Professional development through classroom visits

Good Teaching and Learning

**Resource materials for teachers, inspectors, principals and trainers for all subjects.
With a special chapter on the subject of personal development.**

Rolf Gollob & Wiltrud Weidinger

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PH ZH ZURICH UNIVERSITY OF TEACHER EDUCATION

"Just try new things. Don't be afraid. Step out of your comfort zones and soar, all right?"

Michelle Obama

"I cannot be a teacher without exposing who I am."

Paulo Freire

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Introduction

This **Good Teaching and Learning** manual (resource materials for peer teachers, inspectors, principals and trainers) offers and insight into the most important aspects of quality teaching and learning. It serves as a foundation for educators, lecturers, teachers and inspectors and provides hints for lesson observation and criteria for quality lessons. Apart from general perspectives, it also includes background information and guidelines for application in teaching and learning settings that support learning in the 21st century.

As a practical guide, the additional **Observation Handbook** (for peer teachers, principals, inspectors and trainers) supports lesson observation and quality feedback.

Why classroom visits, why observation and feedback? As we all know, our society is undergoing radical change. The world in which our children live is no longer comparable to the world that their parents grew up in. Alongside the real world there is a whole world that is radically transforming our lives. What do these changes mean for our schools and for teachers, but also for families and parents? Does the teaching correspond to the principles of modern learning as defined by the new research results into psychology and brain research?

Learning has become the subject of intensive neurobiological research over the past twenty years. Motivation and recognition are at the centre of efficient learning processes. In this sense, neurobiologists demand that learning in schools urgently needs to be rethought with the aim of making motivation and individual support the principle of teaching.

In schools, the principle of support must be taken seriously. It requires differentiation lessons, modular support lessons and diagnosis-guided learning support. This requires modified working conditions, especially more time and resources. We also need a different way of dealing with mistakes. They should not lead to demotion and sanctions such as repeating a class, but should instead be a catalyst for support measures.

Open teaching methods must gain more importance alongside the more formal ones in all grades and types of schools. To this end, curricula must be drastically reduced and replaced by framework curricula. Project days and project weeks must be firmly scheduled over the course of the year; time slots for block teaching and cross-class topics and activities must be taken into account. The curriculum for the school subject of personal development goes exactly in this direction, offering assignments for the students, competence-oriented teaching settings and task-based learning. With the subject PD, those responsible for education have taken an important step into the 21st century of learning. In order for teachers to be able to implement it, they need training, time and support.

Different professions with different competences work together in the school setting and should continuously exchange information. Together they develop a support concept that does justice to a heterogeneous student body.

This requires sufficient time for team meetings and project planning and, as suggested here, teachers must have the opportunity to be visited in class and observed in an appreciative manner. This is what is meant by supporting teachers as outlined above.

1.   What is good teaching?
Key characteristics of successful teaching from a teaching research perspective

"To teach a child does not mean to fill a vessel, it means to light a fire."

Michel de Montaigne (1533 – 1592)

"Ignorance is the night of the mind, a night without moon and stars."

Confucius (551 – 479 BCE)

It seems very simple when lessons are taught well. However, as those with extensive experience in teaching and learning know all too well, it is precisely the kind of teaching that occurs in a pleasant and non-threatening atmosphere and in which significant ideas are imparted and learnt – and presented in a clear and comprehensible manner – which is in fact the expression and synergy of manifold didactic-methodological and social competences.

To teach well requires a personal and reflective didactic-methodological repertoire. We concur with research findings that a didactic-methodological monoculture is unable to meet the challenges which modern pedagogy places on good teaching. A single and solely didactic concept for the entire instructional aspect of a class fails to prepare the students for life in a society which demands entirely different skills and abilities. Consequently, this book describes the most important didactic-methodological approaches and argues for an integrative, multi-facetted didactic. Every teaching practitioner must find an optimal proportional mix between the various dimensions. It is a question of balance between teacher guidance and student self-determination on the one hand, and a balance between a teacher-centered and discovery-based instructional approach on the other. All didactic concepts or teaching methods can be situated on these axes.
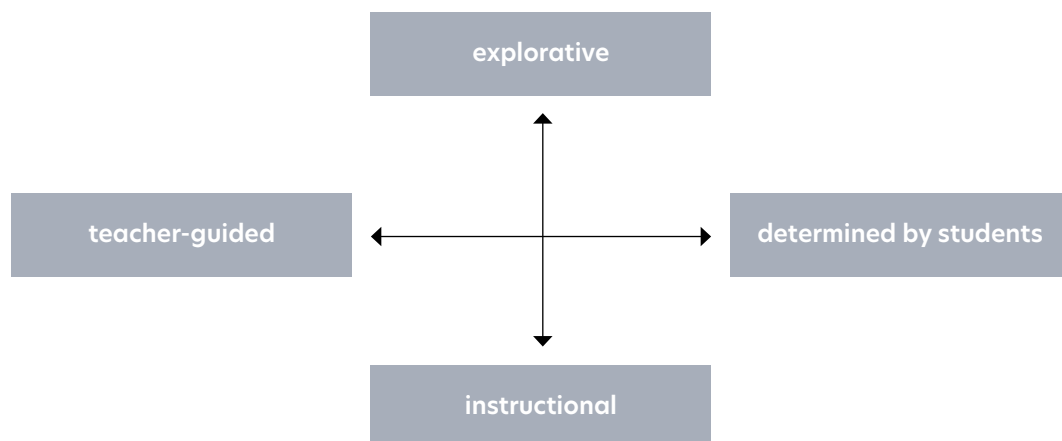
(Berner, *et al.* (2018): Simply good teaching)

To be able to observe lessons in a pre-service as well as in-service teaching situation and for peer-mentoring and peer-feedback situations, one must be aware of the characteristics of "good teaching". Lesson observations in a formal evaluation setting or lesson observations in a peer-mentoring or peer-to-peer learning setting will work well when criteria are used that are based on insights from teaching research and when concrete criteria are selected for in-depth observation and feedback. This chapter outlines the most important key characteristics of successful teaching.

There are numerous principles which, if observed, demonstrably render teaching more successful and effective. The most important of these are briefly summarised in this chapter with reference to the findings of the renowned teaching researchers John Hattie and Andreas Helmke, as well as the teaching expert Hilbert Meyer. Bringing together the teaching principles which Hattie, Helmke und Meyer consider effective to learning in an overall appraisal presents a broad pedagogical consensus. This reflects not only the German-speaking debate, but does justice to the international discussion as well.

The fact that there is no single good method of teaching becomes immediately apparent if one asks a few simple questions: good for what, under what conditions, good for whom, good for when? These questions suggest that good teaching can only be described in a specific context and which, in conjunction with a given situation, must constantly be defined anew by the teaching practitioners themselves – taking into consideration the perspectives of all concerned. This perspective should not lead to the misunderstanding that there are no quality characteristics for teaching. "No, there is no such thing as the *right* teaching method", says Andreas Helmke, "but there certainly exist instructional quality characteristics which are absolutely and unquestionably valid, there are well-founded standards of teacher behavior, and there are important benchmarks of teacher expertise, about which there is a broad consensus."[1] These characteristics relate to the *learning atmosphere* on the one hand, on the other to the *motivation of the learners*, but ultimately to the *didactic-methodological procedures*. Although we address the latter group of characteristics more broadly than the first two, it would not be right to attribute to it a greater significance for successful teaching. Successful teaching is the result of a *balanced mixture* of an atmosphere conducive to learning, adequate motivation and methodological-didactic expertise.

1.1   Activating your own views on teaching and learning

Before starting to read, it is important to activate your own views and experiences about good teaching and learning. Please read through the following tasks and take notes for yourself.

a)   Do you remember a classroom teaching experience that you would have rated as "very good" (or at least "good")? Fill out the table below and describe in key words the teacher's characteristics, as well as your recollections of that person's classroom instruction.

School, grade level	Characteristics of the teacher	Type of instruction

b)   Create a mind map from your own personal perspective about the criteria for good teaching. Underline the three most important criteria and briefly record them in the list below.

Characteristic	More detailed description
1.	
2.	
3.	

c)   Name three instructional "NO-NOs", i.e., three practices which, in your opinion, should be avoided at all costs if you want to teach well.

1.	2.	3.

1.2   Characteristics of good teaching – foundational perspectives

The following twelve characteristics of good teaching can be grouped into three categories: learning atmosphere, motivation and didactic-methodological expertise. In doing so, we follow a suggestion by Wolfgang Beywl[2] who contributed significantly to the reception and understanding of John Hattie in the German-speaking areas by presenting an overview and assessment of the positions developed by the three authors referenced in the introduction to this chapter.

The individual characteristics are primarily taken from the publications *Visible learning for teachers* by John Hattie[3], *Unterrichtsqualität und Lehrerprofessionalität (The quality of teaching and teacher professionalism)* by Andreas Helmke[4] and *Was ist guter Unterricht? (What constitutes good teaching?)* by Hilbert Meyer[5]. Each characteristic is thereby referenced with only a few key words which cannot be fully explained in this first chapter and which do not do justice to the nuanced sophistication with which they are presented in the original publications. In spite of the simplified short explanations, the aggregate list of the twelve characteristics provides a good orientation for classroom practice and design. The resulting inferred suggestions nevertheless yield useful instructions and means of action for practical application. A more intensive study from our perspective is meaningful, especially the very broad and particularly relevant themes of successful teaching, hence the attached bibliographic references with certain characteristics. In our experience, a serious and sustained discussion with teaching practitioners about the characteristics of good teaching has produced extremely positive effects on school management, and with it occupational satisfaction and the love for the profession for teachers as well.

For better orientation, the twelve characteristics are listed in the table below, and relate to a superordinate area of topics:

Characteristic	Related topics
1. Classroom atmosphere	*Learning climate*
2. Classroom management	
3. Real learning time	
4. Motivation	*Motivation*
5. Performance expectation	
6. Clarity of content and structure	*Didactic-methodological expertise*
7. Rhythmisation and articulations	
8. Variation in presentation and methods	
9. Student orientation and support	
10. Heterogeneity and individual promotion	
11. Consolidation and intelligent practicing	
12. Independent learning and learning assignments	

Since we strive for the greatest possible transparence in terms of the origin of thoughts, ideas and findings, we attribute the important contributions of individual authors and findings from Hattie's meta-analysis in each of the twelve characteristics. However, we reference the authors only when, in our estimation, they can make a specific contribution to a characteristic which justifies their special highlighting.

1.   Teaching climate

Helmke und Meyer talk about a climate *conducive to learning*. What they mean by this is that a classroom climate of mutual respect is important, that rules are reliably followed, that all parties assume responsibility and where a sense of justice and a willingness to help others are shared. The conversational tone must be friendly, the atmosphere characterised by cordiality and warmth, with room for laughter and humour. Moreover, there should be as many learning situations as possible that are not connected with performance assessment, and only as many achievement-oriented situations as necessary. Concerning the pace of work, a relaxed atmosphere should be created: tolerance for slowness and a reasonable waiting time for student responses are considered important. Hattie equates the characteristics of a

learning-conducive climate in the classroom with a high-effect strength in the areas of teacher-student relations, class cohesiveness, and low levels of fear. Hattie particularly emphasises that an optimal classroom climate is characterised by an atmosphere of trust which tolerates mistakes as part of the learning process.

2.   Classroom management

Conducting a class – or, more specifically, classroom management – is often considered the most decisive factor for a successful teaching environment, not only by teachers, but also school management and educational authorities. Helmke considers it a necessary precondition for successful and ambitious teaching. Modern classroom management is based on the rules determined by teacher and students. It is imperative to address disruptions preventively with strategies of steering attention (that is, through instructions and organisational measures to control attention). When disruptions occur, they should be addressed discreetly and in a non-dramatic and time-saving fashion. Meyer does not include classroom management among the ten most important characteristics of good teaching, but his demands for clear structuring of teaching, a learning-conducive climate, and meaningful communication, comprise essential elements of classroom management. Efficient classroom management has a high impact on successful learning processes in Hattie's meta-analysis. Because classroom management is generally considered important, but not always easy, the following example should shed some light on some possibilities for further in-depth study from among the great number of publications on the topic of classroom management: *Disruptions in the classroom (Störungen in der Schulklasse)* by Hans-Peter Nolting[6] which further builds on the learning theory-based classic study by Jacob Kounin[7] is a guideline to classroom management which goes far beyond Kounin's classic study and aims at optimal behavior control and guidance and offers easily applicable and trainable suggestions for classroom management. *Discipline and self-discipline in the school (Disziplin und Selbstdisziplin in der Schule)* by Jürg Rüedi[8] is rather deep psychology-oriented and emphasises the relationship between teacher and students in classroom management. In our view, it is well worthwhile studying this publication not only for prospective teachers, but for all teachers who would like to optimise their classroom management.

3.   Real learning time

That total classroom time should entail the highest possible percentage of real learning is an essential characteristic of good teaching according to Meyer. This can be accomplished through good time management, punctuality, and most of all by deferring questions of an organisational nature to outside of the defined, actual teaching time. The proportion of genuine learning time to total classroom time is important for Helmke as well, though he subsumes this point under efficient classroom management. In any case, it is certainly helpful to question how much time is lost in teaching with activities that cannot be attributed to learning.

4.   Motivation

For Helmke, diverse motivation is an important quality characteristic of teaching. Three different learning-relevant groups of motives should be considered. Firstly, it is important to consider the intrinsic learning motivation of students which manifests itself in their objective interests and activity interests. Secondly, the possibilities of extrinsic motivation can be utilised: the importance and usefulness of the learning material should be explained, the link to the living world of the students established, and curiosity and achievement motivation should be encouraged. Thirdly, teacher engagement and the joy of the subject matter and teaching are transferred via the process of modelling to motivate students.

It is extraordinarily interesting that, according to Hattie's research, the students' self-assessment of their own performance level has by far the strongest influence on student success. There is evidently a relationship between the students' motivation to deal with school-related content and Hattie's outstanding findings. In light of the fact that Albert Bandura's social cognitive learning theories and the complementary publications by Matthias Jerusalem (which focus more strongly on the German-speaking areas) resulted in similar conclusions, one has to agree that teaching should be conducted in a manner that strengthens self-assessment, self-efficacy – or most importantly – the self-confidence of the students. For a more in-depth study into these relationships, we refer to the classic study by Albert Bandura, *Self-efficacy*[9] and the publication for pedagogy (Zeitschrift für Pädagogik) which devoted a special edition to just this topic, which, among other things, introduced a differentiated review of Matthias Jerusalem's and Ralf Schwarzer's concept of self-efficacy and discusses the concept with a permanent reference to the school[10].

5.   Performance expectation

There is a consensus in the educational science community that high-performance expectations and an optimistic estimation of goal attainment by parents as well as teachers are of greatest importance to the learning success of children and adolescents. It is therefore not surprising that Hattie, Helmke and Meyer all emphasise the importance of challenging and transparent performance expectations. The expectations should be oriented along guidelines or educational standards and attained by a teaching curriculum that corresponds to the students' capacity for learning. In doing so, they should not only strive for professional competences, but also interdisciplinary competences. Without educationally oriented feedback about the educational progress, performance expectations are only of limited benefit. Additionally, Helmke emphasises that the focus must be on the demonstrable and lasting effect of teaching, which renders regular monitoring of learning progress with all the diagnostic tools and means of assessment indispensable. This must occur, however, without neutralising the element of "only as many performance situations as necessary" from the characteristic *learning atmosphere*. Finally, it remains to be said that Hattie's meta-analysis leads to the same result, but with the additional factor of teacher engagement and enthusiasm for the subject as an effective element of

performance expectation as well as motivation. Challenging performance expectations should not lead to excessive demands on students. In our view, this problem is well recognised in schools, and the risk is rather that the students' high performance ability is underestimated and that they are not confronted with assignments that reflect an adequate appreciation of their possibilities.

6.   Clarity in content and structure

There is a broad consensus among the three authors that clarity is an extremely important and effective characteristic of good teaching. For one, it concerns clearly defined goals and content. Furthermore, the work method should be plausible and provide a transparent organisation of the learning process. Task assignments must be clear and understandable and should include possible learning aids with organising clues (preview, summary, advance organiser, etc.). Ultimately, clarity and obligation are also important in securing results. An additional aspect of clarity concerns language: it should be appropriate in terms of vocabulary and technical terminology and factually correct. Moreover, conciseness of language, clear diction, adequate rhetoric, correct grammar, straightforward sentences and acoustic comprehensibility are also important.

7.   "Rhythmisation" and articulations

Hattie has pointed out that rhythmised practicing has a significantly higher effect than cumulative, bundled practicing. Helmke and Meyer do not postulate any special characteristic of rhythmised teaching and for its articulation (articulation = chronological structuring of teaching in phases). However, both are included in other characteristics, such as in the preceding characteristic *clarity*: the demand for alternating activities in the classroom which enhance learner concentration and absorption capacity and prevent monotony and offer variation. This remains uncontested. The beginning and end of a class session should be viewed particularly carefully. Aside from the rather experience-oriented articulation as proposed by Grell and Grell[11], which allows for a meaningful sequence for almost any classroom session, there are also scientifically elaborated concepts such as the one by Hans Aebli[12], which is referenced under the acronym PADUA and which sketches out a sequence for entire lesson units. Also useful is the AVIVA-model[13], which features five phases of good teaching as well, and was developed primarily for older students up to vocational school age.

8. Variety of offer and diversity of methods

The variety of subjects offered and the diversity of methods should be understood as a supplement to the previously discussed characteristics. Meyer and Helmke are in favour of a student-oriented, variation of teaching methods appropriate for different subject and learning objectives, and social forms and for a balanced combination of major methodological forms. A teacher's vast repertoire of staging techniques and variety of approaches is to be welcomed, but all too many variations appear to be equally problematic as a didactic "monoculture". From Hattie's point of view it should be added that the concept of reciprocal learning shows a particularly high learning effect and, concurring with Meyer, that metacognitive strategies and learning techniques – consideration of the meta level of learning – have an additional positive effect.

9. Student orientation and support

The characteristic of student orientation and support is considered effective by both Helmke and Hattie. The point is that instructors should not only be contact persons for technical- or curricular issues, but also personal contact partners, and that teachers take the learners and their statements and questions seriously. Ideally, students are polled about the teaching process and participate within reason in decisions concerning the structure and content of instruction. In our view, student feedback is part of a modern culture of reflection about teaching.

10. Heterogeneity and individual promotion

Central to this characteristic is a sensitive approach with heterogeneous learning requirements and student personalities with special care that differences in social, linguistic and cultural areas are recognised and respected. To adequately respond to heterogeneity, care must be taken to adjust the instructional speed and degree of difficulty to the respective requirements of individual students or entire student groups. This requires individual learning assessments and coordinated promotion plans, an internal differentiation of instruction, variation of subject and generic goals and contents, particularly a furthering of children and adolescents from groups at risk. Referencing this characteristic, Helmke talks about *fit* and Meyer refers to *individualisation*. The effects of individual furthering in Hattie's study are only referenced as part of other effects.

11. Consolidation and intelligent practicing

As a psychological condition for work with demanding assignments, it is necessary to practice and master basic skills to the point of automaticity. It is also necessary to include in the instructional process a multitude of assignments that require not just mechanical but "intelligent" practice. Tailor-made practice assignments, targeted assistance, good framework conditions and a high variation of practice opportunities are part of this characteristic, which is considered equally important by all three authors. Instructional methodology is of central importance for the formulation of learning-conducive assignments in all school subjects. Finally, Hattie emphasises that practice increases the possibility of not just mastering a subject but also the fluency in a subject area.

12. Self-action and learning assignments

With reference to the well-known teaching researcher Franz Weinert, Helmke sums up this characteristic in a nutshell: good teaching is teaching in which more is learned than taught. Therefore, educational offerings for autonomous, self-reliant learning must be made available; all students need diverse speaking and learning opportunities where latitude rather than narrow margins and authentic questions should be the guiding principles instead of pseudo-questions. The school pedagogues Jochen and Monika Grell provide an appropriate, practice-oriented deeper analysis of these claims in the publication *Unterrichtsrezepte*[14] (educational recipes) in the chapter entitled *Das Rezept Lernaufgabe* (the prescription learning assignment). Ultimately, homework assignments are also suitable to further independent work.

1.3 Application in teaching and learning settings

These implementation instructions are presented in the same sequence as in the previous section. The number of suggestions for good teaching depends on the importance of the characteristic and whether it is followed up in subsequent chapters.

1. Creating a learning-conducive teaching environment

When it comes to creating a learning-conducive climate in the classroom, it should suffice to observe the formulated rules. This is easier said than done, however, as the instructor's personality with their ways of establishing contact with the students is central to this characteristic. This ability is not mastered as a technique but is rather an expression of attitudes and possibilities that are at the disposal of a teacher for relationship building.

If an instructor would like to work on optimising a learning-conducive climate, it would mean, for one, that they implemented the pedagogical-didactical suggestions put forth in this book, such as applying the principle of positive reciprocal affects at the beginning of a lesson. Furthermore, it is always a matter of finding an age-appropriate balance between nearness and distance to the learners and a considered mix of working atmosphere and personal contact.

On the other hand, a critical analysis of one's own approaches and possibilities in relationship building is advisable. For one, this can occur by *studying the applicable literature*. The recommendations by the humanistic psychologist Carl Rogers from 50 years ago are still well worth reading. His postulated attitudes – respect, warmth, consideration; empathetic, non-judgmental understanding; genuineness; minimal direction and guidance – are significant in pedagogical contexts as well. This may also occur in discussions and *exchanges with teacher colleagues*, such as discussions and intervention groups, which offer a greater awareness of one's approaches and relationships patterns, and promote their further development.

2. Classroom management can be learned – it is not just an expression of a certain talent

Nolting's previously referenced publication relates to Kounin's *Techniques of classroom management*[15]. Among his suggestions for classroom management, we consider the following most significant:

▶ **Omnipresence ("with it"-ness)**

The students should have the impression that their teacher keeps an open eye and ear on all their activities, so that disruptive incidents are not consciously "overlooked" and difficult problems are not tolerated.

▶ **Overlapping**

Unavoidable disciplinary problems should be dealt with "in passing" and without much fuss so as not to disrupt the flow of teaching more than necessary. The preparation and implementation of media elements should occur routinely (automatically, so to speak), so that the focus of attention remains on the class. Generally speaking, it is important that work proceeds simultaneously on various problems and that individual student needs be addressed.

▶ **Speed, smooth flow, momentum**

Needless disruptions to class flow should be avoided. The precondition is adequate lesson planning, particularly the avoidance of rush (overload of material) and boredom (lack of sufficient material, monotonous work). A negative example for lacking flow is sticking to notes and small pieces of paper. Another example is idling verbosity or over-problematising of minor details.

▶ **Group activation (group focus)**

Even when only one student is at the centre of activities, all students must follow the class proceedings, with the teacher maintaining the focus on the whole class or group. For example, the class receives clear instructions before the teacher engages in a dialogue with an individual student.

▶ **Managing transitions**

The transitions between different teaching segments or phases should take place via a short and unambiguous segue (for example: acoustic signals, certain gestures) and without loss of time. Rest breaks or relaxation pauses can be granted, rituals for de-escalation may be instituted.

▶ **Avoiding mock participation**

Teachers should be aware of feigned attentiveness; students are known to develop clever rituals to create the appearance of attention and lively interest (intense head-nodding, furrowing their brows in apparent concentration, etc.); commonly known as "school survival skills".

In addition to an updated presentation of these six principles, Nolting's publication also deals with direct and cooperative interventions in cases of conflict in the school. The suggested recommended actions are concrete and therefore very helpful.

In another referenced publication, Rüedi's *Discipline and self-discipline in the school*[16], which deals first and foremost with the relational dynamics of classroom instruction, such prescription-like suggestions are hard to find. In reference to Rüedi,

we are only presenting a self-test for the purpose of triggering a useful discussion within the discipline in terms of the relationship between teachers and learners in the section at the end of this chapter.

3.   Increase the proportion of real learning in your classroom instruction

Increasing the actual learning time while reducing unproductive time is easily achievable and requires no further elaboration. The important thing is to periodically focus on this aspect. Meticulous teaching preparation with attention to seamless transitions is helpful for this reason. There are different ways for thorough, but practical, lesson preparation and planning to ensure real learning.

The didactic hexagon

For the planning of teaching and learning situations, you can rely on one effective model: the didactic hexagon. Based on the fundamental general didactic question, "Who shall learn what, from whom, when, with whom, where, how and with which objective?", the following hexagon can be derived with six important analytical, planning, observation and reflection-related perspectives[17]:
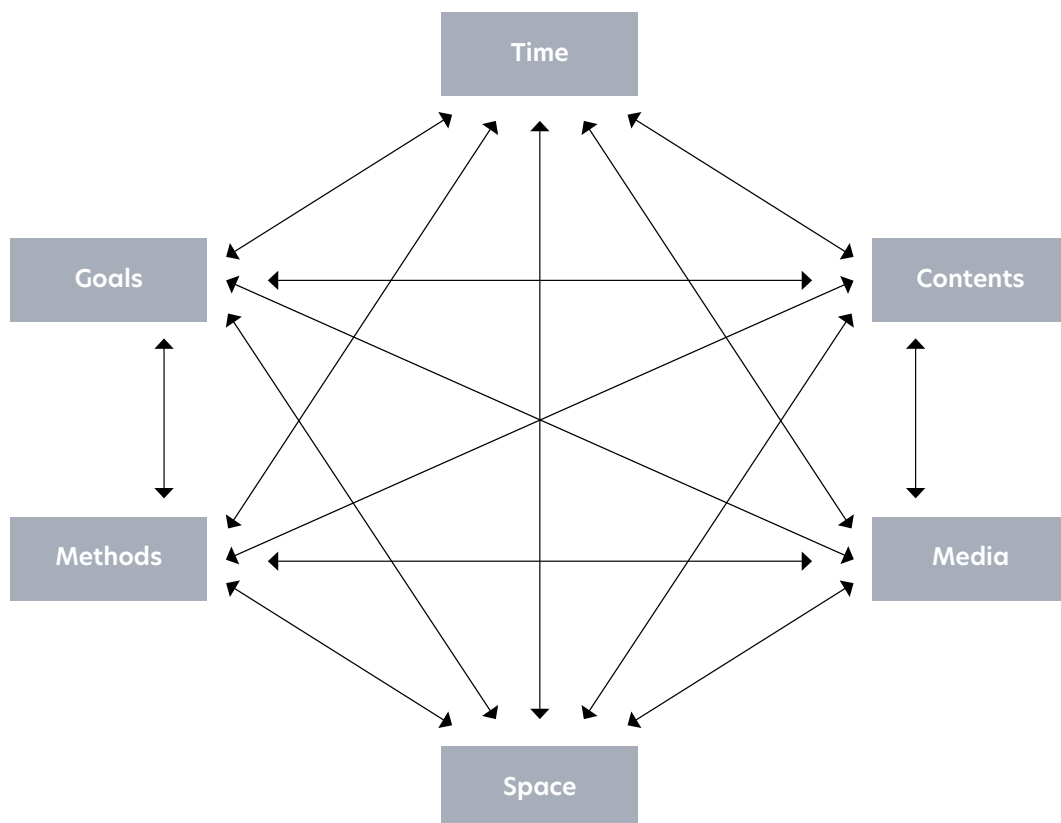
The didactic hexagon according to Wernke/Zierer (2016, p. 12)

Who and for which purpose- question	⟶	**goal-perspective**
What- question	⟶	**contents-perspective**
How, with whom and from whom- question	⟶	**methods-perspective**
With what- question	⟶	**media-perspective**
Where- question	⟶	**space-perspective**
When- and in which sequence- question	⟶	**time/process-structure-perspective**

The planning of teaching-learning situations entails various clarifications and tasks:

⟶	**Goals:**	Operationalisation, hierarchy, taxonomy
⟶	**Contents:**	Contexts of meaning, reduction
⟶	**Methods:**	Forms of work/action, social forms, principles
⟶	**Media:**	Work material, technique
⟶	**Time:**	Articulation, rhythmisation
⟶	**Space:**	Equipment, size, lighting [18]

The perspective of space is an often underestimated, important planning factor. Teaching does not necessarily have to take place within the classroom all the time; places like corridors, playgrounds, gyms, and museums are suitable alternatives. In the case of in-classroom education, the seating arrangement is relevant for certain forms of teaching and learning. Thus, for every planning, the opportunities and limits of spatial decisions must be carefully considered.

Practical planning grids and flow charts [19]

Teachers must be able and ready to think through a teaching concept, and to formulate it in a form that is suitable for them and guarantees the quality of instruction. This requires a planning form which helps visualise and document the individual steps of the lesson flow mentally and in writing.[20] Numerous different suggestions with grids and tables for specific lesson planning can be found in the educational research literature.

[21]

Phases/goals		Teacher activities		Student activities	Media
Time of day	Partial steps (key word: according to learning objectives)	Organising, Informing, activating	Accompanying learning processes	Class, groups, individuals: activity/social form	Helpful resources of all kinds

These and similar flow planning grids or sequential draft lesson plans have an obvious advantage: they present a clear overview. It is easy to see how the sequence was planned and coordinated, whether and when the students are activated (or whether the activity relates primarily to the teacher). A weakness of such presentations often pertains to the problematic interpretation of the time rubric. This may pressure the teacher to reduce the time allowed and lead to accelerated student work processes.[22] Teachers' statements, such as "Don't raise your hands, write it down" are symptomatic of such misunderstood planning time dictates.

4.   Appeal to your students' completely different *motives*

It is not useful to consider the students' intrinsic motivations to learn as good, and the extrinsic as problematic. Extrinsic motivation is unavoidable in a complex civilisation: you will never just be doing what you want to do. It is rather problematic, however, to ascribe an effect, based exclusively on content-unrelated motives, such as rewards, obedience and grades. If you, as instructor, set high expectations and serve as a role model for the learners yourself, you are within the area of extrinsic motivation. This is also the case if you produce cognitive conflicts – that is, situations in which students' acquired knowledge clashes with new knowledge, and the learners are unable to explain a phenomenon based on their current knowledge.

The intrinsic motivations which can be addressed are highly varied and different, depending on the student. However, the following motivations apply to most students: enjoying the challenge, curiosity, imagination, as well as a need for control or prestige, etc.

For a useful, deeper analysis of the theoretical foundations of motivation and possibilities of action, see *Emotion, Motivation und selbstreguliertes Lernen (Emotion, motivation and self-regulated learning)* by Thomas Götz.[23] Under the rubric of "motivation", we have also subsumed the conviction of self-effectiveness, for which there are three powerful strategies.[24] Self-effectiveness improves the most when we overcome difficulties on our own while being aware of the fact that we achieved the feat ourselves. The second most important factor is human models who are within our reach and who master such difficulties as math problems; this point indicates the importance of peers. In third place come encouragement by the teacher – not just in the sense of "You know this!" – but in the sense of "Try it, I'll help you if you get stuck!".

5.   Make challenging performance expectations of your students

Challenging performance expectations must in practice be explicitly stated to the students. For instance, the demands could be formulated as follows in language classes: clearly and correctly articulated pronunciation, use of appropriate words when speaking, giving a short presentation, speech based on key words, grammar and spelling when writing, etc. If the students lack confidence, it is not advisable to reduce the demands too quickly, as a reduction of requirements would suggest the

unspoken message that one lacks confidence in the learners' abilities. An under-challenging situation appears more problematic than an overchallenging one. In the context of learning expectations, it is also very important to refrain from quick praise or heaping praise on students; not every minor performance needs to be acknowledged with "very good!"

6.   Observe *clarity* in content and structure

Clarity in content and structure derives from professional lesson planning and through the actual interaction process in the classroom. Rhythmisation of teaching sequences as described already in criterion three about real learning is an important element which supports clarity in both, content, and structure. However, clarity becomes evident also in the way a teacher presents tasks or delivers an input.

Berner, *et al.* (2018) describe it in the following way: "A short presentation or input should be compact, concise, clear, simple, understandable and well prepared. Moreover, a presentation should be rigorously structured. Good short presentations or information inputs, but longer presentations as well, are characterised by the following distinctions, which were confirmed in various effectiveness studies".[25]

▶ **Advance Organiser**

An *advance organiser* is a cognitive learning aid which is provided in advance. This may occur in form of key terms for the topic or as a structured overview in form of a table of content for the topics to be treated. Such learning aids function as pre-structuring for the contents to be studied and are explained, visualised and given out in written form to the learners at the beginning of a sequence or a lecture.

▶ **Learning objectives**

The learning objectives must be articulated at the beginning of a sequence. This helps the listeners to connect the new material with existing knowledge and to embed it in a context.

▶ **Presentation**

Previous knowledge
An input should connect as precisely as possible with the listeners' prior knowledge; this increases the chances of their integrating the new with existing knowledge.

Structure and sequencing
The input should have a recognisable clear structure – which is ideally referenced in the advance organiser. The structure should become evident in a gradual approach (sequencing).

Clarity
The input should be clear and understandable. The terms used should be defined and rigorously applied. Vague expressions should be avoided. Additional clarity should be achieved with examples as well as by demonstrations and visualisations.

> ▶ **Summaries**
>
> The effectiveness of a presentation is increased if individual segments are summarised each time and the entire presentation ends with a general reiteration of the major points.

The Hamburg concept of understandability

In addition to the aforementioned recommendations, it is necessary to introduce the "Hamburg intelligibility concept" developed by Inghard Langer together with Friedemann Schulz von Thun and Reinhard Tausch. The "Hamburg intelligibility concept" names four essential characteristics of an understandable oral presentation.[26] It can be empirically substantiated that the consideration of these four points leads to a significantly improved comprehension and retention ability of the receivers.[27]

> ▶ **Simplicity**
>
> simple representation – short, simple sentences – common words – technical terms explained – concretely and vividly expressed
>
> ▶ **Structure – order**
>
> structured – logical – clear – important ideas emphasised
>
> ▶ **Brevity – conciseness**
>
> concentrating on the essentials – focused on learning objectives – every word is necessary, no superfluous words
>
> ▶ **Stimulating additional information**
>
> inspiring – interesting – personal – leaving room for humour und fun

7.   **Make learning easier for your students through *"rhythmisation"* and clear *articulation***

The lesson beginnings have a diverse function. Knowing this function helps with planning and starting the lesson in the most appropriate way. It is a matter of:

> ▶ providing the learners with information about the material and subject at hand;
>
> ▶ generating learner interest, producing a certain tension;
>
> ▶ posing a question;
>
> ▶ producing a sense of responsibility for the ongoing lesson;

▶	establishing attentiveness and concentration;
▶	linking elements from previous lessons with the topic of the current session;
▶	ensuring that the theme enters and broadens students' horizons.

The function of the *lesson end* is to render the learned material visible in a brief review. First and foremost, the end of the lessons must be planned in such a manner that the most important content or the homework assignments will not have to be squeezed in at the ring of the bell.

For the *articulation* of an entire lesson, Grell and Grell[28] suggest eight phases, which should be generally applicable to any subject:

▶	**Initiation phase:** direct preparation: everything that will be used for teaching the lesson (material, technology, etc.) is prepared *before* the lesson
▶	**Phase 1:** relaxed atmosphere: positive reciprocal affects are transmitted
▶	**Phase 2:** informational lesson beginning: the learners are informed about the goals and the course of the lesson
▶	**Phase 3:** informational input: the necessary content information is provided, often in the form of a short presentation
▶	**Phase 4:** (setting) homework assignments: the students' assigned task is to independently perform an assignment within a definite time frame
▶	**Phase 5:** independent work on assigned learning tasks
▶	**Phase 6:** transition phase: some time is allowed for finishing the learning assignment and concentrating again wholly on the class
▶	**Phase 7:** feedback and continued work on the project: the results of the assigned learning tasks are presented and/or discussed
▶	**Phase 8:** evaluation: review of the lesson and the learned material

If learning processes are planned observing the aforementioned phases, it can be assumed that the students actively engage with the educational contents and that the proportion of actual learning time is high.

Hans Aebli[29] has developed the following articulation (known under the German acronym *PADUA*), which is equally applicable for all areas of teaching. An approximate English equivalent *might read PSWPA:*

▶ **Problem definition**
A problem is defined in the first phase which needs to be resolved (example: a physical phenomenon).

▶ **Structure**
During the second phase, the content and all its aspects is analysed and structured (example: a grammatical rule).

▶ **Working through**
In the third phase, the content is worked through in the most varied combinations so as to achieve a thorough understanding.

▶ **Practice**
In the fourth phase, the content is practised.

▶ **Application**
In the fifth phase, the content is applied in a new context.

8. Variation and method variety improve the learning success of your students

It should be noted, according to Helmke[30], that according to the MARKUS study it is not a maximum of method variety but an *optimum* that achieves the best results. According to this research study, those classes performed better which, besides direct instruction (lecture format), were exposed to three additional teaching and learning arrangements that were noticeably (i.e. not just selectively) practiced. Pure frontal teaching as well as a teaching approach with an excessive number of forms of instruction were less successful. A median number of primarily applied methods therefore appears right. That a certain teaching method is generally superior to another based on learning success, cannot be empirically substantiated. Moreover, besides a fundamental variety of methods, the choice of methods should also be adapted to the skills and aptitudes which will be important for the learners in their later lives.

9. *Student orientation and support – taking student concerns seriously*

The characteristic of student orientation and student support emerges already in the remarks about learning atmosphere and classroom management. Institutionalised forms may reveal that both principles are indeed practiced: class council, letter box for anonymous student questions, communication booklet, gathering of student feedback, consultation hours, question time, etc.

10. Consider the *heterogeneity* of the class and plan *individual promotion and support*

In her publication with practical advice *Individualisation and internal differentiation – but how?*[31] Marianne Walt mentions seven aspects of individualisation which respond to heterogeneity issues. These seven aspects can be combined with one another depending on the necessity. The following graph can be used as a checklist for approaches to individualisation. It should be ensured, however, that individualised teaching does not further student weaknesses; any reduction of requirements must be considered under the aspect that reduced requirements convey the implicit message that the student is not capable enough of doing more.
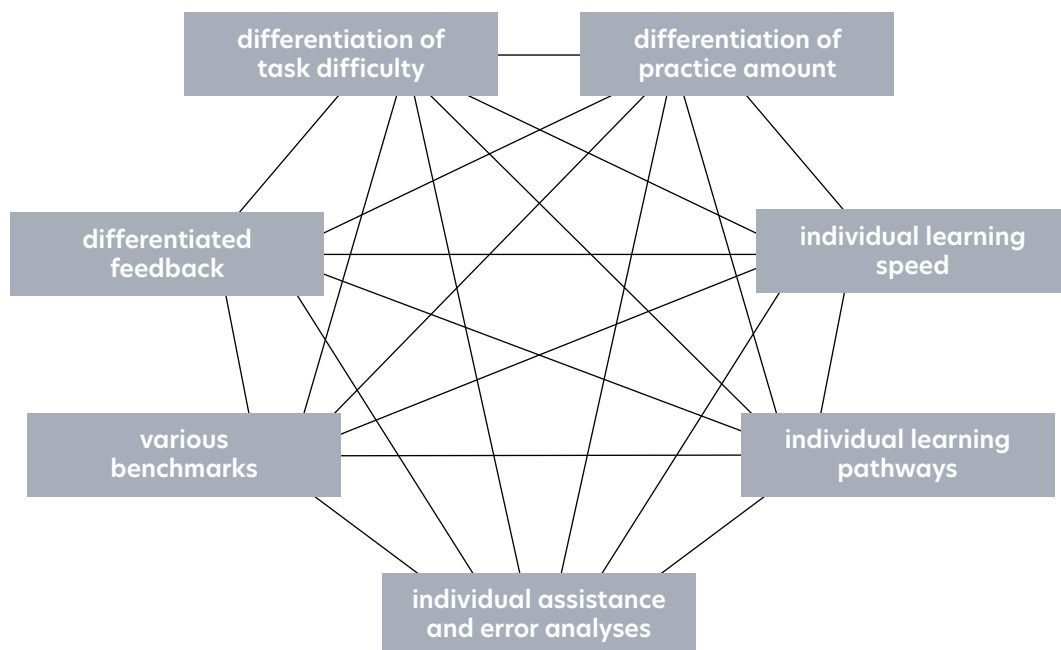
Seven aspects of individualisation of teaching according to Walt (2014, p. 16)

## 11.	Note: no learning progress without *consolidation* and *intelligent practice*

Hilbert Meyers' suggestions for practice are easily implemented. It is important to practice often, but not for too long, in accordance to the learning level and with the support of the teacher, particularly concerning the techniques for learning and practicing. Contrary to the image, often created by teachers themselves, practicing can be fun, above all, when it is practiced voluntarily, when there is room for self-determination, when the success of practicing is easily recognised, and when there is interest in the subject matter. Practicing should affect various levels: the automaticity (e.g. mathematical algorithms), the increase in quality and a deeper understanding, respectively (e.g. reading competence) and the level of transfers.

## 12.	*Self-guided activity, learning tasks and homework assignments:* no learning without student activity

Self-activity implies that the learners work for a specified time alone, in pairs or in groups, without interruption and intervention by the instructor. Self-guided activities are possible in all subjects. The referenced text *Rezept Lernaufgabe*[32] (Prescription for learning tasks) shows how self-guided activities can be built into almost any average teaching session: following an introductory assignment by the teacher, preceded by informational input as needed, the students work autonomously for a minimum of 15 minutes. This is followed by a presentation of the results or a review of sorts, for example. The study of the corresponding chapters by Grell and Grell is rewarding for any instructor and offers helpful practical tips.

Homework assignments are a controversial form of self-activity. Since learners receive varying degrees of help with homework assignments depending on their social background, homework assignments tend to accentuate the inequality of opportunity. An alternative, which many schools have adopted, consists in offering supervised homework hours. It is undisputed that through homework assignments the time of (autonomous) learning can be increased significantly. Correctly designed homework activities require that they are rich in variation, that they support the processing and preparing of the subject materials, that they complement the subject and do not attempt to teach any new material. Homework assignments must be clearly defined and limited in terms of time, so that the students and their parents know how long to spend on it.[33]

How to set learning objectives and define competencies

▶ **Learning goals**

Establishing goals for your teaching is considered a preparatory activity which must occur in the context of comprehensive, differentiated lesson planning. Goals cannot be set in an isolated fashion, independent of other considerations and planning steps.

The formulation of objectives has been thoroughly analysed by Robert F. Mager, an important proponent of curricular didactics, in his publication *Lernziele und Unterricht* [34] (Learning objectives and teaching). According to *Mager*, appropriately formulated goals must first be able to articulate the aims of the lesson in a simple and comprehensible manner. This is important as the goals are logically communicated to the students – either orally or in writing. Precise terminology should be employed to render your stated objectives as clear as possible. It is recommended to avoid such formulations as "the students know" or "the students understand" and to use more specific expressions instead, like "the students can….distinguish" or "the students can enumerate from memory".

Furthermore, a precise description of goals allows you, as instructor, to better review teaching success. To facilitate this assessment, you should incorporate the expected student activities during the lesson in the formulation of objectives as well as enumerate the criteria and level which you have determined as satisfactory.

Goal formulations ideally create a traceable connection of technical objectives on the one hand, and generic and social goals on the other hand. With instructional differentiation and individualisation in mind, it is recommended to always distinguish between fundamental objectives and extended goals.

▶ **Competencies**

Due to the lack of vital components for a "theory of competence-oriented didactic [...] currently only facets, building blocks and preliminary considerations"[35], it is useful to follow a preliminary pragmatic proposal for a competence-oriented instruction, as outlined by Andreas Feindt and Hilbert Meyer.

According to these two authors, competence-oriented instruction means placing student learning results at the centre, and teaching with a goal that enables the learners not only to acquire knowledge, but to master concrete challenging situations. As an instructor, you must orient yourself on given, staggered models of competency, and develop or adopt a curriculum which allows students' development in the direction of the formulated competences. Closely monitoring the students and checking their achievement levels is necessary to be able to fully deploy such suitable teaching programmes. [36] Thus, the learning assignments are placed at the very centre of competence-oriented instruction, whose development is not only the responsibility of the individual teacher, but the didactic experts as well.

1.4 Practical exercises

Here are some additional tasks for reflection for in-depth use and follow-up work.

a)   Instructional quality criteria:
What can you do well already and where do you want to improve?
After studying this chapter, consider which three of the characteristics of good teaching you perform well already, and which three you wish to improve in the near future.

Already well-mastered characteristics	Characteristics to be worked on

Every month, select a "characteristic of the month" and focus on it with special emphasis in your classroom planning, conducting the class, and reflection on your classroom teaching. Also mention partial aspects to which you would like to pay special attention. As a teacher trainee or teacher training intern, this task would ideally concern your practical work. Example:

Month	Characteristic and partial aspects to consider

b)   Ask your students …
… if they feel comfortable in class and if they like the learning environment. Identify the resulting consequences for yourself and write them down. Example:

Student statements	Student suggestions	Resulting consequences

In the light of your professional identity as a teacher: what do you think about the students' statements? What kind of consequences do they have on your professional teaching? Which statements do your regard as relevant? Which ones do you not understand as a teacher?

c)   **Classroom management I:**

How well did you implement Kounin's recommendation?
Following a classroom session, enter which of Kounin's strategies you implemented well, applied partially or did not follow in the list below.

	Date Lesson	Applied well	Applied partially	Did not follow
Omnipresence "with it"-ness The students should have the impression that their teacher keeps an open eye and ear on all their activities, so that disruptive incidents are not consciously "overlooked" and difficult problems are not tolerated.				
Overlapping Unavoidable disciplinary problems should be dealt with "in passing" and without much fuss so as not to disrupt the flow of teaching more than necessary. The preparation and implementation of media elements should occur routinely (automatically, so to speak), so that the focus of attention remains on the class. Generally speaking, it is important that work proceeds simultaneously on various problems and that individual student needs to be addressed, respectively.				
Speed (promptness), smoothness, momentum Needless disruptions of class flow should be avoided. The precondition is adequate lesson planning, particularly the avoidance of rush (overload of material) and boredom (lack of sufficient material, monotonous work). A negative example for lacking flow is sticking to notes and small pieces of paper. Other examples are idling verbosity or over-problematising of minor details.				
Group activation (group focus) Even when only one student is at the centre of activities, all students must follow the class proceedings, with the teacher maintaining the focus on the whole class or group. For example, the class receives clear instructions before the teacher engages in a dialogue with an individual student.				
Transition management The transitions between different teaching segments or phases should occur through a short and unambiguous segue (for example: acoustic signals, certain gestures) and without any loss of time. Rest breaks or relaxation pauses can be granted, rituals for de-escalation may be instituted.				
Avoiding mock participation Teachers should be aware of feigned attentiveness; students are known to develop clever rituals to create the appearance of paying attention and lively interest (intense head-nodding, furrowing their brows in apparent concentration, etc.); commonly known as "school survival skills".				

Repeat these tasks in the following classes with the intention of particularly observing one of Kounin's strategies that has not yet worked very well.

d)   Classroom management II:

How do you manage your relationship with the students?

Discuss with others the questions from the self-test by Rüedi[37]. Follow these discussions with reciprocal classroom visits, if possible, and use the self-test as checklist for your observations and basis for discussion after the visits.

Self-test[38]

1.	How is my relationship to the students? Can I build up a good relationship with them?
2.	Am I aware of and do I recognise the needs of the students?
	▶ Do I facilitate student learning success?
	▶ Does my teaching involve a sensible balance between spontaneity, fun, humour, joy, pleasure and fulfillment of duties, displeasure?
	▶ Do I recognise and acknowledge my students?
	▶ Do I pay attention to their social integration in the class?
	▶ Do I watch out for social manners and conversational tone in the classroom?
	▶ Do I help with formulating democratic rules and appreciative social manners?
	▶ Do I recognise the student self-worth needs? Do I encourage and support them?
3.	Is my classroom teaching well-prepared and interesting? Do I explain the materials in a clear and concise manner?
4.	Do I recognise the multiple criteria of school effects?
5.	Do I know the parents of my students? Have I informed them about my approach to teaching? Do they support my disciplinary efforts?
6.	Is my teaching approach effective? Do the students follow my directions?
7.	Can I explain and analyse any disciplinary problems which may arise?
8.	Do I react appropriately when disciplinary issues and conflicts arise? Do my reactions have an effect? Do I have a certain repertoire of reaction measures and responses?
9.	Do I know the possibility of "covenants"?
10.	How do I deal with punishments?
11.	Do I see the possibility of personal growth in my professional work?
12.	Do I have a personal concept about discipline and classroom management? Do I have a concept for influencing the social development of my class for the medium-term and long-term?

Based on your personal perspective, write down a few key words for the self-test.

_____

_____

_____

2.   Teaching and learning concepts

2.1   Didactic approaches

Classroom learning and school life are part of lifelong learning. Learning in all learning situations and in all subjects needs to be matched with participatory methods of teaching and learning. Teachers need to be aware of the powerful signal that comes from classroom practice. Teaching therefore becomes a distinctive form of educational activity that aims to equip young people with the competencies needed to participate as active citizens, and as such employs and engenders distinctive forms of learning. Teachers need to be "fluent" in these forms of learning and able to put them into practice in different settings.

These different forms need to be understood:

▶   **Inductive**
Presenting learners with concrete problems to solve or make a decision about and encouraging them to apply this to other situations – rather than by starting from abstract concepts.

▶   **Active**
Encouraging learners to learn by doing, rather than being told or preached to.

▶   **Relevant**
Designing learning activities around real situations in the life of the school or college, the community or the wider world.

▶   **Collaborative**
Employing group-work and co-operative learning.

▶   **Interactive**
Teaching through discussion and debate.

▶   **Critical**
Encouraging learners to think for themselves, by asking for their opinions and views and helping them to develop skills of argumentation.

▶   **Participative**
Allowing learners to contribute to their own learning, for example by suggesting topics for discussion or research, or by assessing their own learning or the learning of their peers.

2.2   Didactic approaches

Using Bloom's taxonomy to prepare learning tasks makes it easy to clarify learning objectives and develop classroom activities for any learner at any age. Teachers can even use Bloom's to help students set expectations for themselves. Action verbs put the learners' activities at the centre.

	I. Remembering	II. Understanding	III. Applying	IV. Analysing	V. Evaluating	VI. Creating
Category	Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.	Demonstrate understanding of facts/ideas by organising, comparing, interpreting, giving descriptions, and stating main ideas.	Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalisations.	Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.	Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions.
Verbs	• Choose • Define • Find • Label • List • Match • Name • Recall • Relate • Select • Show • Spell • Tell Specify: ‣ What ‣ When ‣ Where ‣ Which ‣ Who ‣ Why	• Classify • Compare • Contrast • Demonstrate • Explain • Extend • Illustrate • Interpret • Outline • Relate • Rephrase • Show • Summarise • Translate	• Apply • Build • Choose • Construct • Develop • Experiment with • Identify • Interview • Make use of • Model • Organise • Plan • Select • Solve • Utilise	• Analyse • Assume • Categorise • Classify • Compare • Conclusion • Contrast • Discover • Dissect • Distinguish • Divide • Examine • Function • Inference • Inspect • List • Motive • Simplify • Survey • Take part in • Test for	• Agree • Appraise • Assess • Award • Choose • Compare • Conclude • Criticise • Decide • Defend • Determine • Estimate • Evaluate • Explain • Influence • Interpret • Judge • Justify • Mark • Measure • Perceive • Prioritise • Prove • Recommend • Select • Support • Value	• Adapt • Build • Change • Choose • Combine • Compile • Compose • Construct • Create • Delete • Design • Develop • Discuss • Elaborate • Estimate • Formulate • Imagine • Improve • Invent • Maximise • Minimise • Modify • Plan • Predict • Propose • Solve • Suppose • Test

2.3 Four key approaches to be considered

To further mutual discussion and support between the mentor and the student teacher, the teacher in a peer-to-peer learning setting or the teacher and the inspector, four especially important approaches will be described here in a very concise form:

▶	**Key approach 1:** Task-based learning
▶	**Key approach 2:** Cooperative learning
▶	**Key approach 3:** Chairing plenary sessions
▶	**Key approach 4:** Rethinking discipline and order from a participatory point of view

a)   Key approach 1: task-based learning (TBL) – how to support learning by setting tasks

Interactive teaching and learning play a key role in a lot of tasks and activities in every-day teaching. The objectives of interactive teaching are cognition (that is, thinking and understanding), learning, and action. Every stage of planning lessons, monitoring tasks, evaluating results and reflecting on the whole process has a lot of hidden learning potential for the students.

The basic approach of integrating thinking and doing has implications for the whole process of learning. It does not mean that active handling of learning objectives is confined to the preliminary stages of "real" learning, which is then understood to involve only the minds of learners. Rather, integration of learning and doing can give all learners a clear idea of why they are learning by doing: they have a task to do, and this requires many abilities and skills. In this kind of teaching, the learner must define their own learning needs in each new situation that arises. Learners will then also require instruction by the teacher, which means that students set their teacher tasks, and not vice-versa. Task-based learning (TBL) produces ideal combinations of constructivist learning and learning by instruction.

In TBL, students face problems that they wish to solve. Learning is not the end in itself but leads to something useful and meaningful. Students learn by exploring ways to solve a problem, setting themselves, and their teacher, the tasks that pave the way to the solution of the problem. School is life. This also applies to task-based learning. Many real-life situations consist of finding solutions for problems. TBL prepares students for life by creating real-life situations as settings in which the acquisition of competences can take place.

TBL follows a pattern that can be described in general terms. If the teacher keeps to this pattern, the potential of learning by doing, i.e. active learning, will unfold almost spontaneously:

Elements of task-based learning:

▶ The students face a task that needs to be solved (presented either by the teacher or a textbook).

▶ The students plan their action.

▶ The students implement their action plan.

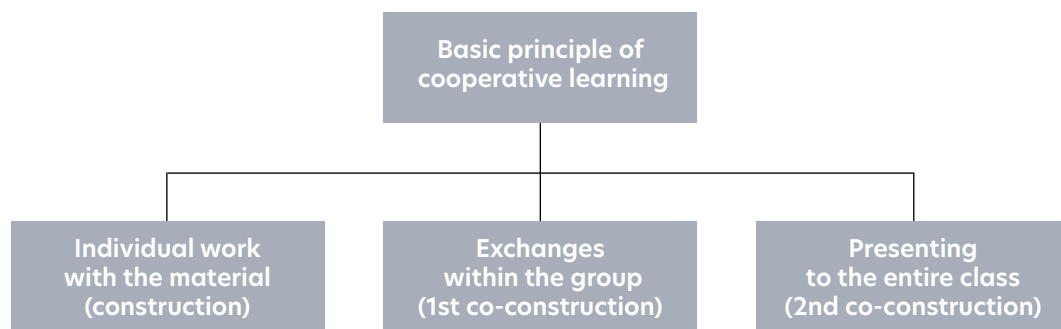▶ The students reflect on their process of learning and present their results.

It is important for the students to experience the principles of TBL frequently and in different contexts. A good task that gives rise to many problems that require solving is the best means to create a productive and exciting learning environment.

b)   Key approach 2: co-operative learning

How to support learning by supporting each other

This form of teaching is not about simply letting students work in groups in the hope that the work will somehow get done. Co-operative learning is focused on achievement for learners. Clear role distribution among the members of the group is a prerequisite for successful teaching according to the co-operative model. Formal tasks that provide equal status among the members are distributed and practised and this leads to successful learning.

Co-operative learning follows one basic principle which is described by "The interplay between individual learning phases and cooperative learning is directed and followed by the instructor and pursues, in addition to the promotion of social and personal competences, the goal of activating the students preferably in a way that they are able to achieve learning gains."[39] In so doing, the playbook for cooperative learning provides roughly three phases. Following a phase of individual work, the learners are able to "co-construct" their individually acquired knowledge in an active exchange with other learners during the subsequent phase. The third phase occurs in the second co-construction; the students present their group results to the entire class. This fundamental principle is found in all cooperative learning methods[40]:

```
                    ┌─────────────────────────┐
                    │   Basic principle of    │
                    │   cooperative learning  │
                    └─────────────────────────┘
```

| Individual work with the material (construction) | Exchanges within the group (1st co-construction) | Presenting to the entire class (2nd co-construction) |

Fundamental principle of cooperative learning according to Brunig/Saum (2011, p. 6)

This fundamental principle of cooperative learning is premised on two major assumptions: learning is first and foremost an active, mental exploration of the subject matter (student activation) and, secondly, all learners should be mentally activated *simultaneously*[41]. The following section will briefly characterise the three phases.[42]

▶ *Phase 1:* **Individual work**

The students connect the material with their prior knowledge and develop their own mental constructions to the respective assignment. They can acquire this knowledge in different ways: by remembering a lecture or something that they have read or heard, or they gather information from a text, a picture, a statistic. They do this alone and preferably write down or create sketches about their insights. They are individually responsible for their own learning.

▶ *Phase 2:* **Exchanges in the group (co-construction 1)**

The students exchange information and results with other students and share feedback about it. The discussions mostly exceed the scope of what has been communicated. This triggers students' mental activation again and they have to re-think their own insights, if only to relate them to the others in a clear and stuctured way. The co-construction develops through the suggestions of other students. A student's own findings are enriched, rejected, verified and expanded. Ideally, learning from others can occur, and new insights move the individual onto a higher development step. A common model emerges.

▶ *Phase 3:* **Presenting to the whole class (co-construction 2)**

The students present their group results to the whole class, and thereby exchange information with the other students. A similar process of co-construction emerges. In cases of contradictory results among the various groups (if the assignment did not allow for an open solution of the problem or required a certain answer), the students often recognise themselves where the errors occured in their findings. This is the point where the most significant learning progress occurs. The learners are not only activated, but they are led to an individual, independent assessment and problem solution.

Not every task is suitable for this form of learning. However, a polarised relationship, with co-operative learning forms interspersed with teacher-led teaching is not what is meant here. In this model of teaching, the teacher plays a clear and meaningful role. The success of co-operative learning, as many class comparisons have shown, hinges on a few basic elements:

How to go about organising a group:

Each person in the group is assigned one of the following roles:

▶ **Moderator**
This person ensures that all the members understand the task and acts as the group's speaker.

▶ **Reporter**
This person organises the presentation or final product.

▶ **Materials manager**
This person ensures that all the necessary materials are available and makes sure that everything has been cleaned up at the end.

▶ **Planner**
This person makes sure that the group manages its time well and checks that the group sticks to its schedule. This person makes sure that the group plans out its course of action in a reasonable way at the beginning of the assignment and adapts this plan accordingly.

▶ **Mediator**
This person solves any problems within the group.

Rules:

▷ Some members of the group have special tasks/roles, but every single person is responsible for the entire process and the group's results.

▷ If a question is to be asked the teacher, then the whole group must decide which question is to be asked. In this way, the group formulates any questions collectively. The teacher does not answer any individual questions during this group process.

▷ Each group is responsible for the presentation. Each member of the group is responsible for answering any questions.

▷ Teachers who frequently work with the cooperative method say that it often makes sense for learners to keep their roles for a longer period of time. This provides a certain security, speeds up learning, and improves group performance.

c)   Key approach 3: chairing plenary sessions

How to support learning through discussion and critical thinking

Guided by their teacher, students share their thoughts and ideas - nothing more. The setting is simple, and it requires only a whiteboard or flipchart, but the teacher's task is a demanding one. Plato's Socratic dialogues mark the long tradition of this mode of teaching, as Socrates focused on problematising and deconstructing his partner's false or dogmatic views.

The students engage in a process of thinking and interactive constructivist learning and the teacher supports them. Generally speaking, thinking is the effort to link the concrete to the abstract. Plenary sessions train and reinforce the students' ability to think. Thinking takes time. Careful students are often slow thinkers. Critics have rightly pointed out the weaknesses of this form: it is applied too often and too long; teachers ask questions that students are uninterested in and unable to answer; teachers enact a crude Socratic type of role, treating students as inferiors who are expected to deliver what the teacher wants to hear. But if used thoughtfully, and with a certain amount of practice, plenary sessions are one of the most powerful and flexible, and indeed indispensable, learning forms.

The following checklist outlines the learning potential and gives the teacher advice on what to do and what to avoid.

The students' (pupils') role in plenary discussions:

The students
▶   enter the session with some expertise – on different levels, so one is interested in the topic;
▶   know that their contribution is welcome: no grades are given for "wrong" ideas or suggestions;
▶   have the lion's share of speaking time;
▶   have different learning needs (for example: "slow thinkers" – "fast talkers").

The teachers' role in plenary discussions:

The teacher
▶ communicates with the class and is ready to react to whatever the pupils say;
▶ fully grasps the topic and has a clear idea of the outcome of the session;
▶ leads – but does not dominate – the plenary session, taking a small share of speaking time;
▶ gives the pupils sufficient time to think;
▶ listens actively without taking notes, "fleshing out" ideas that students hint at;
▶ encourages pupils to participate and addresses students who tend to stay silent;
▶ acts as time keeper, group manager, process manager;
▶ gives structure to the discussion by using the whiteboard (preferable to a flipchart), offering images, symbols, examples, information, concepts and frameworks.

Learning potential for the students/pupils during plenary discussions:

The students
▶ experience how thinking takes place: asking questions, carefully considering answers, linking the concrete to the abstract and vice-versa;
▶ share their criteria for judgment and reflect on the reasons for their choice of criteria;
▶ should experience their class as a micro-community in which they are encouraged to participate;
▶ are addressed as experts (to strengthen their self-esteem);
▶ are able to pass judgment after having considered controversial views.

The teachers' role in plenary discussions:

▶ Asking yes/no questions should be avoided, because you will then have to ask the next one immediately afterwards. Ask open questions.

▶ Avoid getting drawn into a discussion with one or two students.

▶ Avoid side-stepping or ignoring statements by students that catch you unprepared. They may be the most interesting ones! Once again, get the class involved.

▶ There is no need to comment on every single statement by students that you agree or disagree with.

▶ Avoid restricting your role to calling on students in the order of their showing hands. Quite often, students will address different aspects and sub-topics, and the discussion may slip into confusion or chaos. There-fore, take the initiative and decide or suggest which topic to focus on first. Point out the dilemma that time and concentration is too limited to discuss everything.

d) Key approach 4: rethinking discipline from a participatory point of view

There is a misunderstanding in some classrooms when it comes to participatory approaches to teaching and learning. "Am I allowed to give clear instructions, set time limits, be a leader?", some teachers ask. Is it still participatory if I want to have clear rules for learning, behaviour and cooperation? Yes it is, if it serves the goal of learning for all! Participation means the rule of law. So, discipline and order are important, but from a participatory point of view. Supporting student teachers to establish this will help them to become a competent leader, rather than an authori-tarian ruler. Here is some important advice to follow:

▶ Order is necessary under all circumstances. A group without order and basic rules cannot be democratic.

▶ Limits and boundaries are necessary. Rules may be wrong or inappropri-ate. But as long as they have not been replaced they must be respected. It must, however, be possible to change them.

▶ From the very beginning, pupils should participate in setting up and enforcing rules. Only in this way is it possible for them to identify with the rules.

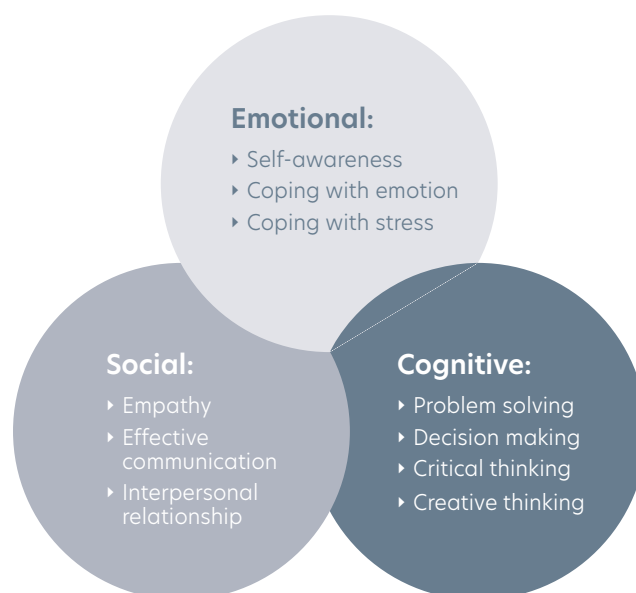|	
▶	A classroom community cannot function without mutual trust and respect. In some cases it may prove difficult to create such an atmosphere.
▶	Team spirit must replace competition in the classroom.
▶	A friendly classroom atmosphere is of vital importance.
▶	The social skills of the teacher have an essential impact (democratic leadership, developing a feeling of belonging to the group, building up relationships, etc.).
▶	Group communication is a permanent necessity in a democratically led class.
▶	Students, both boys and girls, must be encouraged to explore something new and to learn from mistakes.
▶	Within the limits set, it must be possible to exercise liberties. Only in this way is it possible for individual responsibility to develop.
▶	Rules will be accepted and discipline complied with if they help each individual to express themselves, and if they support the group to develop satisfying relationships and working conditions.

3.   Personal development

3.1 Curriculum, competencies and skills

"I cannot be a teacher without exposing who I am."

Paulo Freire

The subject of personal development focuses on teaching transversal and life skills to students that are needed for physically and mentally healthy development. Personal development supports the development of students' personal identities. These life skills and competencies include those that children and adolescents need in the different school and life situations that they will encounter in their present and future lives, whether private or professional. They can be broken down in three main dimensions of social, cognitive and emotional competencies (WHO 2001) [43].

Emotional:
‣ Self-awareness
‣ Coping with emotion
‣ Coping with stress

Social:
‣ Empathy
‣ Effective communication
‣ Interpersonal relationship

Cognitive:
‣ Problem solving
‣ Decision making
‣ Critical thinking
‣ Creative thinking

Life Skills (World Health Organisation 2001)

▶ **Cognitive skills**
such as problem-solving skills, creative thinking skills, critical thinking skills and meta-cognitive skills;

▶ **Social skills**
such as communication and co-operation skills, interpersonal relation-ship skills and empathy;

▶ **Self-awareness skills**
such as self-responsibility, decision-making skills and self-reflection skills;

▶ **Emotion-regulating skills**
such as dealing with emotions, dealing with stress and conflict-solving skills.

The skills used in this personal development programme follow the framework of the World Health Organisation's definition of skills that individuals need for success throughout the course of their lives (2001). It is important to note that all life skills overlap with each other and can best be supported through a holistic approach. Cognitive skills can never be trained without focusing on social and self-awareness skills, emotion-regulating skills can never be trained without also taking into account social skills and so forth.

Personal development and life skills education is embedded in all school subjects and is always connected to learning content that is relevant to the individual at their current state of development. The content and tasks in the subject personal development are targeted at different age groups and grades. Throughout the curriculum of compulsory schooling, teaching life skills becomes more and more complex, following similar topics each year and focusing on the same skills throughout the entire time at school. Life skills education is built up progressively from an early age onwards, starting at the entry point into the school system at kindergarten or primary school and lasting until the end of compulsory education. Over the course of the students' school lives, personal development skills are taught through a spiral curriculum: they are repeated in each school year, but each time at a more complex level.
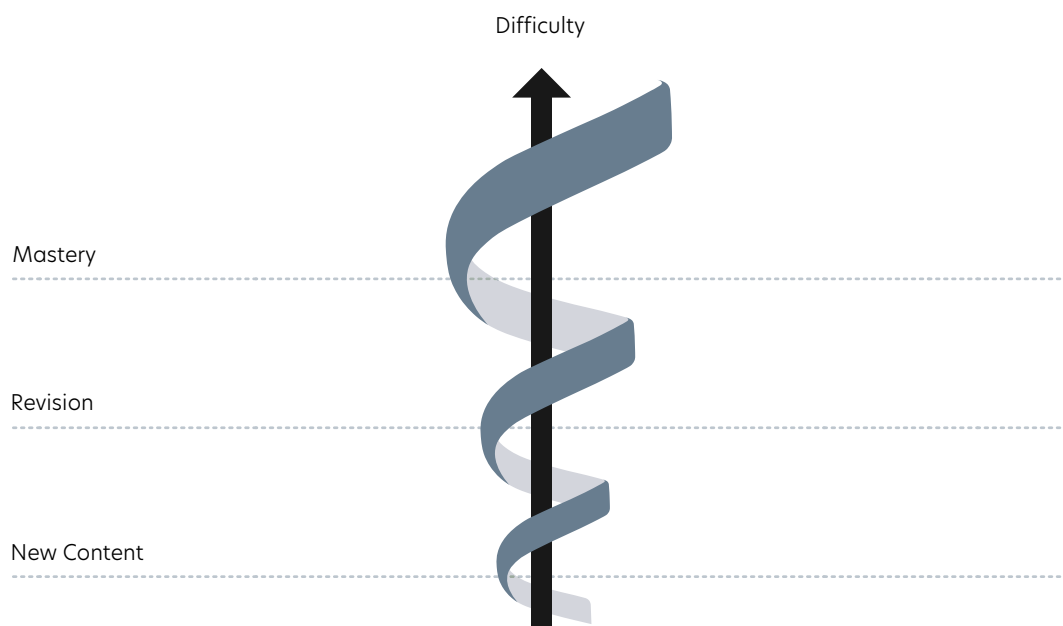
The Spiral Curriculum, Personal Development Manual (2020)

The spiral curriculum of personal development and life skills education can be described as an approach that presents different key concepts for learning with increasing degrees of complexity throughout progressive school years. Following the paradigm of the early educationalist and psychologist Jerome Bruner[44] that "any subject can be taught effectively in some intellectually honest form to any child at any stage of development" (Bruner 1960, p 10), the spiral curriculum is the underlying pedagogical principle of this programme. Information, topics and tasks are

introduced to children at a young age and continually reintroduced, reinforced and built upon. Not only will proficiency in the different life skills be developed through this adaptive learning method, but the meaning and significance of what is taught also becomes an integral part of the programme. This spiral curriculum includes ideas, principles and values that are significant to the students as they mature, and to wider society as a whole. Thus, this programme also follows the approach and paradigm of life-long learning.

3.2 Curriculum, competencies and skills

In the subject personal development, life skills are taught in a sequence of five modules that comprise key concepts. These are:

1.	Self-knowledge and knowledge of others emphasising self-knowledge and self-esteem, exploration and self-evaluation of personal resources, family as a value: responsibilities, gender roles, stereotypes, assertiveness, non-conflictual and non-violent communication, volunteering, etc.
2.	Ensuring quality of life with an emphasis on integrity, efficient resource management, responsibility for sustainable development, good self-management, etc.
3.	Healthy lifestyles guiding students on issues related to physical and emotional health, healthy food, counteracting vices such as drugs, alcohol, smoking, gender influences, etc.
4.	Designing personal careers and developing entrepreneurial mindsets with an emphasis on occupational understanding from a labour market perspective, career planning and career decision making, entrepreneurship as a career option, etc.
5.	Personal safety focusing on behaviour to ensure personal safety and the safety of others.

Following the spiral curriculum, each manual in this series uses the same structure of modules and key concepts. The tasks are spread out over one school year, with four tasks per module. Each manual therefore consists of 20 tasks in total. However, topics and tasks for students often overlap: a task about healthy lifestyle will touch on ensuring quality of life and the art of self-knowledge; a task centred on career options for older children will also touch on self-knowledge and ensuring quality of life, and so forth. Therefore, life, the tasks are organised into five modules, they cannot be viewed as completely separate.

The modular approach insists on an educational intervention characterised by the integration of knowledge, skills and attitudes specific to the development of competencies. The integrative approach is applied within each module, capitalising on

progress made in other school subjects, or the student's social and familiar environment. In this way, the subject personal development is centred on the development of competencies with a specific focus on values, attitudes and dispositions.

How should I teach the modules?

The different modules and tasks in personal development are laid out chronologically for each school year. We advise adhering to this order as it builds up different life skills incrementally through the key concepts in a carefully designed process. The teaching and learning methods used in PD include task-based learning and co-operative learning methods. Both are grounded in a cognitive-constructivist view of learning where learners construct their knowledge through self-engagement with a given task at an individual level, exchange their insights in dialogue with a partner or small group and then share their results with the class. This principle of "think – pair – share" can be found in a number of tasks and itself contributes to the development of social and co-operative skills. The self-reflection of learning processes and the reflection together with others is an important part of personal development and can be found in the different tasks.

What is my role as a teacher?

In personal development, it is the teacher's role to initiate and guide learning processes, to coach and accompany students in their learning and to help them overcome difficulties. Teachers have to be aware that this might mean a change in their roles towards becoming coaches and facilitators. This change also refers to the assessment of learning processes and the evaluation of learning outcomes. Students are required to find their own problem-solving strategies: independently assessing a problem and critically evaluating different ways of solving it. Therefore, each student's learning outcome is viewed individually. Personal development results cannot be summatively graded in a class ranking. Assessment of learning processes has to take place in a formative manner, which means that teachers continually observe and evaluate students' learning processes and not only their results. Giving individual and personal feedback becomes a very important part of the teachers' role.

How are students assessed?

Assessment in the subject personal development is formative during teaching and learning in a given module. Summative assessment can take place after each module has been taught by using a criteria-based assessment tool. The summative assessment is based on students' self-assessment in accordance with descriptors for competencies that have been developed in each module. The students identify their own development potential and set future goals. Following this, the teacher gives each student feedback in the form of constructive criticism, focusing on building on competencies and strengths rather than on deficits. The assessment forms will become an important part of the student's file.

How do I evaluate my own teaching?

Any form of teaching calls for a regular evaluation of and reflection on one's practice. This can be done through self-evaluation using key questions focusing on the goals set, competencies of students, learning outcomes, activity of students, etc. Reflection can also be done together with a colleague (peer exchange) after mutual observations of personal development lessons. We recommend setting personal focal points and communicating them to one's partner before the observation takes place in order to gain something concrete out of this exchange. Feedback should be given in the form of collegial constructive criticism.

How should parents be involved in the subject personal development?

Personal development classes take place in school. However, for a variety of tasks, students receive a homework task that may involve asking their parents or relatives for information (e.g. about their biographies, about rules, about the past, etc.). We recommend introducing personal development classes at a parents' evening at the beginning of the school year. Parents and family are an important part of children's personal development, identity, norms, values and future perspectives. Teachers should inform parents about the character of the personal development programme, give an overview of its different modules and how students will work in these classes (alone, in pairs, in groups, etc.). Parents can be encouraged to take part in the learning process of their children and start associating with school in a positive way. Furthermore, personal development is a subject where integration of the outside world and the community of the school plays an important role. In some tasks, students will have to collect information, communicate with people and discover phenomena that are part of their community. Therefore, the subject personal development is connected to the classroom but also becomes a part of the whole school development and the involvement of all stakeholders in the community.

4. The concept of school-based in-service training as a part of school development (SITT)

School-based in-service training programmes are usually part of a whole-school school development process aiming at teacher professional development. In most cases, SITT programmes include elements such as mentoring, peer-coaching, and peer-feedback/learning among teachers as fixed elements. A structured process that includes inputs by mentors or expert teachers can be added depending on the school development process's focus. For this purpose, expert teachers will have to acquire the necessary knowledge, expertise, and experience in adult learning. Reflection as the central idea of SITT as a motor for professionalisation can be viewed as another element. Ideally, a SITT programme leads to a school culture where communities of practice are established in the long run.
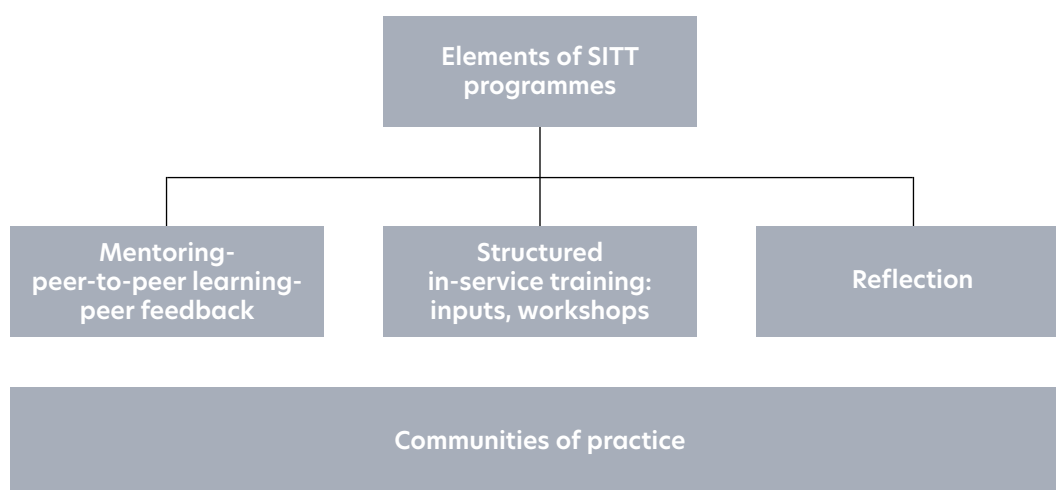
Elements of SITT programmes

a) Mentoring

International data shows that school-based mentoring programmes on students' levels (e.g. adult-student mentoring, peer-mentoring) support the academic achievement of students as well as the development of transversal competencies positively (e.g. self-concept, self-efficacy, friendship, etc.).[45] Mentoring at teacher and student level is often associated with an apprenticeship model with a younger, inexperienced person seeking guidance from an experienced expert.[46] Recent definitions of mentoring among students and teachers in schools also point out the transformation of formerly hierarchical roles between mentors and mentees to a lateral relationship at an eye-to-eye level.[47]

Mentoring in school-based in-service programmes can be differentiated from other forms of counselling (e.g. supervision, coaching) with one significant distinction: in mentoring, both involved partners – mentor and mentee – are supported in their professional development.[48] In a school context, mentoring among teachers, therefore, is understood as the personal and professional development of teaching staff.[49] Through continuous exchange, co-operation can be intensified, and the sense of belonging to the school can be supported by all involved. Usually, the mentoring element is adapted according to the specific needs, goals, and context of the involved teachers. The following table gives an overview of the different forms of mentoring in a school context.[50]

Mentor	Mentee	Situation	Main purpose
Schoolteacher	Student-teacher	Pre-service short-term practicum or one-year practicum	Learn how to teach from a model-teacher
Experienced school teacher	Novice teacher	Beginning at school: introduction phase	Develop basic teaching competencies
Teacher of subject matter	Teacher of subject matter	In-service: school-based/internal co-operative partnership; team model	Reflection, problem-solving, curriculum developing
Expert teacher (coach, supervisor)	Teacher	In-service: external partnership	Improve and extend teaching competencies
Headteacher	Teacher	In-service: external partnership	Staff development, develop leadership qualifications; career promotion

Forms of teacher-mentor-mentee relationships (Raufelder & Ittel, 2012,
adapted from Fischer & vanAndel, 2002)

According to this overview, mentoring programmes in schools can be implemented at different stages of teacher education. In Switzerland, Austria and Germany, Teacher Training Universities organise mentoring programmes for student teachers or novice teachers as mentees like at the Zurich University of Teacher Education.[51] In some programmes, class teachers and teacher students also form peer-tandems and organise school internships as peer-mentoring possibilities, involving joint planning, teaching, and reflection sessions at eye-level.[52] Other programmes put the focus on peer-coaching between student teachers, installing tandems of more experienced student teachers with less experienced student teachers or same-level student teachers with each other.[53] Mentoring programmes within school-based in-service training programmes are initiated and implemented by the schools themselves as staff development and quality assurance measures. Through mentoring, peer learning takes place. In this respect, it is essential to note that the term "peer-support" is not identical with "peer-mentoring" or "peer-learning". Peer support refers not to a format or method but describes the grassroots process of like-minded colleagues to support each other informally.[54]

Scientific literature distinguishes three basic approaches to peer mentoring pro-grammes.[55] They do not necessarily follow a chronological order and can also be described as phases.

> **Apprenticeship approach:**
> The focus lies on acquiring methodical hints, techniques, and approach-es in classroom management and teaching practice. In the apprentice-ship approach, the mentor takes up the role of technical supporter and instructor.

> **Humanistic approach:**
> The focus lies on counselling in different learning areas. The mentor takes up the role of an active counsellor, provides feedback, and acts as a coach. They serve as a role model for the mentee.

> **Critical-constructive approach:**
> The focus lies in developing an autonomous and professional attitude towards teaching and supporting reflection competencies. The men-tor takes up the role of a partner/motivator who keeps an eye on the mentee's professional development. The mentor also helps the mentee finding their way by sharing knowledge, experience, and network op-portunities.

The third role within the critical-constructive approach is where mentors should find themselves in a sustainable working process.[56]

Roles and competencies of mentors within a SITT programme

As described at the beginning of this chapter, mentoring programmes are defined by a mutual professional (and personal) development of mentors and mentees. Moreover, the relationships within a mentoring process described as follows: [57]

> Mentoring represents a unique relationship between two individuals.

> Mentoring always means a relationship geared towards the gain of knowledge and new experiences.

> Mentoring always means a process.

> The relationship between mentor and mentee is asymmetrical but not reciprocal.

> Mentoring partnerships are dynamic relationships.

Mentors in a SITT programme can be experiences teachers or fellow teachers who received additional training in the subject area, making them "expert teachers" and in skills and competencies needed for mentoring and accompanying learning pro-

cesses of individuals. What are the competencies of mentors in schools? Teachers who act as mentors need a set of competencies in different areas. The well-known model of teachers' competencies by Baumert & Kunter (2013) [58] can be adapted and used as a framework and starting point for detecting necessary competencies for mentors even though it was not explicitly developed for SITT programmes. According to this, the model uses professional competencies as a set of

▶ motivational orientations;

▶ beliefs, values, and goals;

▶ self-regulation and

▶ professional knowledge.

Baumert & Kunter (2013) break down the dimension of knowledge using the example of mathematics into content knowledge (e.g. deep understanding of school mathematics), pedagogical content knowledge (e.g. explanatory knowledge, knowledge of students' mathematical thinking, knowledge of mathematical tasks) and pedagogical/psychological knowledge (e.g. knowledge of students' assessment, knowledge of learning processes, knowledge of effective classroom management). Apart from this, teachers also need organisational as well as counselling knowledge.
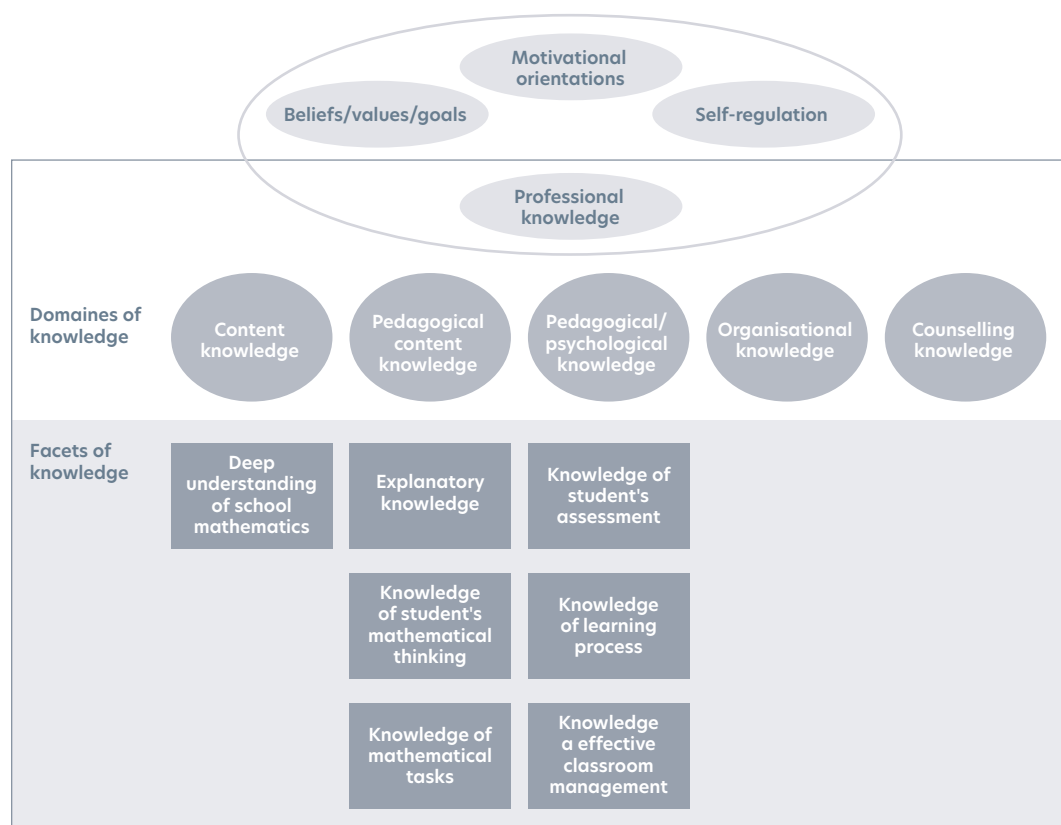
The COACTIV model of professional competence (adapted from Baumert & Kunter, 2013)

Organisational knowledge in this respect includes knowing different roles within the school and an understanding of different stakeholders outside the school, and a notion of the mechanisms of the school system. In the context of SITT, organisational knowledge also means knowledge about different networking possibilities and knowledge and agility of switching the roles from teacher – colleague to mentor-mentee. Counselling knowledge involves all communication, feedback, and steering counselling processes in the light of a critical-constructivist view on professional identity. Ideally, mentors/expert teachers receive training before starting their roles as mentors in a SITT program.

b) Peer-to-peer learning and peer-feedback

The concept of peer-to-peer learning and peer-feedback in schools can be distinguished from mentoring approaches by four specific characteristics:[59]

▶ Hierarchical status: sender and receiver of feedback are at the same hierarchical position

▶ Knowledge and information status: sender and receiver of feedback often have a similar level of expertise

▶ Organisational integration: sender and receiver of feedback share the same organisational information

▶ Relation to tasks and situation: sender and receiver of feedback share the same framework of professional action and situational tasks

This framework implies that both peer-to-peer learning and peer-feedback partners have equal rights and duties, even though biographical and professional backgrounds can differ. However, especially for younger – less experienced – teachers opening one's classroom to a colleague can be associated with feelings of stress and anxiety due to earlier test situations. Even though peer-to-peer learning and peer-feedback are not connected to any legal consequences, on a psychological level, this needs to be clarified and worked on carefully. Scientific literature defines different forms and phases of peer-to-peer learning and differentiates in its findings between aspects of co-operative and aspects of tasks or actions.[60] From a co-operation point of view, peer-to-peer learning and peer-feedback can support different levels of co-operation. The table below illustrates these different levels, referring to three main theoretical concepts.

Concept of Little (1990)		Concept of Gräsel, et al. (2006)		Concept of Steinert, et al. (2006)	
Levels	**Characteristics**	**Levels**	**Characteristics**	**Levels**	**Characteristics**
Storytelling and scanning of ideas	Unsystematic and unregular exchange of experiences (e.g. short talks in the staff room)	Exchange	"low-cost" form of co-operation by chance, co-operation for mutual informa-tion (e.g. materials, methods), offering of advice	Differentiation	Global goal concept, formal information, co-operation in planning in grades or stages, formal exchange about curricula, contents and grades, individual in-service training, self-reflection
Aid and assistance	Support in school-re-lated tasks (e.g. mentoring)	Specialised co-operation	Co-operation to en-hance efficiency, joint planning, structuring, sharing responsibility	Co-ordination	Global goal concept, extensive information, subject-based actions, partial co-operation for planning and implementing teach-ing, exchange about contents, didactics, assessment scales, self-evaluation, individual and school-based training
Sharing	Exchange (e.g. mate-rials, methods, ideas, opinions)	Co-construction	"high-cost" co-oper-ation, joint develop-ment of tasks, joint problem-solving, relat-ing one's knowledge to generate new knowledge, prod-uct-based co-oper-ation	Interaction	Detailed goal con-cept, aligned actions between teachers of same grades and stages, extensive co-operation in planning and imple-mentation, mutual counselling in content, didactics, diagnostics, extensive training
Joint work	Joint work and responsibility for tasks and decisions or individual actions are aligned with joint goals (e.g. using specific methods, im-plementing curricula, etc.)			Integration	Systematic goal con-cept, aligned actions, transparency and mutual adaptation of teaching practice, systematic observa-tion of actions and learning processes, self-evaluation and evaluation by others, systematic training

Peer-to-peer learning and feedback (adapted from Funk, 2016)

Peer feedback will also take a specific shape, depending on the phase or form of peer-to-peer learning that a school practices. From a task or action perspective, peer feedback needs to be planned and defined beforehand to bring all participants in a defined co-operative relationship.[61] In this respect, the peer-feedback concept as a "high-cost" form of co-operation can help define different stages and questions of peer-feedback design and steps to take:[62]

Why do we do peer-to-peer learning, and do we plan it?

Motive	
Initiative	**Development**
‣ The decision to get benefit from feedback ‣ Organisational assignment to accomplish feedback ‣ The decision who in the professional organisation might function as a feedback source	‣ Select a topic/skill/practice ‣ Clarify the purpose/goal ‣ Clarify the specific information/behaviour to gather/observe ‣ Determine where, when, and how the information will be gathered ‣ Define where, when, and how the results will be feedbacked and discussed ‣ Propose the "ground rules"

How do we organise peer feedback, and how do we process it?

Design		Processing
Accomplishment		**Analysis and reflection**
‣ Conduct a session as planned ‣ Gather and collect information with a focus on the skill, practice, topic that was identified: ‣ Use of particular skill ‣ Occurrence of a particular interaction ‣ Existence of a particular situation ‣ Quality of written products …by using methods that were agreed on	‣ Receive/give feedback regarding the use of a specific skill or practice based on performance information gathered	‣ Consider whether what occurred was the intended ‣ Determine what factors influence what happened ‣ Consider what to do differently the next time ‣ Refine or adapt the use of a skill or practice ‣ Generate ideas/options regarding things that might be done differently ‣ Request ideas/suggestions regarding alternative strategies ‣ Develop plans for the continued development to refine or adapt the use of targeted skill or practice

Apart from clarifying motives, engagement for development, design, and forms of processing institutional frameworks in the school play an important role. Aspects of institutional quality criteria are discussed in section 5 of this chapter.

c) Structured in-service training: inputs and workshops

A variety of SITT programmes uses structured in-service training elements such as joint workshops, content inputs, or seminars as training elements to use as a foundation of the necessary pedagogic or didactical concepts depending on the character of the SITT programme (e.g. the introduction of participatory student activities, introduction of a new subject, etc.). SITT programmes that implement mentoring/peer coaching without a specific content focus often use workshops and inputs to introduce the model itself and raise awareness of the different roles of mentors and mentees. Ideally, inputs and workshops involve all teachers within a school who are part of the SITT programme and do not exclude anybody (e.g. mentors-only training, etc.). Structured workshops are half-days are also often used as milestones within a SITT programme, forming a structural element within the school development process. Organisation of structured in-service training elements often lies with the school principal or the head of the steering group (if there is one), being responsible also for the planning, invitation of guest speakers, financial resources for external experts, and time management.

Once a school has successfully trained mentors/expert teachers for a specific content/topic, they can act as multipliers and internal trainers in structured in-service training workshops and inputs. Again, the most critical part is their awareness of shifting the roles. Additionally, a school culture that develops itself towards installing communities of practice also opens possibilities for "new" expert teachers/mentors who might take over a structured in-service training workshop in the future. If the school culture values this potential of their staff and does not punish internal exposure with feelings of envy or jealousy, new or more hesitant teachers will get motivated to also play an active role in knowledge transfer to their colleagues.

d) Reflection

Within a SITT program, the reflection of learning processes is essentially independent of which forms were chosen. It includes self-reflection and reflection done by all participants. In self-reflection, a vital part consists of "tracing the internalised images of school and teachers from one's personal school career and questioning them self-critically about their importance for personal pedagogical identity".[63] This kind of self-reflection can also be viewed as "biographical reflection" and constitutes the key for teacher professionalism.[64] In this respect, questioning one's subjective theories and traditional cognitive patterns can be the first step. "Tradition is not only a way of seeing and acting, but also a way of hiding" – a crucial statement by Maturana and Varela (1984) in their book "The tree of knowledge" describes that "tradition stands for the usual everyday theories which enable a pedagogical vision on the one hand, and impede it on the other hand".[65] According to the theory of Maturana and Varela, behavioural patterns that have become regular and acceptable shape this tradition. More explicit, subjective theories are "complex aggregates of conscious and/or unconscious automatised beliefs about fundamental questions of teaching and learning, which are reflected in classroom teaching".[66]

Self-reflection is not something that happens only individually. It should always be complemented with co-operation.[67] Mentoring or peer-to-peer learning within a SITT programme can facilitate this process.

A simple and valuable instrument for peer feedback and reflection is the Johari window, developed by Joseph Luft and Harry Ingham.[68] The Johari window is divided into four areas: open for the free area (public area), blind area (blind spot), hidden area (private area), and unknown area (unconscious area).

	Self-perception known to me	Self-perception not known to me
External-perception known to others	**Public** Facts that are public. Behaviour that is known to me and others.	**Blind spot** Aspects of behaviour that I do not know and are only perceived by others.
External-perception not known to others	**Private** Aspects wich we consciously hide and wich are not perceived by others.	**Unknown** Thing that are not immediately accessible and not known to us and others.

Johari window according to Luft (1989, p. 28) adapted from Berner, *et al.* (2019, p. 309)

By using the Johari window in peer-to-peer learning or mentoring programmes, differences in external and self-perception become visible and can be discussed. It can trigger important insights into performed actions – for the feedback receiver and the sender, especially when the feedback conversation is made in a critical-constructive way.

In SITT programmes, the quality of peer feedback strongly depends on the way a lesson was observed. Therefore, the observer must receive precise suggestions on what to observe and for what purpose the feedback is intended. Find below three examples of observation requests:[69]

1.	Observe my lesson and provide feedback about the quality of my questions, mainly if the questions are open or closed.
2.	Observe my lesson and give me feedback about the quality of my task assignments. For example, are the instructions clear, concise, and understandable? Did all students listen? Did they have to ask follow-up questions?
3.	Observe my lesson and provide feedback about whether I am narrating in an exciting and age-appropriate fashion. If the students listened and did not, at what point did their attention fade, and why.

If time is minimal, lesson observation can also be limited to just micro-teaching sequences within a group of teachers. According to studies by John Hattie (2013)[70], micro-teaching with an efficiency rate of d=0.88 is a highly effective teacher training method that affects teaching success. Micro-teaching usually consists of a short teaching sequence of about 5 – 10 minutes with a follow-up discussion among colleagues.

For intensive and regular self-reflection, Hattie also suggests a checklist/a logbook for self-assessment and discussion among colleagues.[71] Another helpful tool for self-reflection and peer-reflection in a feedback conversation can be the following list for checking the quality of classroom teaching with a set of questions:[72]

- ‣ How did I encourage the teaching-learning process?

- ‣ Was the interest in the learning content topic maintained?

- ‣ Were the central questions or problems pointed out to the students?

- ‣ Was the emphasis of the lesson discernible?

- ‣ How many questions did I ask?

- ‣ What kinds of questions did the students ask?

- ‣ Did I listen to the students?

- ‣ Were the agreed-upon rules for discussion observed?

- ‣ How did I react to the students' contributions?

- ‣ Were the students' comments repeated verbatim by me?

- ‣ Did I use stereotypical forms of reinforcement?

- ‣ How significant was my proportion of speaking in class?

- ‣ How significant was the students' proportion of speaking in class?

- ‣ Were there individual students with an exceptionally high proportion of speaking in class?

- ‣ How strong was the female student participation in class compared to the male student participation rate?

- ‣ What kinds of contributions were made by particular "problem students"?

- ‣ Did I concentrate on particular students?

- ‣ Did specific conflict situations arise?

- ‣ How were the conflicts temporarily overcome?

- ‣ Were the work assignments understandable and clear?

- ‣ How were the work assignments introduced into the teaching-learning process?

- ‣ What kinds of learning assistance was offered by me?

- ‣ How were the work results presented?

- ‣ How were the knowledge, insights, or perceptions recorded?

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Professional development through classroom observation and evidence-based feedback.

Currently, evidence-based feedback is considered one of the most effective interventions for promoting learning and development processes in many professions, especially in the case of young and experienced teachers. It is seen as providing education professionals with the best possible individual support according to their potential. Therefore, the Ministry of Education and Research of Moldova in cooperation with the Zurich University of Teacher Education provides all education professionals with a set of materials to establish a common background, and the professional and jointly developed tools for quality observation and feedback.

The **Good Teaching and Learning** manual provides an insight into important aspects of quality teaching and learning. It serves as a foundation for peer teachers, principals, trainers and inspectors and provides hints for quality lessons and background for feedback after careful observation. This manual is also available with a special chapter on the subject of personal development.
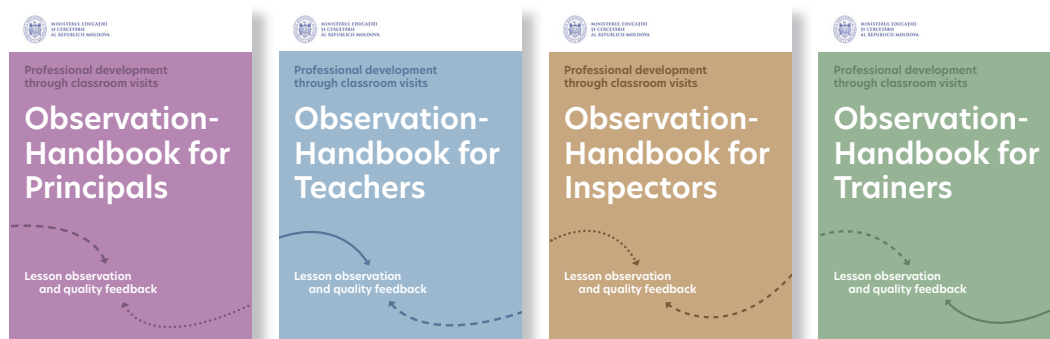
The **Observation handbooks** for different audiences provide clear hints and materials for observation and feedback, and are written to make them applicable to two teachers or a teacher and someone from the education administration, from an inspectorate, from the school management, or from a training seminar. Lesson observation and feedback are not in any way control and judgment, but professional development for both the visitor and the teacher being observed. It is of central importance that each visit is followed up by subsequent feedback, which remains non-judgemental and is carried out according to principles and guidelines that have been mutually agreed upon beforehand.

It is hoped that the widespread use of these materials will help classroom visits to be experienced as a positive element of personal development and mutual exchange.