# Section 2

**Pedagogical structure**

Budapest School Primary School and High School is an educational network operating at multiple venues, with the objective of integrating the areas of knowledge, progress goals and key competencies of the NAT with children’s own learning outcomes, in a familiar environment that is flexible, while also providing a clearly-regulated framework. The various venues – the *micro-schools* of Budapest School – operate as mixed-age groups, encompassing no more than six grade levels, to form learning communities of between 6 and 60 persons (see section 2.1). Children are divided into any number of smaller study groups, depending on the areas they must make progress in according to the Budapest School General Curriculum and the areas they themselves wish to advance in.

Each micro-school is led by a team of *education leader* teachers (educators). Each child has their own specific teacher, their *mentor*, who provides individual attention to assist the child in their progress (see section 2.5). With the help of their mentor, and the active participation of their parents, each child determines their *own learning outcomes* (see section 2.3) for each trimester.

The educators announce *modules* based on these outcomes and the content of the subjects listed in the General Curriculum. The modules reflect the fundamental questions of the world today, integrate fields of science and artistic branches (subjects), and provide equal opportunities for children to acquire knowledge, think independently and create in their daily lives (see section 2.6).

Upon the completion of a module, the results achieved by the child are entered into their own portfolio (see section 2.9), which may include individual or group creative products, knowledge tests, examination tasks, peer feedback, other documents which reflect progress appropriately or anything else that the child and their teachers may be proud of or believe may be important. Budapest School’s feedback and assessment system (see section 2.8) is based on this portfolio. It is based upon the portfolios that the school recognizes the completion of grade levels (see section 3.3.1.1). If necessary, children may also receive grades based on their portfolios (see section 3.3.2).

The modules, which define the daily activities of the children, may encompass a number of educational fields, multiple competencies and the material of several subjects; the material of one subject may also be covered by several modules. For this reason, we say that Budapest School institutions focus on interdisciplinary activities. The intention of the General Curriculum is for children to advance continuously in their discovery of the sciences of the world (STEM), in their connection to their own cultural surroundings and those of others (CULT), and in maintaining their physical and mental balance (Harmony) – in other words, through *priority interdisciplinary progress principles*.

The progress guidelines of each module serve to direct teachers in terms of principles to use to structure their modules and achieve target results.

According to the General Curriculum, it is up to the teachers to decide, for instance, whether children conduct experiments in chemistry class or deal with chemistry in their experimentation class. The General Curriculum simply requires that at grade levels 7-10, in connection with the subject chemistry, a total of 17 different learning outcomes be achieved, and that in connection with experimentation, a total of 15 learning outcomes be achieved through several subjects (only 3 of which are connected to the subject chemistry).

Thus, the subjects are both the sources and the frameworks of the contentual elements of learning, serving as a collection of things to be learned. It is up to the module leader to determine the grouping of this learning. It is possible that children may encounter the taxonomy of the subjects only once every semester, during the reporting period. It is during this period that each child and their mentor compare how what they had studied and created, and what they had made progress in, compares to the expectations of society and law, the National Core Curriculum and the General Curriculum.

The General Curriculum describes the subject matter, content and requirements of the subjects as a set of *learning outcomes* (see 3.2.1). The task of the children at school is to achieve learning outcomes and thus meet the requirements set forth for each subject. Learning outcomes may (also) be achieved by completing modules, meaning that the primary goal of the module is to show the way towards learning outcomes.

Present at school – as described in the General Curriculum – are the expectations for each subject listed in the general curricula published by the minister, the intentions of the latest amendments to the Act on Public Education, the individual goals of the children and integrated reflection on the world today.

## 2.1 Micro-schools and Budapest School’s mixed-age groups

At Budapest School institutions, children study in combined classes – mixed-age groups –: communities of no more than 6 grade levels. The Budapest School General Curriculum refers to these combined classes as *micro-schools*, thereby emphasizing their unique characteristics:

* The communities of each micro-school are led by *teams of teachers* acting as education leaders.
* The micro-schools determine their own rules, sets of norms, customs and culture.
* The micro-schools design their own schedules and module listings, and need not conform to any of the other micro-schools.

##### The micro-schools are led by education leaders.

An important goal of the learning community is to provide security and support, *thereby* helping members of the community in their quality learning.

Micro-schools are led by education leaders appointed by the principal. They are responsible for the content of studies, for listing modules and for tracking learning outcomes. They decide the selection of children applying to the school, and they determine the composition of the micro-school as a community.

See Section . for descriptions of and the links between the various teacher roles, education leaders, mentors and module leaders.

##### The micro-school as one big group.

The minimum number of children at a micro-school is 6; the maximum number is 60. Every micro-school must have an adequate number of education leaders who also serve as mentors.

##### The age differences at a micro-school are constant, as the children grow up together.

As a general rule, each micro-school has children from no more than 6 (consecutive) grade levels, and the corresponding age groups, studying together. The age groups and the initial grade levels are determined by the founder based on the ages of the children applying and already enrolled.

The age limit for each micro-school, as the age limit for the combined classes, changes along with the children. It is possible to depart from this, to expand or narrow the age limits, once a year, with the school notifying parents in advance of each academic year by February 15 (for instance: if it does not run counter to the principle of a maximum of 6 grades, the age limits may be expanded, or if children representing the youngest or oldest age groups have left the school, the micro-school may decide to narrow the age limits). Budapest School micro-schools go up to grade 12, unless the micro-school for some reason ceases operation in the meantime.

##### The micro-school is constant – children and teachers may come and go.

Budapest School micro-schools operate as a single combined class. The departure of education leader teachers or children does not affect the existence of the micro-school; the micro-school may bring a new education leader teacher and child on board in their place. When establishing the micro-school, one goal should be for the children learning together to be able to support one another in their learning. Children remain members of the micro-school as long as they are able to study well there and the relationship of the community and the child is fruitful.

##### Micro-schools may develop their own focus areas, venues and styles.

The micro-schools differ from one another not only in that the children at each – studying in mixed age-groups – represent different ages, have different interests and thereby follow different goals in their learning, but also in that they may be different in terms of location and venue.

In the micro-school system, there is an opportunity in each learning environment to modify the emphases according to the interests of the group and individuals, while also retaining the learning balance among the subjects.

Some micro-schools may choose to employ tools of robotics to support the learning of children at 6 years of age to achieve progress goals and their own objectives; elsewhere, drama classes may be used to develop the text comprehension and self-awareness of 12-year-old children.

##### At the micro-schools, children have an important say in what and how they learn and create.

The micro-schools can accommodate (within the limits determined by the education leaders) children who all have various different objectives set for themselves, as long as the education leaders are able to ensure that children achieve the learning objectives set forth in the General Curriculum.

It is the task and the responsibility of the education leaders to create communities which are appropriately diverse, yet still function well together. The communities must meet the objectives of both the children and the General Curriculum.

The education leaders offer choices (by developing modules) which the children (with the help of their mentors and parents) use to create their own learning plan and a learning path that best supports their objectives and interests.

It is possible for each child to study different things, and there may also therefore be differences in when and how they acquire the necessary knowledge: the same community can accommodate an 11-year-old preparing for centralized entrance examinations as well as a child who at the same age wishes to learn about Minecraft programming, which means they will be slower in developing other skills.

##### Children may study in smaller groups.

We may choose to divide the community of a micro-school into smaller groups if that makes the education there more efficient. For certain modules, the children organize into project groups; in these cases, children of different ages and abilities are generally able to work together very well. For other modules, the teacher creates the groups based on children’s ability level. Such groups may include one learning about solving quadratic equations, one bringing together children who are learning to write, or a module focused on writing and editing an English-language newspaper, where children must be advanced enough in language and verbal communication that allows the project to lead to a measurable outcome.

##### Micro-schools are diverse, integrative communities.

Budapest School micro-schools are diverse, in a social, cultural and economic sense, and they believe integration is one of their primary goals as long as it serves the interests of the community.

##### Micro-schools as learning communities.

Budapest School’s goal is for studies at the micro-schools to be transparent and trackable for both children as well as teachers and parents, and for children and the community to advance consistently. It is a priority principle of Budapest School that every method and process may always be improved; it is therefore a job and an opportunity for teachers to select the most appropriate method that is best-suited in a particular situation to help support the learning of the children.

##### Micro-schools are launched by the founder, and each micro-school is in operation as long as it serves the studies of the children.

Micro-schools are launched by the *founder*. The founder determines where (at what venue, in what member institution), with what age limits and with what headcount a micro-school should be established. It is the task of the founder to provide the necessary building and tools. A minimum of 6 children and one education leader (who in this case is also a mentor) is required for the establishment of a micro-school.

Each micro-school is a community reaching beyond its teachers and children, and one which continues to operate even if a teacher or a child leaves. Should an education leader or a child leave, the micro-school will bring a new education leader or child on board, up to the point where the micro-school reaches the maximum number of persons determined for that school.

A micro-school may only cease operation if it merges with another micro-school; the goal through this is that no school be allowed to “disappear” from “under” a child. Should the number of children at a micro-school drop below 6, or the number of mentors fail to reach one, with the headcount failing to reach the minimum level by the beginning of the following academic year, the micro-school must be merged with another micro-school.

##### Joining a micro-school.

Whether or not a child may join the community of a micro-school is up to the education leaders, who make their decision based on the age of the child, their navigation of the community, their interests and their own development needs. The key selection principle is that each child joining help advance the community.

A child may transfer from one Budapest School micro-school to another as long as the new micro-school agrees to take them on. In these cases, a new mentor must be assigned to the child.[[1]](#footnote-1)

## 2.2 The structure of the academic year

The academic year may be described as the repetition of three trimesters: the planning of the learning outcomes is followed by studying, with the trimester closing with feedback and assessment. As soon as one cycle is completed the next one begins.

Trimesters last an average of 12 weeks, in a way so that the days spent studying and school breaks are determined so as to coincide with the structure of the academic year as issued by the Ministry of Human Capacities (EMMI). The first week of each trimester is always spent with planning, and the last week is always about assessment. On average, an additional one week is spent each semester with developing the community and independent learning.

The consistent nature of the cycles provides the framework for managing learning. It is the responsibility of the education leaders at each micro-school to adhere to these cycles; they are monitored by the founder. The structure of the academic year is shown in Table . below.

*Each academic year, we repeat the cycle of planning, studying and reflecting three times.*

|  |  |
| --- | --- |
| **timeframe** | **activity** |
| September | community building |
|  | determining individual goals |
|  | designing and announcing modules  |
| October | studying, creative work |
| November | studying, creative work |
| December | updating portfolios |
|  | reflection |
|  | feedback |
|  | reassessing objectives |
|  | modifying modules if necessary |
| January | studying, creative work |
| Issuing mid-year assessment |  |
| February | studying, creative work |
| March | updating portfolios |
|  | reflections |
|  | feedback |
|  | reassessing objectives |
|  | modifying modules if necessary |
| April | studying, creative work |
| May | studying, creative work |
| First half of June | concluding the year, assessment, report cards |

Each academic year is made up of three parts, a schedule which follows the quarterly planning pattern of the business world, as well as the trimesters used by certain universities – but, primarily, the seasons. After each trimester, we assess the preceding three months, we celebrate our achievements and we plan the next period. In terms of the trimesters, there may be a difference of a few weeks from micro-school to micro-school, as they follow the unique characteristics of the specific community.

##### Mid-year and end-of-year reporting

In order to comply with external systems and legal requirements, the General Curriculum outlines the content of the subjects broken down into two semesters; along the same lines, the school issues reports twice a year automatically based on the child’s portfolio – the report is a collection of the assessments entered into the portfolio.

The first semester ends at the end of January[[2]](#footnote-2), which is in the second trimester. The mid-year assessment is therefore issued by the school on the basis of the progress at the end of the first trimester. For children in grade levels 5-12, there is an opportunity and a way to update their portfolios in January; this may be necessary in cases where their mid-year assessment or the results of their transition to grading is important for them (i.e. if transferring to a different school of when continuing their studies, or for any other reason). In such cases, they have the opportunity in January to prepare, as laid out in Section ., for the process of transitioning to grading.

At the end of the year, one-half of the month of June is devoted to end-of-year conclusion and, as necessary, for preparing for the process of transitioning to grading; this entails updating, expanding and augmenting the portfolio.

## 2.3 Individual Learning Objectives

Every three months, each child composes and re-composes their *individual learning objectives*: results that the child wishes to achieve, abilities they wish to improve or habits they wish to get into. The child and their mentor enter into a *learning contract* with the parents when adopting the individual learning objectives.

The child’s individual learning objectives may only include objectives which are safe for all stakeholders, and which are in line with the subjects’ developmental goals and learning outcomes. The contract may include agreements pertaining to learning outcomes, expectations relevant to a subject’s grade level (e.g. “*should advance one grade level within one year*” or “*prepare for advanced-level school-leaving examination*”) and tasks and objectives beyond the structured subjects.

Every three months, education leaders and children stop to reflect on the period behind them, and in view of their experiences and the goals achieved reformulate and reorganize their system of activities in line with new objectives – in other words, they determine what and when children will be doing at school. Everything that a child does over the course of their daily activities (experiences, creative products, tasks accomplished, examinations taken and anything else that happens to them) is entered into their portfolio, including anything that was not pre-planned.

The child’s mentor helps them set their individual objectives, and assists with making various decisions, building their portfolios and reflecting on achievements. As a child’s self-directed learning gradually improves, and as they get older, setting learning objectives becomes an increasingly independent activity. The mentor accompanies the child through their path of learning and in setting objectives.

One unique feature of Budapest School’s individual learning structure is that children advance towards their own goals, following a pathway that is most effective in reaching a particular goal. In other words, everyone has their own individual goals, even if up to 80% of the goals of members of the community match one another because of identical learning outcomes or similar interests.

Fulfilling the requirements of the NAT – described as knowledge areas and subjects – is also a part of learning, but the main direction of learning is different: we ask children for their individual objectives *above these*.

## 2.4 The learning contract

The learning contract, as mentioned, is an agreement between the child, their mentor and the parents, laying out the following:

1. the needs and expectations of the child, the mentor (the school) and the parent; these may be requests related to a process, such as “*I want my child to spend more time reading each day*,” or stronger needs or boundaries, such as “*you must change your behavior if you wish to remain a member of the community*”;
2. the objectives of the child for the following trimester or through the end of the academic year;
3. the pledges of the child, the mentors (the school) and the parent, through which they can support the achievement of the objective and meeting the needs of the stakeholders.

Learning contracts typically follow the below guidelines:

* The objectives should be as specific and measurable as possible. It is a good idea to use the techniques referred to as OKR (Objectives and Key Results) or SMART (Specific, Measurable, Achievable, Relevant, Time-bound), to ensure that the objectives are as specific, achievable, plannable and easily measurable as possible.
* Once there is an agreement on the objectives, an agreement must also be made about who will do what in order for the child to reach these objectives.
* In terms of the agreement, the mentor represents the entire micro-school (the other teachers and the community).

We sometimes refer to the learning contract as an *agreement*. The General Curriculum uses the words agreement and contract interchangeably. The concept of the *learning contract* has been in widespread use since the 1980s in the literature of adult learning, emphasizing self-directed learning. In this sense, the best translation of the term is contract in Hungarian. In another field, in psychotherapy work, they emphasize the establishment of a framework for common work and its sustainability when concluding contracts. This is something we also wish to allude to by using the term learning contract. At times, we use the term *three-party contract*, emphasizing that all three parties must find the content of the contract acceptable.

## 2.5 The various roles of the teacher: the educational leader, the mentor and the module leader

At Budapest School, children regard those adults as their teachers who spend quality time with them and help, support or lead them in the process of learning. We break down the concept of teacher into several roles: a child is linked particularly closely to one (and only one) adult, their *mentor*, who pays special attention to them. Additionally, the child recognizes that the daily life of the micro-school is defined by a team of teachers, the *education leaders*, who lead the school. School activities may also involve other teachers, *module leaders*, who lead a specific kind of activity, club or class.

In terms of organizational structure: each micro-school has a fixed *team of teachers*, the education leaders. The education leaders sign on for at least one academic year, as opposed to module leaders, for whom it is possible to participate in project work lasting only a few weeks. Education leaders also tend to be mentors, but not in every case. Someone who is not an education leader in the child’s micro-school may not be a mentor, because they would have no visibility of the goings-on of the micro-school. One education leader may hold the same role in several micro-schools, and may thus be a mentor in several micro-schools.

##### Mentor

Every child has a *mentor*, who assists them in formulating their own objectives and in tracking their progress. Every mentor is responsible for several children, but no more than 12. Mentors work with the other education leaders of the micro-school, the parents and the children they mentor. The mentor helps the child they are mentoring find the right balance between subject developmental goals and their own objectives they formulate, and helps create the child’s *individual learning plan*.

The mentor is the link between Budapest School, the parents and the child.

* Represents Budapest School and the community of the micro-school.
	+ Understands Budapest School, opportunities and the process of education.
	+ Studies together with other Budapest School mentors and works together with fellow teachers.
* Knows, assists and represents the children.
	+ Knows where and in what direction their mentee is headed; understands their abilities, circumstances, intentions and desires.
	+ Helps achieve individual objectives and supervises progress.
	+ Reinforces their mentees’ psychological sense of security.
	+ Provides their mentees with feedback.
	+ Helps ensure that the objectives achieved are entered into the portfolio.
	+ Compares the content of the portfolio with the development goals of the subjects.
* Works together and thinks together with the parents, and represents their needs toward the community.
	+ Establishes a strong partnership with the parents; shares information with them.
	+ Helps determine goals together with the children.
	+ For the parents, the mentor is the primary point of contact for various school matters.

Each mentor is responsible both for assisting the progress of the child they are mentoring, as well as for working with their fellow mentors to ensure that children acquire as much knowledge at the school as possible. The mentor continuously tracks the child’s individual learning plan and provides feedback on it to their mentee and to the parents of the child.

##### Education leader

Works as part of a team; school organizer; a teacher who helps shape the school’s structure. The regular team of teachers at a micro-school is made up of 2-7 education leaders, who are responsible for the day-to-day operations of the micro-school, as broken down individually by specific roles. Every mentor is also an education leader. Education leaders may also teach modules – in fact, it is desirable for them to work directly with the children and not only organize their lives. They commission the work of external module leaders; in this sense, they act as the project managers of the various learning paths.

##### Module leaders

Anyone able to lead a process of learning or creating for a single session or for an entire trimester may be a module leader. For the most part, they tend to be experts in their particular field of science, the arts, language or any other area.

Modules may also be led by education leaders; external, contracted professionals may also play the role of module leader. Anyone may be a module leader if the team of teachers entrusting them with this responsibility knows that they are able to support the continuous advancement of the children and their progress towards their learning goals. The modular curriculum is discussed in Section . .

## 2.6 Modules – the basic units of studies

*Modules* are the *basic units* of studies: they are a planned series of sessions during which children develop a particular skill, acquire some kind of knowledge or produce something within a set timeframe. The goals of a module may vary, but one shared expectation is that they lead to a result that is worthy of inclusion in participants’ portfolios, and that they have a clear objective.

Day-to-day learning is achieved through the completion of the modules, thereby ensuring that learning take place in a flexible framework, along precisely defined goals and involving content that is clear and transparent for the children and which they can consider to be their own.

The learning modules, or the basic content and format of these units of studies, are determined by education leaders from the following three compulsory components:

1. the content of the subjects included in the General Curriculum,
2. the interests and current level of knowledge of the children and the teachers,
3. and current challenges in their environment and in the world.

Of the three components, the first is the most static, since the General Curriculum – in line with the NAT – determines the subjects and their content, as well as what possible outcomes should be expected of the child’s advancement in these areas. In the various modules, these may be tailored to the needs of the individual or the group, since the outcomes may be achieved through a number of practical and theoretical learning methods.

The interests of the children and the teachers – which are essential to ensuring that the objectives are owned by the children and that they become as involved as possible – determine the theme of the module and the projects involved, as well as potentially even the individual learning times of the children.

At the same time, it is the intention of the General Curriculum that teachers and children react to their environment and to current challenges and questions in the world. The General Curriculum, for instance, stipulates that “*the child solves tasks through a spreadsheet program*.” What kinds of charts the children enjoy working on, however, is only determined when designing and completing a module. Preparing charts on, for instance, the expected decrease in the number of fatalities thanks to self-driving cars, or the correlation between the number of vegans and GDP growth, helps develop very similar spreadsheet-user skills.

The main purpose of the modular system is to make it possible both to adapt to learning needs as they arise (in other words, to serve as a transparent structure for learning), as well as to make it possible for the micro-school to support learning in the most flexible way possible, so that individual, community and societal goals are harmonized.

This, too, shows that while the framework may be shared, the number of potential modules (the building blocks of the learning pathway, and thus the learning pathways themselves) is endless. This is why the General Curriculum believes it is more important to describe how to create modules rather than providing an exhaustive list of the actual modules.

Over the course of the modules, children learn:

* how to participate in projects structured around creating a product;
* how to explore, invent, research and examine – in other words, how to seek answers to questions;
* how to explore a phenomenon from various perspectives;
* how to develop a particular skill or ability;
* how to prepare for a specific examination through practice problems;
* how to participate in community programs;
* how to work on self-understanding, their consciousness and their physical and mental well-being.

#### Announcing the modules

Selecting and offering modules is the job of the education leaders, as the ones listening to and reacting to the goals and needs of children and parents. The list of modules announced makes up the learning structure of each semester.

The education leaders determine the syllabus, duration and tasks of each module after learning about the children’s learning objectives, and after considering the learning outcomes for the subjects as listed in the General Curriculum.

Whether or not to enroll in a non-compulsory module is up to the mentor, the parents and the child, who decide together; the goal should always be to continuously make progress in terms of individual and subject outcomes already achieved. Preconditions to enrolment in a module may include the completion of a certain other, earlier module, as well as the child’s skill level, the number of applicants – or the sole precondition may be the interests of the children.

The same module leader may hold modules of different topics, depending on the needs of individual objectives and subject results, and also depending on the capacity of the education leaders and module leaders.

When a child completes their modules and enrolls in another, it is the job of the education leader to help the child select modules which are most in line with their areas of interests and learning objectives, and which are most appropriate for them to make progress in subject results which have yet to be achieved.

It is also the job of the education leaders to track subject result expectations. While external experts may be drawn in to develop and hold modules, education leaders remain responsible for ensuring that the learning objectives targeted through the modules are met.

#### Module formats

The modular system grants a relatively large degree of freedom for teachers to structure the schooldays. For this reason, it is important to design each module’s framework before the module is announced, according to a few criteria.

##### Objectives

The objectives of each module should be determined ahead of time. As in the case of the objectives of the learning contract, module objectives should be as specific and measurable as possible. It is a good idea to use the techniques referred to as OKR (Objectives and Key Results) or SMART (Specific, Measurable, Achievable, Relevant, Time-bound), to ensure that the objectives are as specific, achievable, plannable and easily measurable as possible.

##### Assessment

At the end of each module, each participant receives a personal assessment and feedback, prepared according to multiple criteria, about their activity related to the module and the results achieved. The structure of the feedback must be determined in advance, and must be shared with participants prior to the beginning of the module[[3]](#footnote-3).

##### Contact hours

The duration of a module and the number of class sessions and their frequency varies, and can range from a single occasion to an entire trimester. At the end of the module, the education leader and the child(ren) conclude the module, assess it and record the results achieved in the (learning) portfolio. To continue a module, a new module may be announced the following trimester.

##### Methodology, format

Modules are different not only in terms of topics, objectives and duration, but also as far as their methodology and processes are concerned. In some modules, an inquiry based approach is best; in others, repetitive practice is most effective. Thus, the best methodology is always chosen based on module goals and the skills and needs of the teachers and the children. The extent to which the process is influenced by the children or by the teachers is different from module to module. Two examples of this difference:

1. The objective of a digital handicraft module may be to build something that is programmable. It is up to the children to invent what and how to build. All the module leader does in this case is support the process of learning – *facilitate* it.
2. In the case of a module entitled, “*The development of visual communication in the second half of the 20th century*”, the teacher designs the syllabus in advance – for instance, whose work and what pieces they will want to present – and then covers them one by one with the group. In such cases, however, it is still possible to expand the syllabus based on the children’s interests and questions.

#### Module venues

Learning takes place at the premises of the various micro-schools, at any other Budapest School micro-school, at an external location chosen by the teacher or online, in the virtual space. We consider learning to be a holistic development need connected closely to life, and in this spirit we do not wish to separate learning from the primary space and format of socialization – the environment of the parents and the family. In the spirit of lifelong learning, the venue of learning continues after the school years end and beyond the premises of the school itself.

Children learn outside the school for a number of reasons:

1. Modules or module sessions may be held at external locations, such as at museums, forest schools, parks or companies, or children may spend their time “out in society.”
2. As long as doing so would not endanger the achievement of their individual goals, and continuous progress can be ensured, children may complete a module at another venue outside the micro-school, as long as their mentor is aware, and with a view toward self-directed learning.

To conclude a module, children and module leaders provide feedback for one another. A part of this is sharing their own experiences, reflecting on their time together, collecting and assessing the results achieved and thinking about potential areas for development.

## 2.7 Priority development principles

Budapest School structures classes at the school in the format of interdisciplinary learning modules. The contentual foundations of these modules directly correlate with the subject structure issued by the minister. Each module is aimed at achieving one or more outcomes of the general curricula issued by the minister. In other words, the subjects describe the content outlines of learning, while the subject structure – with the relevant number of contact hours – provides the balance among learning outcomes.

The outcomes of the module are connected to the subjects through the portfolio, and the objective is for children to make continuous progress in scientific learning about the world (STEM), in their relationship to their own cultural surroundings and those of others (CULT) and in maintaining their physical and mental balance (Harmony) – in other words, in *priority interdisciplinary development principles*. The development guidelines of the modules serve to guide teachers in the principles along which to organize the modules to achieve the desired outcomes.

The development principles include a combination of disciplines which may also be interpreted if broken down into subject structures, and which help align the modules with present-day needs. The same module may be in line with several development principles. For instance, one module may involve mechanizing an ecological experimental farm (STEM) while learning about the historical and socio-cultural background of farming (CULT); and through working outdoors we care for our body and mind at the same time.

### 2.7.1 Science, technology, engineering, and mathematics (STEM)

*The development principle builds on the areas and expectations of the following subjects of the general curriculum issued by the minister, and also adds additional objectives: biology, health studies, physics, chemistry, mathematics, information technology, geography, environmental sciences and natural sciences.*

Today, STEM is relevant not only because it is a combination of several subjects and because we refer to these by this abbreviation. An interdisciplinary scientific-engineering approach, research and development work and innovation are present in all areas of life, and it is no longer up only to scientists in hidden laboratories to discover, create and experiment with new things. This is also evinced by the fact that more than half of the jobs expanding at the greatest rate in the world are STEM-based, and projections suggest their number will only increase in the coming decades. STEM is aimed at answering the most important questions of the future. For this reason, STEM must keep children’s desire for discovery and knowledge alive, and must only deepen these, while relying on practical methods of creation to develop teamwork and perseverance, and also helping them apply the new knowledge acquired in situations that are new to them. It is this perspective which can help advance the individual’s academic knowledge and their long-term commitment to learning.

##### STEM development objectives

* Develop problem-solving skills
* Develop mathematic thinking
* Develop logical thinking
* A better understanding of the workings of the world through a natural sciences perspective
* Encountering and applying a technological (coding) and practical (maker) toolset necessary for innovative developments

STEM’s complex approach, spanning areas of science and technological possibilities, branches off into many directions – yet there are certain fundamental rules which are always present during the learning process. In order for progress to be continuous, it is important for learning in the STEM fields to be based on the child’s current abilities, and to be open, fact-based, knowledge-based, diverse in methodology, scalable and relevant.

To achieve the goals above, the STEM principle recommends the utilization of the following complementary components:

##### Practical learning linked to a network of communities of dedicated and cooperative communities

During STEM learning, it is particularly important that in addition to the module leader and the mentor, who are closely familiar with the particular field, additional innovative and supportive environments also support the development of the children. It can greatly help establish a connection to day-to-day life if persons working at institutions (e.g. museums or research institutes) or technological or industrial companies active in STEM or other related areas serve as a model or they join the daily activities of the children.

##### Accessible learning exercises, also including ones relying on tools such as games and risk

STEM-themed games help children learn from and with one another, thereby improving their creativity and developing their desire to explore. These games of discovery help raise awareness about the importance of teamwork and how we find answers to the problems and challenges of the present.

##### Multidisciplinary learning activities seeking answers to great challenges in the world

The greatest challenge in STEM is to examine questions of the present day for which there are as of yet no answers on the level of the community, the nation or the world. These include questions related to water management, neuroscience and its impact on prevention or on treatment, renewable energy management or the technological directions of the new generation of self-driving cars.

At the same time, these challenges also show what may be the most relevant issues as far as our civilization is concerned.

##### Flexible and inclusive learning environment

A learning environment that is interpreted broadly contributes greatly to the experiential learning of STEM areas. By turning school spaces into creative spaces, through field work conducted outdoors in nature, or with the involvement of modern technological platforms such as VR (virtual reality) and AR (augmented virtual reality), these areas become easier to experience, and may encourage children to ask new questions. At the same time, the teachers’ role emphasizes tasks such as experimenting, helping and facilitating instead of directing.

##### A new toolset for measuring learning outcomes

Performance, research, experimenting and creating are priority focus areas for children’s learning in the STEM fields. For this reason, presentations and observations built on the child’s own research feature prominently, along with valuable feedback provided to these.

### 2.7.2 Culture, society, communication and the arts (CULT)

*The development principle builds on the areas and expectations of the following subjects of the general curriculum issued by the minister, and also adds additional objectives: Hungarian language and literature, foreign language, visual culture, drama and dance, national and ethnic studies, history, social and citizenship studies, song and music.*

The arts and self-expression have been helping humankind’s survival since ancient times. Employing levels of abstraction is one of the most important characteristics of humans as a species. Developing this is one of the greatest challenges of our globalized world today. In order for us to become active shapers of social debates and regulations, and to understand the greatest challenges of our globalized world, we must understand our past, our own civilization and the role of culture in general; we must be able to express ourselves at times through words and at times through the tools of the arts.

Never before has humankind lived in a world as closely interwoven as today’s. And never before have we so consciously had to prepare our children to understand and navigate multiple cultures and social networks. Families, workplace environments, residential environments and even our national and overarching social environments all change more rapidly today than in our parents’ times. We therefore want our children, building on their own stable identities, to be able to relate as humans to their fellow human beings, and to understand them and live and work with them.

One of the key functions of learning is to enable us to become capable of leading a sustainable existence. To that end, in addition to understanding and improving ourselves, our environments (Harmony) and the workings of the world (STEM), we must also be able to relate to our smaller and broader cultural spaces (CULT). We must learn about local and global challenges so that we may connect to our own cultures and to other cultures in an understanding and compassionate way, and so that we may become shapers of sustainable development. Budapest School’s CULT subject is therefore aimed primarily at developing global competencies which support the attainment of the goal above.

The CULT principle includes the following development areas:

* written and spoken native language communication
* written and spoken foreign language communication
* understanding contemporary local and global challenges in the context of the past
* understanding cultural diversity and culture as toolsets describing human behavior
* the stylistic world and forms of the arts
* the arts as tools of self-expression in the visual arts (from traditional creative arts to digital art) and in the performing arts (drama, dance, music)

While the role of technology continues to increase in the world, there is also increasing demand for us to be able to interpret and make appropriate use of the information that is made available to us. The foundations for this are provided by the ability to interpret a text, the use of language as a strategy of written and verbal communication (as appropriate for the individual’s abilities and for the relevant age group) and learning other methods of expression through the arts. In order to become capable of these, we must place the information that becomes available to us in the appropriate historical and cultural context, and we must be open to internalizing this information and interpreting it in line with the global challenges of the age we live in.

The complex learning structure of the CULT field provides the foundations for internalizing new information, and helps them become a part of day-to-day decision-making strategies.

CULT develops the following skills:

* Empathy and compassion
* Learning about personal and community beliefs
* Critical thinking
* Understanding the function of the arts and literature and integrating them into day-to-day life
* Discovering and questioning fundamental questions of ethics and morality
* Accepting unfamiliar ideas or ideas beyond one’s comfort zone
* Learning about humankind’s cultural heritage and present-day diversity
* Thinking on several planes, and multidisciplinary interpretation of texts

In order to achieve the goals above, the CULT principle proposes the use of the following components, which also aid one another:

##### Connecting to local communities

In learning, the role of local communities increases, since being able to understand and apply culture and artistic values in our own environment, as well as language use, plays an important role.

##### Contemporary challenges

The foundations of the CULT field are provided by contemporary artistic values and current challenges and problems. While these may always be interpreted in the context of the past and their environment, a priority approach is to establish a connection to the creative products, texts and cultural values of the present.

##### Multidisciplinary learning experiences which seek answers to the greatest challenges in the world

The CULT field helps children better navigate the world of today and tomorrow, and to ask questions which are unanswered in the present but may shape the future. To that end, it also makes sense to highlight the points and transitions where the arts, languages and cultures intersect.

##### Flexible and inclusive learning environment

Interpreting texts today and the ability to navigate content accessible online are just as important in terms of our connection to the world as fostering the ability to communicate in foreign languages. We can come to understand current global challenges through our past. To do so, we must continue to shape our learning environment to the demands of experiencing and learning, and we must use tools which help us interpret.

##### Creative freedom and the free interpretation of the creative individual

Independent creative work and the free interpretation and acceptance of creative products are the foundations of innovation and creativity. For this, we must reinterpret traditional frameworks and we must allow the individual’s own goals to be explored through a process of creation.

##### A new toolset for measuring learning results

Commitment to different ways of communication, self-expression and using various ways to connect to our surroundings are especially important tools. Outcomes of creative work may be measured against the individual’s development pace. Similarly, written and verbal expression, and methods of individual and group presentation, may also be appropriate measurement tools.

### 2.7.3 Harmony (physical and mental well-being, and a connection to nature)

*The development principle builds on the areas and expectations of the following subjects of the general curriculum issued by the minister, and also adds additional objectives: ethics, physical education, shop, lifestyle and practice, information technology.*

Our physical and mental well-being is the foundation of our learning and development, and for us to become shapers of our own lives. The physical, mental, emotional and social aspects of our lives define our relationship to ourselves, our peers and to the people around them – in other words, to society. This helps us make decisions independently and helps us to be able to learn and work well together in groups. In order for us to live in harmony with ourselves as a part of our community, we must establish a connection to the built and natural environment around us.

In the center of Budapest School’s learning concept is the individual, as a well-functioning member of society who has their own goals. During their progress in school, they learn primarily how to formulate specific individual goals and how to achieve these. In this process, they are helped by a mentor, from the beginning of school until its end. The mentor helps ensure the constant physical and mental security and development of the mentored child, and helps when the child’s sense of security or stability deteriorates.

In the interest of the internal harmony of an individual who functions well in their community, the subjects spell out the following development areas:

* Emotional and social intelligence
* Self-understanding and self-confidence
* Conflict management
* Flexibility (resilience)
* Critical thinking
* Participating in the creation of community rules and applying these
* Practical development of teamwork
* Casual play
* Healthy physical development
* Nutrition in line with the individual’s needs
* Connection to nature
* Navigating the built village and urban environment
* User-level understanding of the world of technology and its smooth operation

In order to achieve the goals above, the Harmony principle proposes the use of the following components, which also aid one another:

##### In a community and in a team

Budapest School is a community school, where members of the community learn with and from one another. The best way to develop the skills necessary for belonging to a community, thinking as part of a team and functioning in the family is if we experience all of these from the start. Establishing the internal rules of the community and connecting to these is a fundamental precondition of the continuity of learning.

##### Life skills

We hope for our children to relate to challenges in life generally adaptively and positively, and for them to retain and develop their physical and mental strength and resilience. The World Health Organization offers the following definition of life skills:

* Decision making and problem solving
* Creative thinking
* Communication and interpersonal abilities
* Self-understanding and empathy
* Self-confidence (assertiveness) and level-headedness
* Coping with stress and emotions

##### Emotional Intelligence

We often emphasize emotional intelligence, highlighting that our children must deal with recognizing, controlling and expressing emotions more than our parents had to.

##### Free mobility and walks

Making the various forms of movement, sports and walks a part of the daily routine should be accomplished in a natural way, according to the individual needs of the children.

##### Practical, everyday skills

In order for our children to be able to live their lives independently and effectively, and so that their relationship with their peers does not become an addiction, they must acquire a host of practical everyday knowledge. The children must continuously develop their everyday knowledge necessary for life, from handling spam messages to the conscious use of the internet and social media or the preparation of a personal budget.

##### Healthy eating

Healthy eating is a habit that can be learned. It is rooted not only in the selection of the right foods, but also in understanding the biological effects of these foods and in shaping one’s eating habits.

## 2.8 Feedback and assessment

In order for learning and development to be effective, it is important for children, teachers and parents to know the following:

1. where the child is in terms of progress and what they know,
2. where the child wishes to go – in other words, their goals, and
3. what they need to achieve their goals.

Additionally, everyone must believe that by paying attention and through practice, a child is able to learn a specific thing. It is important for children to have high self-efficacy, and for them to have high self-confidence; they must not be afraid of making mistakes or not knowing something. The first step of learning is to accept that we do not know something. Put differently, it is important to have a growth mindset; or in other words

1. they must believe that they can achieve their goals.

Feedback and assessment is good and useful – and is effective – if it helps in the four areas above. According to our knowledge today, this requires the following:

* They must receive and give feedback regularly.
* The learning objectives and the feedback must be as specific as possible (in other words, we should not be assessing 8th grade *mathematics knowledge*, but should be assessing the extent to which someone is able to use *trees in graph theory when solving problems*[[4]](#footnote-4)).
* A diagnosis of “*where I am now*” should always pertain to action, behavior and active action. The feedback should not be something like, “*you are good at solving equations*,” but something like, “*you solved these four equations quickly and precisely*.” It is best if feedback is based on specific observations, and it is best to know when and where something happened: “*when you were building a house in Minecraft with your peers, you were able to calculate the area of the house correctly*.”
* If the goal is not to surpass someone, the feedback should not contain statements which compare the child to someone else (thus, the use of the word *talent* should be avoided, as it is generally defined as abilities better than average). Assessing one’s level compared to others is important in cases (and only in cases) when the goal is to achieve good results in a competitive situation.
* The child should be a part of the feedback: they should understand why they were given that particular feedback. It is best if – as made possible by the child’s abilities – the child is able to provide this feedback themselves, or at least parts of it.
* Feedback should play a transparent role in learning organization. It should be a part of the learning process, and children, teachers and parents alike should understand what and how we do something differently based on the feedback.

##### Multi-level feedback

At Budapest School institutions, children receive various types of feedback.

1. After the completion of each module, children receive feedback based on the goals, topics and focus of the module about their learning, their creative products, results, progress and behavior.
2. Every trimester, children receive feedback about their general progress towards learning objectives.
3. Also at least every trimester, children also receive feedback about how they function as a part of the community.

##### Grades and assessment rubrics in lieu of grades

Budapest School feedback must be far more detailed than what grades in each subject would allow; for this reason, Budapest School’s General Curriculum uses assessment rubrics in their stead. The rubric indicates the criteria for assessment, and different levels for each criterion with short descriptions. Based on these, children themselves can see where they are and how they can still improve their work. The format of the rubrics can be modified for different types of feedback (i.e. by module or by objective).

## 2.9 The portfolio

Children and their mentors compile a portfolio of the outcomes of their modules, products and feedback, in order to be able to perceive patterns of learning and so that teachers are able to more consciously assist children in designing and achieving their goals. The portfolio also serves to track children’s results, and is also a tool for feedback towards the parents. Each child’s portfolio is a work in progress, containing the tasks they had completed, their projects or documents, creative products, results, the scores of any examinations taken or feedback received from their peers or teachers. The *objective of the portfolio* is to collect all information so that

* the child and their mentor can assess whether they have successfully reached the objectives identified, and what else the child may need to achieve new objectives;
* parents have continuous visibility of the child’s learning path;
* it is possible to assess where the child is in terms of subject requirements;
* by viewing the portfolio, the child may look back on what they had learned, and so that they may review and practice in order to deepen their knowledge;
* based on the contents of the portfolio the school may issue a report card.

The portfolio is always being updated; everyday situations, including formal, non-formal or informal learning situations, may provide reasons to update the portfolio. In the life of the school, the following situations are of special significance:

1. Upon *completion of each module*, the following is recorded in the portfolio::
	1. The fact that the child has acquired the competence or achieved the learning objective. No competence may be acquired partially, so no additional assessment is necessary. For instance, if during the module the child has learned basic arithmetic on the hundreds chart, the following would be entered into the portfolio: “*Is able to add, subtract, multiply and divide on the hundreds chart both orally and in writing*.” Should the teacher and the child feel that the child has failed to acquire this competence appropriately, the fact that it is being practiced will be entered into the portfolio.
	2. The results of the creative process or project work, if the goal of the module was to produce a creative product.
	3. Attendance, if the goal of the module was attendance (e.g. a field trip on the National Blue Trail).
2. It is a good idea to record the results of examinations completed, knowledge tests, assessment tests and diagnoses.
3. *Unpacking* is intended as a way for children to show teachers, parents and others their work – in other words, the evolution of their portfolio. Preparing to unpack is, essentially, the compilation of the portfolio, preparing it for presentation, and *updating the portfolio*.
4. Through peer feedback, every child receives feedback from their peers. They collect what the other child has done that merits recognition and the gratitude of their peers. This may also be relevant for inclusion in the portfolio.
5. The child’s own assessment and reflection on how they see their achievement is also an important element of the portfolio.
6. Teachers may provide competence certifications. These are brief, specific forms of feedback which show if the child has accomplished, or has made progress in, something.

Mentors help the children present their ways, processes and results of their learning in their portfolios.

##### Format requirements

The portfolio must be orderly, accessible, available, searchable and easily expandable. The micro-schools should choose a (technological) format that allows the child, the teacher and the parent to expand the portfolio *daily*, and allows the expansion of the portfolio to be reviewed *weekly if necessary*, in chronological order, by module or by subject.

There is no standardized format the portfolio should follow: each micro-school is free to design its own system that works best for children, teachers and parents. To advance from one grade level to the next, and to transition to grading, the school accepts only portfolios stored digitally and made available online to the designated teachers.

1. Transferring between micro-schools. [↑](#footnote-ref-1)
2. Each year, a ministerial decree regulates the end of the semester. [↑](#footnote-ref-2)
3. The criteria for feedback may of course change during the module, should the content or the conditions for the module change. In such cases, this must be made clear to everyone involved. [↑](#footnote-ref-3)
4. This specific example is one of the learning outcomes of the subject mathematics. [↑](#footnote-ref-4)