali (Cerdd) discusses the value of educational debate and how digital media can be usefully employed in a teaching environment.



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Home Affairs FDHA
Federal Office of Public Health FOPH

Gearing projects to schools' needs

There is now a large number of services that focus on health promotion and prevention in schools. To be successful and viable in the long term, these services need to be geared to the different syllabuses in each language region and to schools' needs.

Education is a major influencer of health. People who only have a mandatory school-leaving qualification have significantly poorer health in old age and can expect to live for five years less than people with a university or college degree. People who have no mandatory school-leaving qualification – who even today account for almost ten percent of 25-year-olds in Switzerland – have the worst prospects of all. They are at significant risk of ending up in poorly paid, precarious employment or even becoming unemployed, which has a negative impact on health.

This illustrates just how crucial it is for students to receive a good education and to learn at school how they can acquire new knowledge and skills for themselves outside the school setting. This will have a positive impact on their health when they become adults. Mandatory schooling is the only time when we can reach (almost) all children and young people. Although health is not a separate teaching subject in itself, it does crop up in many other subjects. Lehrplan 21, the new joint curriculum for public schools in German-speaking Switzerland, has this to say on the subject of sustainable development: "Health comprises human physical, mental and social wellbeing. Students will pro-



Positive experiences in PE lessons are vital, since this increases the likelihood that individuals will continue to exercise later in life and thus reduces the risk of them becoming overweight..

gressively learn to assume responsibility for their health and wellbeing." Applying the principle of cross-subject issues, the various aspects have been incorporated in-

Although health is not a separate teaching subject in itself, it does crop up in many other subjects.

to each subject syllabus, particularly the "Nature, Humans and Society" syllabus.

According to an analysis by the University of Applied Sciences and Arts Northwestern Switzerland (FHNW), Lehrplan 21 contains over 700 health-related competencies. Schools will be addressing diet, exercise, mental health, social media, sexuality and issues related to addiction or violence. During their school career, students will

learn to resolve conflicts, search for information on the Internet, understand and categorise that information and use it to make decisions. By doing so, they will improve their health literacy. They will learn to assess health-related risks or identify the risk of accidents. In short, education reinforces health-promoting behaviour.

However, it is also important that students associate exercise with positive experiences in PE classes and in their leisure time. This increases the likelihood of them continuing to exercise in later life, which in turn reduces the risk of them becoming overweight. A current study by the Robert Koch Institute reveals the links between education, income and health. In Germany, just eleven percent of children from high-income families do not do any kind of sport. The equivalent figure for children from low-income families is 28 percent.

Education and health are a pairing that have a lasting as well as a strong effect. The things that students learn at school often stay with them all their lives. The beneficial or detrimental habits they acquire there often persist into old age.

Switzerland now has a wide range of health promotion and prevention services that aim to make schools health-promoting. There are a large number of stakeholders and projects. Headteachers, who are often responsible for health promotion and prevention, respond well to advice and training in the topics and are interested in engaging with them. However, obtaining an overview of the various services on offer is often less than straightforward. Quality varies, and the real-life effectiveness of

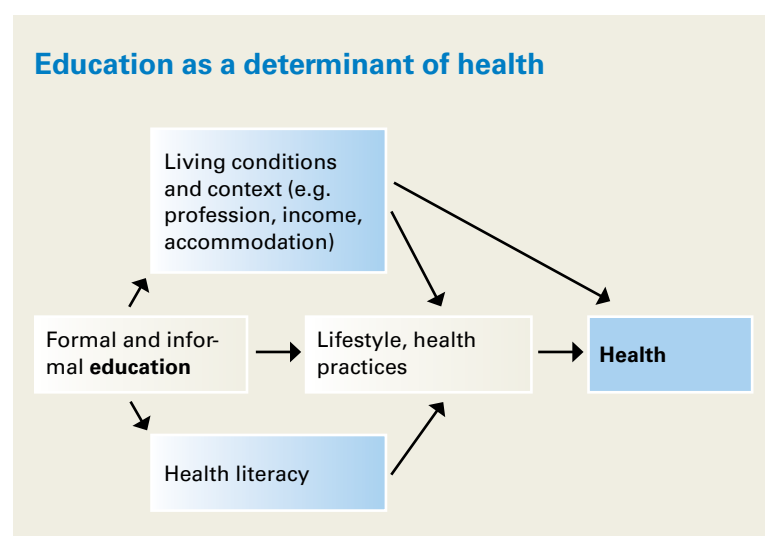
certain programmes has not been sufficiently demonstrated or evaluated.

The important thing here is to gear these services to the curriculum. What needs do teaching staff have? What are students' needs? What goals are prescribed in the national syllabuses? Services that are not geared to this framework will not be sustainable. Particularly when things get stressful and schools are short of time, there is a risk that health promotion and prevention projects that are not precisely tailored to schools' needs will be the first to fall by the wayside. So what can be done? This is where the guidelines and services provided by the cantonal agencies can be helpful by giving schools guidance and information on which projects work and how.

The FOPH has been involved in health promotion and prevention in schools for over 20 years. It is also one of the sponsors of the Swiss education and health network *bildung+gesundheit*. This nationwide network is committed to implementing health promotion and prevention activities in the school environment and to ensuring that the various stakeholders coordinate and cooperate with each other. Other topics that may be relevant in the school setting, depending on circumstances, are alcohol, tobacco, cannabis and sexual health.

Contact:
Dagmar Costantini, Public Health Section, dagmar.costantini@bag.admin.ch

Links:
<https://tinyurl.com/y2tvsg56>
www.bildungundgesundheit.ch



Education has a significant impact on health in terms of living conditions (e. g. profession), lifestyle and health literacy. And better health leads to longer life expectancy.

Fresh air for bright minds

An investigation by the Federal Office of Public Health has revealed that the air quality in around two thirds of schools is insufficient, even though good air quality in classrooms is important for students' intellectual capabilities and health. Now schools and their teaching staff can access good ventilation recommendations and other resources such as the Simaria ventilation simulator.

Classrooms are used intensively and there are generally a lot of people in them at the same time. They therefore require regular ventilation. Bringing fresh air into a room prevents the air quality from deteriorating. However, as a representative investigation shows, there is a need for action in Swiss classrooms with window ventilation. In partnership with municipalities in the cantons of Bern, Graubünden and Vaud, the FOPH measured the carbon dioxide concentrations in 100 classrooms continuously for a period of four days. It is known that air quality deteriorates perceptibly as carbon dioxide levels rise. This is because when people breathe out, they not only exhale carbon dioxide, but, owing to metabolic processes, also a large number of other substances that have a detrimental effect on perceived air quality over time. Unlike carbon dioxide, many of these substances have an odour and make rooms smell stuffy, stale or musty. In addition, they have a negative impact on the intellectual performance and concentration of students and teachers alike.

Contrary to popular belief, classrooms are not ventilated to let oxygen in. Since oxygen accounts for one fifth of the air around us, it is rarely ever in short supply. Instead, ventilation is about letting stale air out and replacing it with fresh air. Stale air makes students feel tired and can even give them headaches. Performance declines if air quality is poor. Conversely, good air quality in a room has a positive effect on academic performance and concentration. Another reason why good air is important for health is that it makes asthmatic symptoms and mucous membrane irritations less common.

Situation deteriorates as the day progresses

While the investigation revealed that most schools actively ventilated, they often did so spontaneously, for too short a period and non-systematically. Due to ventilation classroom air quality is often good when classes start in the morning. However, if the windows are kept closed, quality can fall rapidly in the course of one lesson. If rooms are not adequately ventilated during breaks, the air in them cannot regenerate sufficiently, and the situation continues to deteriorate.



Through systematic, efficient airing, the air in classrooms can be immediately and significantly improved.

Since the hygiene limit of 2,000 ppm carbon dioxide was exceeded for more than 10 percent of teaching time, the air quality in more than two thirds of all classrooms was insufficient. Furthermore, in one third of classrooms, carbon dioxide levels exceeded the hygienic limit value for more than 30 percent of total teaching time.

However, as the second phase of the FOPH's investigation showed, the air in classrooms with natural window ventilation can be immediately and significantly improved if rooms are systematically and efficiently aired. Using the free online ventilation simulator Simaria (www.simaria.ch), a trial involving 23 school classes was carried out. This pilot project adopted a fun approach to calculating how long classrooms need to be aired during breaks to ensure sufficient fresh air gets into them. The simulator shows clearly that both class size (i.e. the number of people in the room) and room volume have a major impact on air quality.

Immediate action successful

The classes that took part in the trial used Simaria to create ventilation strategies adapted to their particular classroom. In addition, they also looked at and followed general recommendations for efficient ventilation, such as having all windows wide open, but always keeping the classroom door closed (to allow

fresh air from outside to flow into the room, rather than stale air from the corridor).

Repeat continuous measurement of carbon dioxide levels demonstrated the efficacy of the measures. Air quality was sufficient, showing unacceptable carbon dioxide values for only 9 percent of teaching time, as opposed to 31 percent at the outset. At the same time, the percentage of teaching time when carbon dioxide values were good (1000–1400 ppm) or excellent (<1000 ppm) rose from 40 to 70 percent. Feedback from the classes who took part in the trial confirmed that the students appreciated the fresh air and felt more awake and productive overall. However, some found the cold draught a source of discomfort. For this reason, students should be able to leave classrooms while they are being aired on particularly cold days. However, that means teaching staff pulling together to come up with shared solutions. For example, corridors are only a suitable place for children to spend time if all classes have their breaks simultaneously, as used to be the case in the old days.

Contact:
Claudia Vassella, Consumer Protection Directorate,
claudia.vassella@bag.admin.ch

At first hand



Andrea Arz de Falco,
Vice Director and
Head of the Public
Health Directorate

The same level of motivation

I can still remember how we used to be divided into two teams to play dodgeball in PE classes. Two captains took turns to pick their teams, and always left the children who weren't very good at sport till last, only picking them – much to the disgruntlement of the other team members – when there was no one else left. There can be no doubt that being one of the first to be picked gave a tremendous sense of validation, while always being picked last was demotivating.

This example is symbolic of many other situations in schools that exacerbate inequality of opportunity rather than seeking to balance it out. Equality of opportunity aims to even out inherent imbalances such as physical fitness or background – and offer everyone an appropriate perspective and corresponding development opportunities. I see equality of opportunity primarily as an entitlement to the same level of motivation, encouragement and recognition.

I don't know whether PE class teams are still picked the way they used to be. However, the figures show that there is still a long way to go until the imbalances have been levelled out to some extent. It is still the case that children from financially less well off or poorly educated families are significantly less likely to enjoy good health, for example because their parents cannot afford to pay for membership of the local sports club. As a result, the children may constantly leave PE lessons feeling demotivated.

School teaching staff give children and young people a range of skills to carry them through life in good health. The aim is to boost resources, train resilience and learn to cope with various burdens. However, it is also important to make it clear that a person's value is not measured in terms of their performance and productivity. And it is just as important to promote values such as respect, friendliness and honesty – a task that schools cannot fulfil single-handedly.

“Bans reduce willingness to engage in dialogue and block discussion”

Barbara Bonetti has observed that there is less bullying in schools that permit and have rules for smartphone use than in schools that ban phones completely. In this interview, the Research Assistant at the Centro di risorse didattiche e digitali (Cerdd) discusses the value of educational debate and how digital media can be usefully employed in a teaching environment.



Serious cases of gaming addiction are fortunately uncommon. It is always important that the young people affected have someone to talk to.

We often hear that children spend their break times sitting still and staring at their mobile phones, rather than running the playground, like they used to.

That's just a preconception. If you look more closely, you'll see that very few primary-age children take their mobile to school with them. All schools ban the use of smartphones during the school day – including break times. While mobile phones certainly aren't an issue at primary level, the situation becomes more complex when we turn to secondary schools. Speaking for myself, I firmly believe that exercise and fresh air are good for children and should be encouraged. However, I also think that young people should have opportunities for free development. They are often not allowed to go into the field next to their school building or to play ball games because they might damage something. They should have incentives as well as restrictions.

In Canton Ticino, we have decided to let students use mobile phones provided they observe certain rules that we have established. Consequently, they are allowed to take their mobiles to school, but must mute them and keep them out of sight in class. Each school incorporates the cantonal regulations into its rules and decides for itself whether to let students use their phones during breaks. As a result, the approach varies from school to

school. But whatever the approach, I think it makes good sense to discuss the rules with students and develop them together.

Mobile phones also involve certain risks to mental health. How dangerous are issues such as Internet or gaming addiction?

There's an ongoing debate about what constitutes addictive behaviour. Video gaming addiction – though not Internet addiction – was added to DSM-5, the current US reference work for mental disorders, a few years ago as a condition for further study. Fortunately, serious cases of gaming addiction are relatively uncommon. It's important for the people affected that their health insurers recognise the condition and pay for treatment. From a health promotion and prevention perspective, however, I don't see either unjustified panic or bans as a useful way to avoid gaming addiction. Banning phones makes the issue difficult to talk about. Yet the literature shows that dialogue between young people and adults is the one thing that's most needed when it comes to digital technologies. If you maintain dialogue with students, negotiate mobile-phone rules and discuss the outcomes with the young people, you have an opportunity to fulfil an education role.

The aim must be to seek discussion with students, especially if

they are obviously withdrawing from social interaction with their peers so they can sit in a corner and play on their phone. It is often a good idea to involve parents and the school psychologist or other professionals.

Another risk to mental health that we hear a lot about is cyberbullying.

Not every disagreement that starts in the playground then spills over into online chat, for example, counts as cyberbullying. Bullying is when a group deliberately picks on and even threatens a victim over a long period. It is important in every case that the young people affected have someone to discuss the problem with. Our approach to prevention draws on teaching staff's educational resources and skills. From our perspective, it's not so much about experts telling young people where they need to watch out and what they should be paying attention to. It's much more crucial for teachers to be open, accompany students through their relationships (which are constantly changing at this age) and promoting a good classroom and school climate. We offer training courses for teaching staff to enable them to respond correctly to bullying. Since victims and perpetrators are both minors, they both need to be protected, even though our spontaneous reaction might tempt us to only protect the victim and punish the perpetrator. That's why we prepare teaching staff for such situations in our courses. We want them to be able to help the perpetrators as well as the victims. This doesn't rule out sanctions, but dealing with and rectifying the error is often much more important and beneficial than sanctions.

How does banning mobile phones from schools affect cases of bullying?

When we were drawing up the rules for mobile phone use, we were struck by the fact that there is more bullying in schools that ban phones than in schools that permit and have rules for phones. We think this is again linked to the fact that bans reduce the willingness to engage in dialogue and block discussion. But if teachers are part of a dialogue, they can often intervene in conflicts before they spread and escalate.

Are there fundamental differences between physical conflict in the playground and conflict in the digital world?

Because information can travel faster, conflicts on social media generally proliferate more quickly. On top of that, misunderstandings are more common in written communications between groups than in face-to-face conversations, where people can read the non-verbal signals and ask straight away whether they have understood something correctly.

But we adults tend to panic when conflicts occur in the digital world. For example, a video game recently caused a conflict situation in a small school. Instead of there being a calm analysis of the situation, the discussion was allowed to escalate, and a self-appointed task force demonised the game – as if the game were the only thing responsible.

Very often, the problem is that children and young people are left to their own devices in the digital world. No one would leave 20 children in a gym for hours on end without supervision, but when it comes to video games on phones and computers, the adults are nowhere to be seen. We have to ask questions so we can be a bit more involved and start a dialogue.



Barbara Bonetti

Barbara Bonetti studied educational theory, special education and social work at the University of Fribourg. After graduating she worked as a support teacher in secondary schools. Following the birth of her first son, she worked on health promotion in schools and coordinated various working groups on the subject of sex education. Since 2015 she has been Research Assistant at the cantonal centre for educational and digital resources (Centro di risorse didattiche e digitali or Cerdd), where she heads up the “Schools and digital issues” section.

Impressum: spectra 126, January 2020

“spectra” is a newsletter of the Federal Office of Public Health published four times a year in German, French and English. Some of the views expressed in it may diverge from the official stance of the Federal Office of Public Health.

Published by: Federal Office of Public Health (FOPH), CH-3003 Berne, tel. +41 (0)58 463 87 79, fax +41 (0)58 464 90 33

Realisation: Adrian Heuss, advocacy ag

Head of Editorial Board: Adrian Kammer, adrian.kammer@bag.admin.ch

Editorial Board: Rahel Brönnimann, Claudia Brunner, Lea von Wartburg, Selina Luscher-Lutz, Daniel Dauwalder

Contributors: advocacy ag, members of staff of the FOPH, as well as external authors, Ori Schipper

Photos: authors, Fotolia, iStock by Getty Images

Layout: Vischer Vettiger Hartmann AG, Basel, **Printed by:** Bütiger AG, 4562 Biberist

Print-run: German: 5,000, French: 2,500, English: 800.

Individual issues and free subscriptions to spectra can be ordered from: Bundesamt für Gesundheit, Sektion Gesundheitsinformation und Kampagnen, 3003 Bern, kampagnen@bag.admin.ch

www.spectra-online.ch