

Clinical Teaching in Practice: Interim Report

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Background

Quality teaching forms the heart of the Trump Foundation's strategy. It is the Foundation's main program lever to enable more students to complete their studies successfully at the level of five units in mathematics and science.

In its strategic plan (2011), the Foundation offered a general definition of quality teaching: "Teaching that places the individual learning of each student in the class at the center, and that strives to ensure that he or she reaches the optimum achievements." Later in the document, this definition was presented in slightly more detail:

Outstanding teachers set high targets for every student, diagnose needs and abilities, monitor progress, and prepare adapted teaching plans. They provide the students with feedback and support their learning on a real-time basis... In high performing education systems, teacher training nurtures

a clinical approach to teaching that places the student's learning at the center. The teachers observe the practice of experienced teachers and colleagues, undertake and discuss simulations, and share their professional knowhow with each other. Their training is based on the rule that practical experience is preferable to theoretical knowledge.

As its experience grew, the Foundation later updated and detailed its definition of quality teaching (2014):

Numerous studies have shown that the quality of teaching is the most influential factor in explaining variance in the class in terms of the students' achievements... Prominent education systems have transformed the teaching profession from a "production line" approach to clinical specialization. The clinical professions are characterized by a high level of commitment to every "patient," including the presentation of ambitious targets, an individual "treatment" plan, diagnostics, adaptation, monitoring, and feedback.

The clinical professions are characterized by active participation in a professional community, including consultation in treatment (consilium), group study during the course of treatment (clinical rounds), in-service specialization (residency), and mentoring and coaching.

Quality teaching in the fields of mathematics and science education means a high standard of teaching based on personal excellence and implemented in a thorough and systematic manner, including careful planning and implementation, and a developed level of selfawareness. It takes place within a professional community, through ongoing consultation, and focuses on the progress of each individual student. This type of teaching diagnoses the student's abilities and difficulties, presents them with ambitious targets, adapts itself to the student's thinking and pace of learning, monitors progress, and provides constructive and reinforcing feedback.

Quality teaching focuses on the learning of each student. Outstanding teachers:

- A.** Believe and are convinced that all their students can excel; show deep commitment to making the most of the opportunities they face; present them with high and attainable learning targets; arouse their curiosity; and help them to become independent learners.
- B.** Create an inclusive atmosphere in their class that builds trust, enables students to ask questions and make mistakes, encourages them to express knowledge and positions, in writing and orally, and encourages them to take cognitive risks. They respect their students, nurture communication skills and creativity, and encourage cooperation.
- C.** Have a practical understanding as to how students think and learn the subject. They know how knowledge develops in their

students and are able to identify typical mistakes, learning styles, and developmental processes.

D. Are proficient in the use of diverse measurement and evaluation techniques and are able to adapt these to the context in which learning takes place. They maintain comprehensive documentation of the learning performances of every student and use this on a real-time basis in order to map, diagnose, adapt teaching, and provide constructive and reinforcing feedback.

E. Use a broad arsenal of teaching approaches and methods and are capable of exercising informed discretion in choosing strategies and techniques according to the context, the subject of the study, the class, and the diagnostic findings of each student.

F. Provide their students with grounded, constructive and reinforcing feedback according to their learning performances. They choose the type of feedback and the appropriate time to present it, and draw on it in order to help the students to internalize the learning targets and to be aware of the extent of the progress they have made.

G. Play an active role in a professional community whose regular activities are led by master teachers, including a systemic focus on students' learning and on analyzing learning and teaching from the classrooms.

H. Build professionalism in teaching together, including formulating a shared instructional system, shaping routines for monitoring learning, establishing a support system for students, and engaging in peer learning, including documentation, analysis, feedback, and mentoring.

The Foundation's International Council met with the Foundation's partners in 2014 and offered the following comments to the Foundation on this subject:

The Foundation's partners, including teachers, grant recipients, researchers, and decision makers, do not understand exactly what the Foundation means. They attach great importance to quality teaching as they perceive it. They remain unconvinced that it is possible to implement teaching that is focused and adapted to the thinking and learning of each individual student. The "clinical" terminology is alien to them... In light of this, the Foundation should deepen the implementation of quality teaching with clinical characteristics. This should include detailing, clarifying, and illustrating – together with its partners – the conceptual perception, the necessary integration of the various components, and ways to ensure sustainability. The Foundation must document the practical knowledge and disseminate it through a process of dialogue with the professional community, and it must be careful to ensure that the projects it supports are actually geared to a focus on the learning and thinking of each student.

The Foundation staff subsequently formulated a more concrete and visual definition entitled "the Quality Teaching Compass" (2016). The Compass was presented as the product of the knowledge accumulated by the Foundation in the course of its hands-on work with dozens of projects and hundreds of teachers, and of an analysis of research and experience in Israel and around the world. In theory, the Compass constitutes best practice documentation including various aspects of professional activity in the field. Its presentation as a "Compass" was intended to position this deliverable as a vision, a target for the future, and an ultimate and collective expression of the profession. The Compass opens with the following definition:

Quality teaching is an advanced level of expertise that focuses on the learning of every student in the class. It combines profound knowledge in the subject area, a

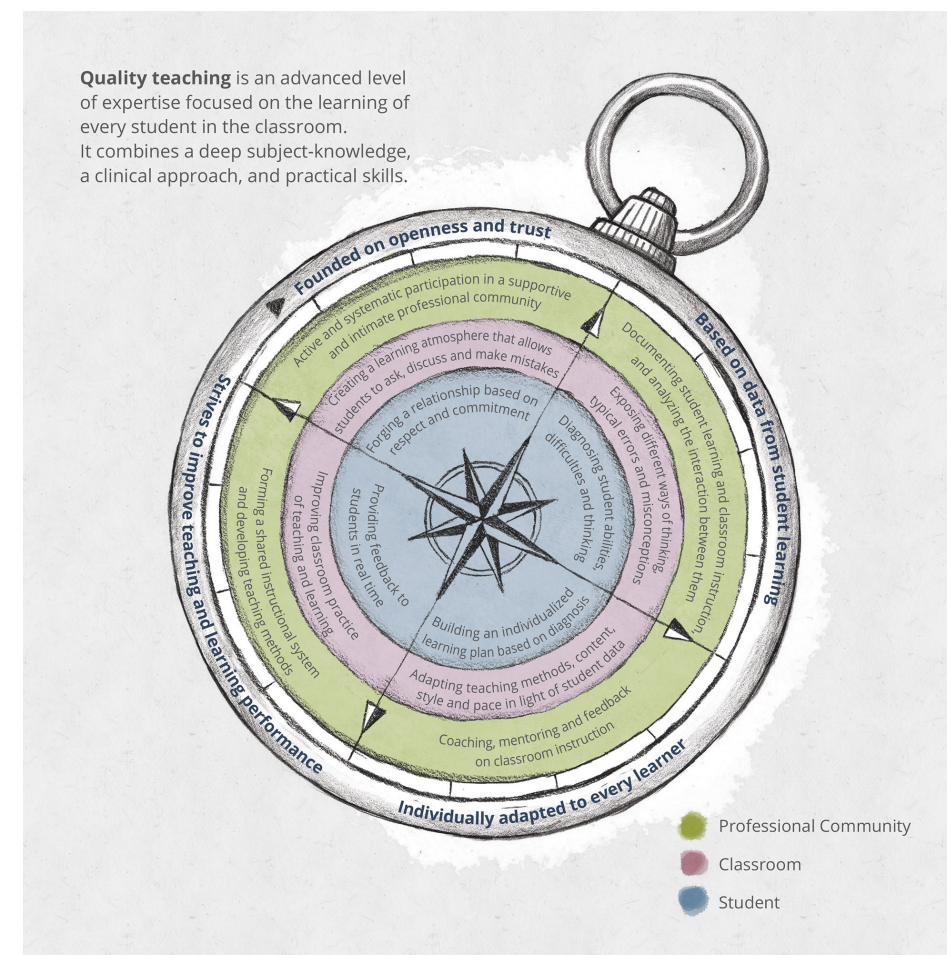
clinical approach, and practical skill. It takes place in all three arenas of encounter of the teacher: with the student, the class, and the professional community. Its characteristic is that it is based on openness, sharing, and trust; founded on the ongoing diagnosis of students' learning; adapted individually to the abilities, difficulties, and learning style of each learner; and seeks to achieve a constant improvement in teaching and learning performances.

In order to examine the extent to which the components of quality teaching are implemented in its programs, the Foundation contacted a group of 15 experienced teachers (the "Trump Fellows.") The Fellows were asked to observe the actions of several of the Foundation's programs; to interview the participants; and to observe their teaching in classrooms. The Fellows used the Compass as the glasses through which they observed and analyzed the findings. The Foundation also convened a meeting of some 50 mathematics and science teachers, who participate in its programs, in order to present the Compass and receive their feedback.

The preliminary raw materials yielded by these actions served as the basis for drafting this report.

Key Insights of Teachers

1. "Nurturing" teaching founded on the aspiration to enable as many students to make progress in mathematics and physics reflects the teachers' worldview of today. They note that in recent years the entire system has adopted a more nurturing approach and marginalized the traditional "selective" approach. They emphasize however, that the burden of nurturing falls mainly on teachers, without any substantial help from the system.
2. Most of the teachers expressed a high level



of commitment to excellence, to a high level of achievements, and to a profound level of understanding on the part of the students. Some of the teachers expressed concern that the over-enthusiastic adoption of nurturing teaching is liable to come at the expense of achievements, pace and depth, and to create a situation where students who are fundamentally unsuited to these levels of learning are pushed toward inevitable failure.

3. The teachers deeply identified with the

need to create an atmosphere of trust and to accept students' mistakes as a learning opportunity. It is evident that principled change has occurred in their relationships with their students in the class in light of this position. Surprisingly, the teachers do not seem to express any difficulty in making this shift or to feel that any restrictions hamper their ability to do so.

4. The teachers testify that they are familiar with common difficulties in understanding and typical errors among the students. The professional development processes they have undergone over recent years have led them to adopt a form of teaching that takes into account their students' thought processes and learning style. However, many teachers do not agree that the individual student should form the center of diagnostic actions or the implementation of their conclusions. Most of the teachers consider this expectation unrealistic — both in a general sense and in the context of the conditions in which they work. This gap between what is expected in this respect and what actually happens on the ground also seems to be due to a lack of clarity regarding the concrete meaning of adapting teaching to the student.

5. Most of the teachers report a significant broadening of the repertoire of teaching methods they control and use, mainly due to the professional development programs in which they are involved. This relates to teaching methods that are organically integrated in the model of quality teaching, since they encourage and reflect its characteristic values, such as discovery, experimentation, openness, and so forth. Regarding the principle of adapting these tools to the students' needs, it is still apparent that while the expectation that they adapt their teaching to the class is perceived as natural, the demand to do so regarding the individual student is more problematic.

6. The teachers express partial support for non-disruptive data collection during the course of the lesson, including the immediate implementation of findings and insights that emerge from this process. Their support is manifested in the principled importance they attach to collecting data for the purpose of quality teaching, but without expressing support for

the idea that the individual student should form the center of the diagnostic process and the implementation of its findings.

7. Most of the teachers show an extremely positive attitude toward active participation in a professional community. They report that this has rescued them from the feeling of professional isolation they experienced in the past. The professional community enables them to develop their awareness of their own functioning as teachers through comments and feedback from peers and instructors, and significantly expands the arsenal of teaching means at their disposal. It also provides an opportunity for them to "recharge their batteries" and refresh themselves, reconfirming and enhancing their commitment to excellence. The open, egalitarian atmosphere and the mutual respect and trust that characterize their experience in the community, together with the practicing of different learning means, turn this experience into a type of living laboratory, as shown by the teachers' reports. Teachers can bring problems and examples from their class and take away living illustrations of the concepts and tools they acquire. However, the teachers do not see the community as an arena that focuses on the learning of individual students and on responding to their abilities and difficulties.

In summary, it can be stated that the vast majority of the teachers who participate in the Foundation's programs and who participated in the study support and validate most of the characteristics and components of quality teaching. Their descriptions can be seen as reflecting a change of professional language and culture — from an essentially individualistic, matter-of-fact and cold approach to one that has a more cooperative, collective, emotional, open, and creative character, and that focuses more on the teaching process than on learning achievements.

Introduction

Quality teaching in mathematics and science, as presented in the Trump Foundation's Strategic Roadmap, "is a clinical expertise focusing primarily on providing an individual response to each student's learning." It provides teachers with tools and pedagogical skills adapted to the student's learning needs and characterized by openness, a high level of trust in the students' ability to improve, and a strong commitment to achieving this in practice. Quality teaching "diagnoses" the individual learner's abilities and difficulties and adapts itself to his/her unique pace of learning and thought process. It presents the student with ambitious targets and monitors the rate of progress, providing reinforcing feedback which encourages the ongoing process in an atmosphere of trust.

The theory of quality teaching formed the basis for the formulation of the Quality Teaching Compass. The Compass is a model that provides a graphic representation of the fields and methods of activity of quality teaching. These are grouped into four cornerstones on which this teaching method is based: it is founded on openness and trust; based on data relating to the students' learning; adapted individually for each student; and strives to improve teaching and learning. Each of these principles is expected to be applied in the three types of encounters experienced by the teacher: with the student, with the class, and with the professional community in which the teacher participates.

The goal of this report is to examine the manner in which this model of quality teaching is reflected in the reports of teachers of mathematics and physics at the level of five units who participate in several of the Foundation's programs. A further goal is to discuss various issues raised by

the findings regarding this teaching model. In both cases, the report does not claim to examine the teachers' teaching directly, but rather to analyze their own reports and the discussions held between them and the Foundation's representatives on this aspect.

The following are the main types of materials addressed by the report:

- A. Reports of structured interviews with teachers of mathematics and physics at the level of five units, undertaken by teacher leaders under the guidance of the Trump Foundation.
- B. Reports of observations of teachers while teaching mathematics and physics at the level of five units.
- C. Interviews with the heads of the programs in which the teachers participated, or their written summaries regarding quality teaching from the perspective of their PD program.
- D. An analysis of the above raw material undertaken by Dr. Guy Ashkenazi, a chemistry teacher at the Israel Arts and Science Academy in Jerusalem who also teaches at the Israel Center for Excellence in Education and who received the Trump Master Teacher Award for 2015.
- E. Discussions of various types in plenaries plena and in working groups relating to quality teaching and nurturing teaching as distinct from selective teaching. The discussions took place at a conference held in May 2016 under the auspices and leadership of the Trump Foundation for teachers who participate in the Foundation's different programs.

Despite the partial and subjective nature of these data, this report adopts the basic assumption that dozens of interviews with teachers and observations of their work, summaries from program directors, and hours of lively discussions at the conference **can teach us a lot about quality teaching as it is practiced in the field.**

Proper processing of these materials will include an unbiased external review of the internal examination undertaken by those involved in the processes, who, after all, also ask themselves questions. This will enable an assessment of the extent of the perceived relevance of clinical teaching; the extent to which it has been absorbed in the field; discussion of its various components; and an examination of various difficulties and problems that emerge in the course of its implementation. This information can help the Trump Foundation as it continues to inculcate clinical teaching among teachers of mathematics and physics at the level of five units.

We chose to examine the testimonies and reports with reference to the Foundation's definitions and to the overall concepts of nurturing teaching as opposed to selective teaching.

The Nurturing Approach and the Selective Approach in Light of Clinical Teaching

The Foundation's strategic plan explains several times that the selective perception shared by many teachers and officials has been a destructive force, an obstacle which pushed many capable students to drop down from the five-unit track. This selective ecosystem which dominated the system for many years, led to a clash with the nurturing aspirations of a handful of educators. The Foundation also describes the "traditional" teaching style prevalent in schools in mathematics and physics (and in all probability in other subjects, too). This style focuses on conveying as much study material as possible, while leaving the burden of coping with this material to the student. This approach leaves the level of five units only to

those students who are capable of "surviving" on their own. The Foundation has set itself the goal of changing this reality. Accordingly, we can conclude that both simple logic and the discussion of this aspect in the strategic plan see the adoption of a nurturing orientation as an essential and fundamental condition for work in accordance with the clinical teaching vision.

This assertion does not solve all the theoretical and practical questions that follow. In the reports from practice, the clear focus on the perception and practice of clinical teaching leaves very little room for discussion of relevant theoretical concepts. Indeed, the terminology of nurturing versus selective, which, as noted, forms the foundation of clinical teaching, is hardly ever mentioned.

Nurturing Approach versus Selective Approach in Systemic Terms

Nurturing on the system level — The Foundation's strategic plan notes that the actual effect of clinical teaching depends not only on what happens inside the classroom, but also on the system's structure as a whole, the way it operates to advance this approach, and the possibilities for its realization. The way to examine this is to ask to what extent is it accurate to speak of a nurturing approach, as opposed to a selective one, in terms of the system as a whole, and to what extent (assuming this is possible) the system has adopted this nurturing orientation and uses it to guide its actions.

The answers to these questions can only be offered in a limited manner, among other reasons due to the paucity of references to these aspects in the materials available to us. Nevertheless, we can establish with a high level of certainty that the answer to the first question is positive. In other words, a nurturing or a selective approach can be manifested in a practical and concrete manner on the system-wide level in an entire chain of decisions,

procedures, policies, and declarations. From this perspective, mathematics and physics studies in schools and the teaching method of each individual teacher are merely one component in this broader structure — a cog that can turn with or against the direction of the machine as a whole.

This raises a further question regarding the present orientation of the system in terms of teaching mathematics and physics. We can take a risk and suggest, in a rather generalized way, that the system is far more nurturing today than it has been in the last few years. After all, the current aspiration and practical effort to enable as many students as possible to reach excellence in these subjects are shared by numerous bodies in the Ministry of Education and elsewhere — including, of course, the Trump Foundation. This clearly reflects the adoption of a nurturing approach, at the expense of the selective approach, which seeks to populate the five-unit tracks with only those students who are perceived from the outset as having the special capability required to succeed. In the selective approach, the teaching process itself is then used to screen and remove unsuitable students.

However, this does not in itself imply that the effort and commitment to nurturing is borne equally by teachers and by the other components of the system. The system in general has other concerns and objectives that may impair its commitment to this aspect. Moreover, the education system in general maintains an organizational culture that also includes a strong selective dimension that presumably filters through to this field. On the concrete level, referring to a system that operates with a nurturing orientation implies one that creates conditions that encourage and facilitate a nurturing approach at all levels — above all on the school level and on the level of the individual teacher, who is supposed to implement this approach through clinical teaching. This contrasts with the adoption of a much easier solution in the form of

selection, creating an obstacle course on which only a few survive.

Another key derivative of this discussion is the extent to which the system adopts a nurturing approach, as distinct from a selective one, toward the teachers themselves, and the ancillary question as to what the desirable approach is in this respect. Should a selective approach be applied in admitting new teachers, whereby only the top 10 percent of potential candidates are accepted to teach five units in mathematics and physics? Such an approach seeks to shorten processes and focus directly on outstanding candidates. Alternatively, should a less selective approach be applied to teacher intake, accompanied by massive investments to nurture them as they work in the system? Does the available supply of teachers permit this approach? And what about current teachers: is there any real alternative to nurturing in their regard? A further question is where the programs we examined stand on this issue since they both nurture and select teachers.

Clinical teaching in a nurturing system — In practical terms, the strengthening of the nurturing orientation in the education system in the context of five units in mathematics and physics, at the expense of the selective approach, means a substantial increase in the number of students participating in frameworks for study at the level of five units in these subjects. It is to be hoped that the teachers they encounter in these frameworks have also, for the most part, adopted the nurturing approach. This should be translated into practical teaching using the clinical teaching model. Thus, the correlation between the macro and micro levels would appear to be complete. However, the heart of clinical teaching is the principle of a quasi-clinical approach to each individual student, applying sophisticated diagnostic tools and an individually-adapted learning program. There is a clear practical contradiction between these two trends. The more the

teacher is required to relate to students who have particularly significant nurturing needs—since they are not necessarily “natural” candidates for five units—the less they will be able to meet the expectation of individually-oriented clinical teachers. Paradoxically, therefore, a selective-type system, leading to fewer students in these classes, but more students who are outstanding from the outset, actually permits the maintenance of clinical teaching, though this may be less vital for students with such prominent capabilities from the outset.

When there are lots of students, it's much harder because you can't hear everyone in a big group. If I address them, they answer. I don't remember that we devoted time in the program to how to reach each child in a large class. And I don't think I'd believe anyone who told me that it's possible to do this in large classes without missing any students.

We don't engage in the individual adaptation of teaching. That doesn't seem to be realistic to me, unless it's computerized. The teacher in the classroom can't adapt the teaching methods to suit students who have difficulties, but only according to the state of the class as a whole.

These quotes from teachers show that the most problematic aspect in implementing the clinical teaching model is the teacher-student dynamic. These findings highlight still further the question that emerges here. Can we attribute this difficulty to the increase that has already been seen in the number of students taking five units, leading to a reduction in selectivity in entry to these classes? In all probability this is a negligible factor, at most, particularly since the increased resources provided for schools by the nurturing system will almost certainly have balanced, if not outweighed, the increase in the student-teacher ratio. Accordingly, this specific problem would appear to be more ideological than practical in the present stage. If the

nurturing approach later becomes dominant among almost all those involved, leading to a steeper increase in the number of students studying five units, the question presented here that currently seems relatively minor may re-emerge in a stronger form.

The boundaries of nurturing — Is there not a risk that indiscriminate nurturing may sometimes damage students rather than help them? This question was raised several times during the discussions among the teachers at the conference. The desire to reach a critical mass of students studying at five units receiving reinforcement in the form of an enthusiastic nurturing approach may bring to the classroom an increasing number of students whose ability — and, in some cases, whose desire — to overcome this difficult hurdle is limited. The combination of enthusiasm, ambition, and the more sophisticated teaching methods advocated by the clinical teaching approach, which constitute the essence of the nurturing approach, is ultimately expected, after an arduous journey, to enable even hesitant students who have difficulties in reaching the peaks of excellence. In other cases, however, and despite good intentions, this approach may harm students who are genuinely out of place. Such students may come to feel like “ugly ducklings,” rather than finding the solution and framework in which they might again be swans in accordance with their own worth and quality.

...students who do not succeed and who receive low grades in five units will feel terrible alongside their friends. They will have failed, and this will not advance them...

Accordingly, is there a need for a selective approach — albeit on a miniature scale — within the overall nurturing framework? Or is this liable to impair the unconditional commitment to nurturing, whose forthright slogan is “everyone can do it” — if we only help; we are not leaving any student behind.

On the principled level, the answer to this question is that we must nurture every student to excellence adapted to their own level. Yet it remains far from clear to what extent this principle can be maintained and translated into practical behavior in the field when this entire project is geared to the goal of five units and will stand or fall on this point.

A further difficulty addressed by some of the teachers themselves is the frustration teachers experience in situations of indiscriminate nurturing when the teacher tries time after time to secure results, without achieving success. In other words, in the indiscriminately selective approach, the teachers safeguard themselves against frustrating situations through the prior exclusion of students likely to face particular difficulties. In the highly nurturing approach, they encounter more situations that provoke despair.

Efficiency of nurturing — Another area of doubt resulting from the current situation concerning mathematics and physics studies at five units, also reflected in the teachers' discussions, relates to considerations of efficiency. Whether they like it or not, teachers encounter such considerations in implementing the principles of clinical teaching in a nurturing system. The nurturing orientation, amplified by clinical teaching, encourages unconditional investment in every student according to individual needs and profiles. However, as the saying goes, “where there are two, a third will also appear,” demanding his or her own share of the cake. The need to work with an entire classroom of students in a world of finite resources obliges teachers to consider the allocation of these resources and the measured investment of time and energy. If they fail to do so, they are liable to leave one student unattended to and moreover, to be unfaithful to the goal they have undertaken for themselves and toward the system — of bringing as many students as possible to the five-unit finish line.

This raises another issue also mentioned by the teachers: what about considerations of efficiency and viability regarding the teachers themselves? This point was initially raised in the context of the emotional loss the teacher is liable to experience after investing limitlessly in a student who faces serious difficulties. However, teachers not only have emotions, but also their own interests that can be measured against various yardsticks. Are teachers not liable to be harmed if they fail to plan their steps carefully?

The practical meaning of these comments is the need to put a brake on the teachers' instinct to indiscriminately nurture everyone under their charge, and instead to recognize the cost-benefit aspects of investing in different students. Their situation might almost be compared to that facing a physician who must cope simultaneously with a large number of injured people, and who must consider — alongside other factors — the manner in which their work is evaluated by the management of the HMO or hospital in which they work.

It should be noted that these questions, which range from the theoretical to the practical, become more valid and concrete as the teacher fully internalizes the clinical message of individual work according to the quality teaching model. Teachers who tend to think in terms of work with the class as a whole, and who speak of “my personal class,” will be less prone, at least subjectively, to situations in which a focus on one student detracts from others. Accordingly, this may represent a further explanation of the unusual lack of success seen in this component of the clinical teaching compass.

Diagnosis versus selection — Diagnosis is a key tool in the clinical teaching model. Diagnosis is supposed to add the element of individual adaptation to the nurturing approach, which relates to large masses of students. Diagnoses are supposed to identify

the individual's precise level, so that work can proceed from that point at the appropriate pace — always forward, always toward excellence. By contrast, selection is a form of diagnosis whose goal and rationale focus on a horizontal axis rather than a vertical one. With which group or category is this individual to be affiliated? When the number of individuals is large, sub-groups emerge comprising those perceived as sharing similar characteristics. Diagnosis plays an important role in this respect. A simple principle of efficiency and logic leads to the grouping together of "similar" students into sub-groups that are then labeled as "amplified" "strengthened" five units, "weakened" five units, and so forth. Thus, the selection born of diagnosis re-enters the nurturing system through the back door — ostensibly subordinated to the interests of this system and operating in its service. After all, it is easier to nurture students in relatively small and homogenous groups than in a large, heterogeneous class. Once again, this highlights the need for nurturing teachers to have selective capabilities. When operated up to a certain degree, these capabilities can indeed assist the nurturing trend. At the same time, and certainly from that point forward, these capabilities can also sabotage the process. The reports from the field and the surrounding discussions however, include little real discussion of these issues.

Process versus outcome in the nurturing approach — The perspective and language of the nurturing orientation emphasize the supremacy of the process over the outcome. From the standpoint of this approach, the individual is in a constant state of development and change, even if this may be only unrealized potential. Accordingly, what matters is not the student's precise condition at this moment in time, but where they can get to with suitable help — and even then, where they can get to is merely a station on the way to the next objective. In other words,

the nurturing approach likens excellence to the horizon. By contrast, the selective orientation tends to have a static character, which automatically focuses on outcome — a given, measurable condition that can be labeled and classified in order to ascertain whether or not the student has performed the task so that their level of success can be quantified and so that they can be pinned at a particular position, pending further notice. If clinical teaching is the executive branch of the nurturing orientation, then it shares the tendency to examine developments through the prism of process. Many of the basic concepts and tools of the clinical teaching model are process oriented. The lack of being judgmental and the emphasis on learning from mistakes both mitigate the tendency to identify students with their performances, particularly when these are unsuccessful.

Multiple ways to reach the same solution, examining the thought processes behind mathematics and physics, and using experimentation and discovery, rather than handing the students a ready-made correct answer — all these create a climate that emphasizes the quality of learning rather than its output. A number of teachers commented on this issue, and on the whole, they tend to accept the notion that it is better to delve deep with the students and ensure a true understanding of the material than to check off another item on the crammed five-unit curriculum. Racing ahead while leaving behind those who are slower or have difficulty absorbing the material serves the interests of the exponents of the selective orientation, for whom the possibility that these students may soon drop out of the chosen framework completely does not constitute a particularly serious problem. The cherry on the cake of the process-based dimension of clinical teaching is that a teacher's work with an individual student, from a position that recognizes that every student — even if they are immersed in the group learning process — nevertheless requires their own language,

attention, pace, and ultimately their own definition of achievement. This reduces the outcome-oriented dimension based on the standardization of achievements for the purpose of measurement.

This naturally brings us to the crucial question. Everyone recognizes why more and more students are entering frameworks for mathematics and physics at five units. Accordingly, the focus on the learning process, as highlighted in the reports, should serve a goal that has a distinctly outcome-oriented meaning: increasing the number of students successfully completing the matriculation examination at five units in mathematics and physics. There is probably more than one answer to the contradiction that emerges here between this supreme objective, the very essence of the system, and the demand by clinical teaching, in the spirit of the nurturing approach, that teachers should think and work primarily in terms of the individual student. One of the most prominent answers explains that maximizing attention to individual needs, abilities, and learning possibilities is still undertaken in the service of this same familiar goal — to lead the mass of students to a well-defined finish line. However, it is doubtful whether this tension between the language and conceptual standpoints of these two views can be resolved quite so easily. The learning process in nurturing teaching is undertaken through the genuine nurturing of creativity, openness, and flexibility, in a manner that is more reminiscent of the study of philosophy or art. The standardization of the products of this process by means of uniform measuring tools thus appears particularly incongruent. In this context, outcome-oriented goals such as output, interim tests (as a target rather than as a form of diagnosis) and, of course, the final examination that is common to all — all these must, to an extent, appear as a distraction and a necessary evil rather than the real thing. In other words — if excellence

in the spirit of the nurturing orientation is indeed to be likened to the horizon, this horizon is something that can be fixed.

The presentation of this issue clearly includes the deliberate exaggeration of a contradiction that most teachers, as we will see below, do not sense, or at least do not mention in their field reports. The closest they come to dealing with this issue is the sense of discomfort and even displeasure concerning the demand for output in their work with masses of students, thereby impairing their ability to nurture an in-depth process. A less direct manifestation may be teachers' expressions of anger regarding the demands by the leaders of clinical teaching and the support community in their promotion of in-depth learning and individual work while ignoring the conditions in which they work, including the demand that they comply with measurable outputs.

A further interesting reflection of this tension between outcome and process, albeit an indirect one, is the remarkable lack of references to measurable outcomes in the material examined, as we will discuss in the following section. There are very few references to hard data, such as interim test scores, the students' concrete achievements, the percentage of students who have advanced in the number of units they are taking or the percentage of students who have dropped out. Such data almost certainly form part of teachers' daily discourse, but they were apparently not reflected in the common discourse in the reports and in the discussions under the Foundation's auspices — perhaps because this discourse is process-oriented and qualitative rather than outcome-oriented and quantitative.

Quality Teaching Through the Prism of Reality

In this section, we will examine the testimonies and reports from and about the teachers who participate in the programs, in reference to the eight characteristics included in the definition of quality teaching as defined in the Trump Foundation's strategic plan. This will enable us to examine the manner in which quality teaching is perceived and implemented by these teachers, principally in terms of their own testimony.

1. Believe and are convinced that all their students can excel; show deep commitment to making the most of the opportunities they face; present them with high and attainable learning targets; arouse their curiosity; and help them to become independent learners

This characteristic emphasizes excelling and excellence. This is the place the teachers aspire to reach with their students. The brief definition provided here implies a transition from the perception of high achievement as something that rests with teachers — their personal vision of what is supposed to happen with their students — to an approach that is increasingly interactive. Excellence is perceived as the common goal of teacher and student, the product of their mutual relationship, including a description of behavior on the teacher's part that can cause students to aspire to high achievements. Is that what actually happens in the field, though? The majority of the reports that addressed this aspect, directly

or indirectly, suggest that the answer is broadly positive.

Belief in the ability of students to reach high achievements — This declaration embodies the perception that the teacher is responsible for the success of all students — not some of them, but all of them. A further element mentioned in this context is enthusiasm — the “*spark in the eyes*” of the teacher that can inspire students, taking them along in an attempt to get as far and as high as possible.

Thus, we are speaking of a commitment made by teachers, fueled by the belief that this is their destiny, along with a strong emotional component, to reach excellent achievements — and no less than that — with all their students, and not just with some of them.

Shared excellence of teachers and students — The teachers' references to this component focused on expressions that present the students' internal monologues — “*the students know that I'm not giving up on anyone...*,” “*they know that a low grade is just an interim stop on the way to a high grade.*” Although this was not stated explicitly, these perceptions of the students do not seem to represent a manipulative capacity on the teacher's part to instill beliefs in the students that they themselves do not share. Rather, the goal is to ensure that the teacher's genuine belief in the student, founded on their basic assumption that excellence can be achieved through determination and perseverance, will filter through and reach the student. “*They feel that I am interested in advancing them; every student in advanced physics feels that they are letting me down personally if they don't succeed.*”

Excellence-oriented behavior by teachers in the classroom — A broad array of behaviors fall under this category, most of which will form the focus of the following

characteristics of quality teaching. We are referring here to the most fundamental behavioral manifestation of this aspect, the manner in which the teacher's enthusiasm, “*is transferred both directly and indirectly to the students, infecting them with ambition and creating belief in their own abilities.*”

“Invest, love the profession, and work with the students — the enthusiasm infects the students, and this encourages them even though they find it hard.”

“New tools and a fresh look at certain subjects. As soon as I find a given subject interesting and exciting, this is conveyed to the children, too”

“I come with enthusiasm because I am making innovations, and the students sense this.”

What we see here, then, is not merely the definition of the high goal they aspire to reach, but also comments relating to the feelings of insecurity, inability of the students, or even their tendency to make do with less than the best. The teachers thus aim to challenge these feelings and to replace them with a sense of ability and an aspiration to excellence.

“It works wonders when you believe in a child that no-one has ever believed in, and who maybe hasn't believed in themselves, either.”

Practical excellence — This heading refers to an admittedly small number of examples presenting concrete achievements and attributed to the teacher's perception of excellence and to the program in which they are participating. These references relate primarily to the two ends of the practical embodiment of excellence — classes at five units in mathematics and physics where there is almost no drop out, and a dramatic rise in the number of students entering such frameworks.

“I used to start out with a class of 14 students, and now there's a real demand — 72 students.”

Infecting students with the teacher's belief in excellence as a desirable and realistic characteristic, with the practical behaviors that result, are perceived by the teachers as a practical manifestation of excellence in action, reinforcing their belief in the feasibility of this approach. In terms of the Pygmalion effect, a concept that was mentioned in the field reports, teachers' high expectations of students are translated into behaviors that change and shape the students' expectations and behaviors in similar ways, thereby proving and reinforcing the a priori validity of the high expectations.

“...He conveys the message to the students that everyone will be successful...,”

“He needs to be supported all the time so that he doesn't crash. You put mechanisms in place to support him so that he doesn't fall. It's all a matter of attitude. I talk to them a lot during the lessons, not just about mathematics. I have a lot of discussions with them about personal things during the course of the lessons.”

In order to complete the picture, we might ask from where teachers draw these high expectations of their students? How are they created? The reports do not provide a clear response in this respect, but it would appear that for more than a few of these teachers, the programs they participate in, including their spirit of quality teaching, play an important role in their aspiration to excellence. The “spark in their eyes” often comes from the fact of their participation in the program, its prevailing atmosphere, the materials studied and tools acquired — and from there it is passed on to the students.

"I used to see things pretty unequivocally – this one is right for five units, this one is for four units, he doesn't stand a chance. I saw that sometimes children even make an effort during the summer, and then they do better than others we were sure about at the end of 9th grade. This year I'm increasing the number of students allocated to five units. I know that with the help of these methods, and the atmosphere we've managed to create, there will be a group where people say, 'Wow! The kids love to study math!...'"

However, the teachers also raised reservations regarding the aspiration to universal excellence:

Excellence, but not for everyone — Some of the teachers, while not abandoning the goal of bringing their students to high achievements, challenge the assumption that this is possible with every student. Their experience shows that it is impossible and unjustified to ignore the inherent inability of some students to secure high achievements in this field. Thus, they question the validity of statements such as "everyone can do it" that are presented by most of the teachers. *"I'm totally in favor of 'almost all the students' rather than 'every student.' My feeling, and my limited experience, suggest that trying to win every student by force ultimately means coming out with fewer students – rather than identifying, after something like six months, which students [should be invested in]. When I see a student who isn't putting themselves into the learning process, despite all my efforts and attempts and conversations, I take that energy and redistribute it among all the other students."*

Ignoring the teaching conditions in the field — A criticism leveled by some of the program participants is that the value of excellence it embodies is promoted while ignoring the conditions of teaching the field. Exceptionally large classes, a lack of time, students who are not particularly interested in mathematics,

and other factors often complicate and even frustrate the best intentions of teachers in this field.

"The question is what is the purpose of the PLC at this point? It has become a kind of hothouse for excellence. This serves certain goals, but ultimately, I think we need to remember that we have 70-90 percent who aren't in that segment, and we don't discuss them as much. We also aren't really dealing with the problems that most teachers face in the class."

The perception of excellence as a key characteristic of clinical teaching in the field is present, and indeed dominant, among the teachers who participated in the study. However, two issues in this context require deeper clarification. The first relates to the subtle but crucial distinction between excellence as an "I wish" and excellence as an actual commitment to high but attainable achievements, as emphasized in the characteristic itself. We should recall that the subject of excellence and excelling is particularly prone to lofty and sweeping declarations, made with sincerity and passion, but which reflect a kind of group spirit, or even group norm, that gives them more of the character of an aspiration than an actual personal target for which the speaker assumes full responsibility.

This is accompanied by the second question — exactly what achievement are we talking about? The various manifestations of the drive to achieve, mentioned in the materials, are not uniform and are often rather vague. There are few direct discussions of this issue and few attempts to examine opposing definitions and perceptions of the concept. Between the lines, a number of tests of achievement may be perceived, and these can enhance our understanding of what is involved: to reach as many students as possible at the level of five units; to meet the challenge

posed by students who are not "natural" candidates for five units; to bring them to this framework and keep them in it. In some cases, the emphasis is on prevention — on the need, "against all the odds," to prevent students who have despaired of reaching five units (as has everyone else involved, with the exception of the teacher in question) from dropping out. In other cases, this question regarding the required achievement is presented as a dichotomy between delving as deeply as possible into the material — an aspect that by definition cannot be precisely measured — and meeting the more quantifiable demands of the system regarding the material covered and the grades received.

2. Create an inclusive atmosphere in their class that builds trust, enables students to ask questions and make mistakes, encourages them to express knowledge and positions, in writing and orally, and encourages them to take cognitive risks. They respect their students, nurture communication skills and creativity, and encourage cooperation.

The definition of this quality emphasizes the ability to make mistakes, take risks, and be creative, with the support of the positive and respectful atmosphere created by the teacher. The support found for the actual manifestation of this characteristic in the reports and the accompanying discussions was particularly strong. Some participants even commented that this is the most important and central characteristic of the clinical teaching compass. The following are three prominent examples of this perception,

chosen from among many:

The teacher and the students are partners in the learning process and its underlying goal. In many respects, this is the foundation for this entire characteristic, albeit not on the declarative level. It is impossible to create trust between students and teachers, or to encourage students to take risks (concepts drawn from the language of clinical teaching that the teachers frequently employ) without redefining the status quo and the traditional division of tasks in teacher-student relations. The traditional approach argues that the teacher bears the responsibility for managing, determining, and implementing the work of transmitting the study material to the students, while the latter are likened to an empty vessel that is to be filled without regard to its needs or desires, sometimes at the cost of a power struggle with the students.

From student passivity to activity — A transition from a situation where the student is almost constantly examined to ascertain whether he or she is performing as required to one of experimentation and learning. The concrete manifestations of this aspect include:

- **A non-judgmental approach** — changing the prism from the almost-constant perception of the students as "alright or not alright," "poor or good," to one in which diagnosis serves to advance the student.
- **Regarding errors as a basis for learning** — this relates not only to the cognitive dimension of this statement, but also to the non-judgmental response to mistakes, including the blurring of the dramatic dichotomy between a mistake and a correct answer, in favor of the perception of both answers as ancillary means for the acquisition of knowledge and understanding.
- **Aspects of positive psychology** including a deliberate tendency not to mention students' non-successes and an emphasis on providing positive feedback.

• **A friendly and open atmosphere** — the proactive use of exercises and skills by the teacher for creating a comfortable and relaxed climate for learning. This is particularly important during the early stages of the lesson, in the section that the reports refer to as “warm-up exercises.”

Trust and mutual respect — The sense of confidence that the teacher inspires in the students, including belief in their own ability to participate in and contribute to the learning process, as well as their ability to secure high achievements. This is complemented by the creation of a situation whereby the student has trust in the teacher — trust in the teacher's positive intentions and caring, and in their stable behavior over the long term. This allows the student to take risks, open up, and share their inner world and difficulties with the teacher.

However, the teachers also raised reservations regarding the aspiration to create an atmosphere of trust:

The main question marks relate to the principle of refraining from making negative comments and focusing solely on positive reinforcement. For some of the teachers, this constitutes a significant departure from their familiar mode of teaching. Some of them feel that this principle goes too far and is inconsistent with simple logic and with their habits as teachers. Accordingly, several of them have refrained from adopting the ceremonies that sometimes accompany this principle, such as clapping in response to students' correct answers. Other opponents, however, noted that although they have not completely abandoned the practice of responding critically to students' mistakes, their utilization of this approach has significantly moderated and softened the tone and character of their responses. For other teachers, their reservations relate to the sweeping nature of this characteristic. Nevertheless, they draw from it an attempt to focus on what can be used from the student's incorrect answer in order to secure

improvement, rather than what is wrong and missing. Nevertheless, the overall impression is that this quality has been adopted less widely, and sometimes less deeply, than the others.

"In the training sessions they love to talk about how we mustn't make comments about the students. They love the ideal of being non-judgmental. In all the exercises, they tell us that when a student is successful, you clap. The mathematics teachers refuse to clap. They tried to convince us that if we don't make comments, the students will gain confidence and be willing to have a go and offer an answer. Even now, there are some teachers who don't accept this..."

3. Have a practical understanding as to how students think and learn the subject. They know how knowledge develops in their students and are able to identify typical mistakes, thought processes, learning styles, and developmental processes.

Attention to knowledge about the way students learn, as defined in this characteristic, is present in the teachers' reports, though relatively infrequent and primarily indirect. The main reason for this is that the references are usually embedded in more intensive discussions about the step that automatically follows — the collection of more focused information about the class and the specific students. Such information is evidently intended to update and moderate the generalizations about the thinking and learning patterns of the student population regarded as a whole.

Knowledge about typical difficulties in understanding and mistakes — The teachers

report on their growing experience regarding their students' typical mistakes in the relevant fields of study, common difficulties in learning, and the manner in which students acquire proper understanding. This knowledge is supposed to enable them to act even without prior diagnosis, since they can anticipate from previous experience where the students face difficulties and are liable to make mistakes. Such a process is almost inevitable in teaching, since teachers cannot engage in a specific examination of the student's precise position on every single issue before beginning to teach it. However, the teachers' declarations about their reliance on this general knowledge, without relating to the accompanying diagnosis, some of which takes place intuitively, may reflect both their greater confidence regarding this general knowledge and their lack of awareness of its limitations.

Knowledge about lack of knowledge — In a series of statements, the teachers describe the process whereby they overcame what they had learned and believed about what the students have absorbed and what the students actually know, as reflected in the later tests. The awareness of this gap belongs to this characteristic, in terms of knowledge about how the students think and develop knowledge. Some teachers evidently translate this awareness into a broader working assumption whereby such a gap is always present, even if the teacher's subjective impression was different. The practical ramification that results is the need for diagnosis and various teaching methods that encourage and enable students to present openly what they know and what they do not know.

Knowledge embedded in learning tools — Experienced teachers can activate efficient teaching means without being able to offer a good explanation as to their reason. However, the inclusion of this characteristic implies that a clinical teaching teacher is

required to gain an explicit understanding of the relationship between the teaching means and the student's learning process. Two common examples of this are teaching through discovery and teaching through errors. Both instances encompass considerable knowledge regarding the way students learn. They understand and internalize the study material better when they discover a scientific or mathematical principle than when it is presented to them on a silver platter. Learning through errors sharpens and deepens their understanding of the study material, since what makes the correct answer right is absorbed more successfully when it is “illuminated” by means of the incorrect answer.

4. Are proficient in the use of diverse measurement and evaluation techniques and are able to adapt these to the context in which learning takes place. They maintain comprehensive documentation of the learning performances of every student and use this on a real-time basis in order to map, diagnose, adapt teaching, and provide constructive and reinforcing feedback.

This characteristic of quality teaching focuses mainly on the teacher as a diagnostician. It conveys a more principled message than might at first appear regarding the perception of clinical teaching, due to the direct connection between awareness of the student's needs and the manner in which the teacher acts. This contrasts with traditional teaching, which provides little room for diagnosis, other than for the purposes of evaluation and selection.

The reason for this is that, according to the traditional approach, it is the students who must adapt to the content and the teacher's teaching style, rather than vice versa. The emphasis is on the contemporary study context — the teacher must be able to identify when to undertake the collection of data over the course of the lesson, without interrupting its course, and how to put the findings and insights that emerge to immediate use.

The corroboration of this characteristic in the teachers' reports is partial. It is easy to find support for the principled importance of collecting data for the purpose of teaching, and details of recommended tools to this end. However, it is more difficult to find reflections of the conviction that the individual student should form the center of diagnosis and of the implementation of its findings.

The importance of collecting data — On this aspect, there is broad agreement that the systematic collection of data relating to the learning and absorption of the material by the students contributes to the quality of teaching. This process enables the teacher to understand the quality and nature of the student's knowledge regarding the study subject, and to adapt their tools and teaching methods accordingly.

"This is great because we are trapped in the assumption that the students understand us perfectly. The diagnostic tasks really open up the possibility to understand that what we say isn't what the students understand..."

"For me, every student is a class. When I look at the class, I don't see it as one unity. I look at every student. When I come to a new class, after a week I can sketch a profile of each student. The students are really important to me."

Diverse and dynamic tools for data collection — The reports mention questionnaires, the use of various types of questions,

individual work projects, and so forth as means for revealing the students' "learning performances" and learning difficulties. Most of the teachers appear to have been exposed to a great diversity of diagnostic tools in the various programs, more than those with which they were familiar from their own experience. Despite this, there are repeated complaints about a lack of diagnostic tools, particularly in the context of the individual student.

The diagnostic use of errors — The use of students' errors as a diagnostic tool is just one of the collection of tools teachers use for this purpose. However, its weight in the reports was remarkably strong. This can probably be explained by the fact this tool is beneficial not only at the diagnostic stage, but also in several of the subsequent stages in the clinical teaching process. Another possible reason is that its innovative nature attracts attention and comments, reflecting the participatory and encouraging way in which this diagnostic tool is presented to the students. The emphasis is not on right and wrong answers, but on a joint clarification of the source of the error and possible ways to correct it.

"I always used to check tests vertically. Thanks to the program, I have started checking them horizontally and mapping errors. Then we go through the errors, and immediately after the test we have a lesson about these errors (they receive a photocopy of the answers immediately after the test)."

"For example, one teacher collated the students' errors and prepared index cards. She divided the students into groups and gave each group a card. Each group had to characterize the student's error and think of ways to avoid that kind of error in the future."

However, the teachers also raised reservations regarding the use of diagnosis: The most notable finding that emerges from the various reports relating to this characteristic is the considerable difficulty

teachers encounter in implementing its central principle — the idea that diagnosis should be used to adapt the teacher's teaching method to each individual student. As long as this concept remains on the level of the teacher working with the class as a whole, teachers do not seem to encounter any particular problems. However, the prism of teacher-student, rather than teacher-class, is not merely dominant in this characteristic, but exclusive. In this context, there is almost complete agreement that this component of the clinical teaching compass remains on paper only. The Foundation's programs do not appear to be providing an adequate response on this point.

The main arguments raised, some of which are contradictory, are that in practice there is almost no individual diagnosis; that the teachers lack sufficiently sensitive and sophisticated tools for this purpose; and that it is doubtful whether such a process can be implemented. The main reason for this, though not the only one, concerns the conditions in which actual teaching takes place — large classes, time pressure, and so forth. Regarding the question of exactly what prevents individual diagnosis, it is difficult to gain a clear answer from the reports. The same is true concerning various ancillary questions, such as: What does individual diagnosis actually include? And what segment of information becomes invisible in the transition from the class level to the student level?

In the context of the class — the students as a group — teachers have a reasonable picture, according to their own reports, concerning their knowledge and their performance in mathematics or physics at five units. Thus, the teacher can locate a gap between what was taught and what was absorbed, identify typical errors, assess the relative effectiveness of the illustrative tools and teaching methods used in the class, and so forth. The logical conclusion, and one that

was sometimes raised in a hesitant manner, is that the process of diagnosing the individual student and locating the differential response corresponding to the diagnostic findings requires a diagnostic map with a much higher resolution than can be obtained from the mapping of the entire class. However, and as noted, the reports raise more questions than adequate answers in this respect.

A minority of the teachers express fuller agreement with the principle of the importance of diagnosis on the level of the individual student, and even report the actual implementation of this process, albeit less frequently. One of the factors that encourages this process is the teacher's heightened sensitivity to the student's difficulties, preferences, and manner of learning, alongside the acquisition of tools for individual diagnosis. The distinction between these two aspects is not always clear, since many of the relevant tools for collecting data from individual students are also used for diagnostics on the class level. Thus, for example, the use of errors as a learning tool can also be applied on a more class-oriented basis, as well as focusing on the teacher's need to gain an in-depth picture of the thought process of each individual student.

A further point mentioned in the diagnostic context relates to teachers' need and ability to diagnose themselves. A number of comments point out that the clinical model for teaching does not include this aspect of the encounter and the teacher's dialogue with themselves, at least indirectly. Some teachers commented that the teacher's diagnostic tendencies and abilities, even when manifested primarily on the class level, ultimately contribute to enhancing the teacher's familiarity with themselves. The reason for this is that the deeper and the more detailed the picture obtained regarding the class's performances, the greater the opportunity for the teacher to reflect on their own strengths and weaknesses.

"I think that we need to talk sometimes about the encounter between the teacher and themselves. Diagnostics enables the teacher to examine their own teaching method..."

"There's a whole column missing here – the teacher! Myself as a teacher. I think that this is where everything starts. I think that there needs to be direct attention to this aspect. During the first year of the program, I heard that people say that the foundation of good teaching ultimately rests on the relationship. The relationship is based, first of all, on who you are – your values and beliefs, the way you judge people and talk to them, and so forth."

5. Use a broad arsenal of teaching approaches and methods and are capable of exercising informed discretion in choosing strategies and techniques according to the context, the subject of the study, the class, and the diagnostic findings of each student.

The fifth characteristic embodies the expectation that the quality teacher will have a command of diverse teaching tools and will use them according to the data from the field. This contrasts with a teacher who does not have access to such an arsenal, or who has access to diverse teaching methods but whose ability to adapt these to the conditions in the field is limited. Accordingly, this characteristic assumes that this teacher is also equipped with a diagnostic capability and the ability to collect data, in accordance with the previous characteristic, both in applying the diverse diagnostic tools and in adapting the teaching means to the right situation.

Although this characteristic is based on the previous one, it differs in one crucial respect. In the previous characteristic, the diagnosis

and the adaptation of teaching methods to the findings relate to the individual student, while here the point of reference is broader. Once again, the teacher is required to adapt the teaching methods and style to each student, based on the diagnostic process, but the characteristic adds the dimensions of "the context, the study, the class..." This difference in terms of the expectations presented to teachers is probably due to the fact that in the context of overall teaching, as in the previous characteristic, the challenge is indeed each individual student. In this context, the teacher can obviously have only limited knowledge without diagnosis. By contrast, in aspects such as the context, subject, and class, to which teaching must also be adapted, teachers do not need to apply special diagnostic tools. They are already familiar with the situation and its ramifications from their constant contact with the class. This explanation is particularly pertinent to the dimensions of "context" and "subject of study," and less so to the "class."

The reports paint the following picture in this respect:

Diversity of teaching tools and methods

— The general impression is that teachers employ diverse teaching tools and methods, and that this diversity is largely the product of the various programs to which they have been exposed. This is one of the most notable benefits of these programs, and very few reservations emerge in this respect. Even veteran and experienced teachers report that the programs they participated in benefited them in this respect. Accordingly, many teachers explicitly declare that their teaching is now characterized by a high level of diversity in teaching tools and methods. Many of these tools and activities are consistent with the spirit of clinical teaching.

Particularly positive comments were received regarding teaching tools, activities, and diagnostics based on contemporary

technologies — computers, smartphones, and so forth. Apart from the benefit these bring for the students and the ability to connect to their world, where such technologies play a key role, this arena also offers the teachers a chance to enter a sphere that some of them have tended to avoid due to a lack of knowledge and confidence.

A further characteristic of many of these tools and methods — "technological" and others — that is particularly important for our purposes is their organic integration in the clinical teaching model, due to their emphasis on activity, experimentation, and the active participation of students in the lesson. These aspects can readily be translated into the values nurtured by clinical education, such as discovery, experimenting, openness, or an accepting and participatory atmosphere. In addition, there is a clear emphasis on the value of diversity rather than the value of each individual means — in contrast to traditional teaching, which would seem to take the opposite approach.

In addition to all these aspects, it is impossible to ignore the teachers' sense of satisfaction and joy at the wide range of means and methods available to them. According to their reports, this satisfaction is shared by the students. For many of the teachers, this diversity has ended the reliance on the same teaching approach and the same few teaching tools that they used for years.

Adapting the teaching method to the field conditions — There are relatively few references to the acquisition of skills in adapting diverse tools to the field conditions. Although this is not stated explicitly, the reports show that adaptation is perceived as based on commonsense, acquired together with the tools themselves and applied without any particular difficulties. This may indeed be the case, though it is also possible that

the teachers are unaware of defects in this respect. This description applies particularly to adaptation to context, various circumstantial conditions in which learning takes place, and the study subject, and less so to the class.

However, the teachers also raised reservations regarding the aspiration to adapt teaching:

Adaptation to the class and the student

— Most of the teachers see themselves as adapting their more diverse teaching methods to the needs and situation of the class. As already noted, most of them do not modify the learning methods and tools for the individual student, as clinical teaching requires. They respond to this demand with a broad range of reactions, drawing on several arguments to support their rejection. Some of these arguments relate to the impossibility of meeting the implications of the demand to adapt teaching to the individual student given the prevailing conditions in the field — large classes, limited time, and a high level of heterogeneity among the students.

Another type of argument relates to a lack of tools. The teachers do not have adequate diagnostic tools to enable them to identify the unique needs of each student and to adapt the learning method accordingly. Very few reservations were raised on the more principled level, questioning the need for individualized adaptation or its underlying pedagogic rationale. However, the comments made by most of the teachers convey the message that this demand is so impractical, for the reasons noted, that it is totally unrealistic. In some cases, this leads to anger at this excessive demand imposed on the teacher.

The picture becomes even more complex when we examine the reports of some teachers explaining how they adapt their teaching methods to the needs of the class.

The teachers emphasize their sensitivity to the heterogeneity among the students (stronger and weaker students) and pay particular attention to those at both ends of the spectrum. Examples of individual adaptation often include individual work by the teacher with students facing particular difficulties, or the identification of other suitable solutions, such as help from another student. An example of adaptation that does not focus solely on students facing difficulties is the adaptation of the difficulty level of the exercises relating to the subject studied in class in order to identify each student's abilities. These examples raise questions regarding the practical meaning of the concepts of "adaptation to the class" or "adaptation to the student" — concepts that appear to be used in more than one sense in the different reports.

"According to the class and according to the student is a bit problematic. Of course, if a student has a question, I stay behind. You can't arrange an individually adapted plan. It's certainly important to me to know what's happening with each one of them, and I sit with them separately, but it's impossible to provide them with an individual plan..."

What is adaptation to an individual student? — Some teachers talk about their individualized work with students who face difficulties, or the special attention they pay to the "spectrum-end students" in the class, such as giving them individual work. Others declare that they do not currently — and there is no chance that they will in the near future — implement an "individual learning plan." Clearly, these two groups of teachers do not share the same perception as to what constitutes an "individual learning plan." The first group sees this as something familiar and readily accessible, based mainly on help for those who are falling behind in their studies. The second group assumes the existence of some type of diagnosis allowing the mapping at a high resolution of

individual needs, characteristics, and forms of perception and learning. At this point they have no idea as to how this might be achieved, or even whether it is possible in the current learning conditions. Accordingly, the expectation that they will apply what is referred to as an "individual learning plan" is perceived as threatening or impractical, particularly when multiplied by the number of students in the class. This is particularly true since, in the reports from the field, this slightly bombastic title is never accompanied by a detailed explanation as to what it actually entails.

Class versus individual — This aspect ostensibly reflects a clear distinction between the two end points: the teacher standing in front of a collection of students, aware of their unique characters as the result of in-depth diagnosis, and teaching each one according to their distinct needs — versus the teacher standing in front of a bunch of faceless students. However, it would appear that there are also interim points where it is far from easy to maintain this distinction. The teachers report the adaptation of their teaching methods to "my own class," thereby transforming the class into a kind of individual. Others depict the class as a body with an anonymous and somewhat undefined center, contrasting with well-diagnosed "ends" of the spectrum, usually defined according to the command of the study material. Another common type of comment regards the class as a united and clearly-defined entity to which the learning method is to be adapted, with the exception of a few individuals who have particular difficulties in learning and therefore receive personal attention.

Under the burden of the demand to engage in the "clinical" diagnosis of the individual student's needs, teachers feel ashamed to say they are failing. This leads to feelings of frustration or anger. Others shrug their shoulders at what they perceive as an

unrealistic demand that is detached from the field, and accordingly not worth worrying about too much. Others still report that they adapt the teaching methods to the student's needs as required, although a careful examination of the examples they offer to illustrate this creates the impression that, in practice, what they are doing is not very different from what most of the teachers do in this respect; the difference lies in how they conceptualize these actions.

6. Provide their students with grounded, constructive and reinforcing feedback according to their learning performances. They choose the type of feedback and the appropriate time to present it, and draw on it in order to help the students to internalize the learning targets and to be aware of the extent of the progress they have made.

Feedback is a familiar and well-known tool in the context of curricula, workplaces, and significant goal-oriented activities. The decision to allocate one of the characteristics of quality teaching to feedback, rather than including it as one of the ancillary skills required in order to ensure clinical teaching, presumably reflects the great importance attached to this tool. Our analysis of the findings from the field will therefore focus on the question as to whether the feedback the teachers give their students, according to the teachers' own reports, constitutes universal feedback in the spirit of this characteristic, and if not — in what ways it differs from this ideal, and what implications this has.

Feedback with a positive bias — The fundamental purpose of any feedback is essentially positive — to lead to

improvement and progress in the functioning of the recipient of the feedback. Nevertheless, the feedback process itself also usually involves the identification of failings, errors, and weaknesses. Although the traditional approach states that positive points should be raised in the feedback before the negative aspects, the overall balance is usually expected to reflect the actual situation. The feedback reflected in the reports we received shows a significant change in this respect. In keeping with the goal of being non-judgmental and the desire to create a positive and constructive atmosphere, there appears to be a significant diminishing of the tendency to note missing or erroneous aspects, as opposed to positive features.

"There aren't any negative responses. Admiration is shown just for the willingness to offer an answer — to stand in front of everyone and move it forward..."

"Students go up to the board and answer tasks they didn't understand. The teacher provides positive, constructive, and reinforcing feedback..."

Feedback focusing on the method rather than the result — Even in its conventional sense, feedback is not meant to focus solely on the final outcome, but on what led to it. In clinical teaching, as reflected in the reports, there seems to be an effort to consolidate and expand this principle, drawing away from the final outcome (the solution), or indeed the failure to solve the problem, and focusing instead on the way this outcome was achieved. This approach transforms this interaction into an act of review and ordinary learning, rather than classic feedback focusing on the individual's performance from a relatively judgmental viewpoint.

Creating opportunities for positive feedback — Any teaching process invites opportunities for feedback as soon as students are given the chance to respond to the study material. The reports show that beyond this level, many teachers make a deliberate and systematic attempt to create numerous opportunities for feedback, particularly as a platform for group learning, as we discussed above.

"A discussion develops among the students. They offer feedback to each other and do not refer to the teacher as an arbiter. They need to understand why this is a natural law – not because the teacher said so. The students argue about the answers, but not just in terms of right or wrong. What's interesting is not the answer, but the thought process – why it's right or wrong."

The main means used to this end are allowing particularly generous space for mistakes, so that these can be responded to and learned from, as well as a large number of individual tasks and the use of online questionnaires. All these are key diagnostic tools in clinical teaching, but here, as the reports show, they are also used to provide feedback in the spirit of clinical teaching as characterized above.

The picture that emerges from the characteristics we have examined so far describes a form of feedback that accentuates or exaggerates the positive and constructive dimension of regular feedback. As noted, this leads to the reduction of the element of feedback in the interaction and its transformation into a regular learning event. The outcome is that there is more feedback in quantitative terms but less in substantive terms in the classic sense of the word. In its traditional meaning, feedback constitutes a type of ceremony attended by the awarded and the recipient of feedback; the latter stands on trial. The participants and observers at this ceremony can therefore

easily distinguish between this event and other learning events, even if the latter also include an element of feedback. In our case, by contrast, the feedback is integrated in the learning process in a more organic way. The participants, with the teacher's encouragement, are all those present in the class, with the result that, in a sense, all of the teaching acquires the character of feedback. Accordingly, there are far fewer distinct feedback events.

This particular type of feedback is consistent with the spirit of quality teaching in its various dimensions, specifically, with the second characteristic, relating to the creation of trust, respect, and an accepting and egalitarian atmosphere. In order to create multiple opportunities for such dramatically constructive feedback, there is obviously a particular need for an atmosphere characterized by the student's trust in the teacher, openness, and egalitarian relations in which barriers between the teacher and the students, and among the students, is reduced to a minimum. Equally, feedback in this spirit forms one of the main components in creating this atmosphere and these relations, especially when contrasted with classic feedback, in which it is very clear who is giving the evaluation and who is receiving it and whether the student acted properly or not, with all the inevitable judgmental ramifications of such a setting.

Another question that emerges from this aspect is the extent to which the use of this type of feedback meets the expectation that a clinical teacher will devote a substantial part of their activity to individual work with each student. Increasing the number of opportunities for individual feedback ostensibly also enables the teacher to diagnose the individual state of each student and to respond accordingly. However, as feedback functions less as a ceremony of judgment and evaluation, and more as a "pure" learning event less directed at the

individual, the more it becomes a class experience, making the dimension of teacher-student work in classic feedback less dominant. Whether this is a good thing or a bad thing, it contributes to blurring the distinction we noted above between work with the student and work with the class.

We can assume that most teachers, even when they consider that they have adopted most of the profile of clinical teaching, will experience themselves as working with the student as an individual in situations that highlight their attention to a particular student, such as the provision of feedback to their performance on a given task. Thus, they will feel that the class as a whole should serve as a kind of backdrop in this respect, essentially in the role of passive observer, rather than playing a central role in the interaction. A similar, and perhaps even more accentuated, sense of work with the individual will surely be present during feedback discussions referred to in organizational jargon as "evaluation conversations" or "personal conversations." The emphasis in such conversations is usually not on a concrete event but on the individual's standing relative to their long-term objectives. It is possible that such conversations take place mainly between the teachers who participated in the study, though there are few references to this in the various field reports, and these almost all appear in various other contexts and not in the context of providing feedback.

7. Play an active role in a professional community whose regular activities are led by master teachers, including a systemic focus on students' learning and on analyzing learning and teaching from the classrooms.

8. Build professionalism in teaching together, including formulating a shared perception of teaching, shaping routines for monitoring learning, establishing a support system for students, and engaging in peer learning, including documentation, analysis, feedback, and mentoring.

These two characteristics relate to the importance of the teacher's participation in a professional community as part of the clinical teaching approach. The inclusion of this aspect in the characteristics of clinical teaching may create a logical difficulty. While the other characteristics focus on the outputs of clinical teaching in terms of the teachers' work with the students, these two more clearly address not only the input intended to shape this output (such as a command of diverse teaching methods), but also the definition of an overall arena with its own presence, and to an extent its own outputs.

This may explain why the first of these two characteristics (characteristic #7) emphasizes that the framework focuses on "students' learning and on analyzing learning and teaching from the classrooms." This returns the focus to the teacher's activities with the students, rather than to the events in the community per se, however appealing these may be. Characteristic #8, which we included here with its predecessor due to the organic connection between the two, focuses more strongly on what is supposed to happen in the community, though here, too, the emphasis is on what is defined as "building professionalism in teaching together" manifested, as noted, in tools applied in direct work with the students.

Before discussing the comments on this subject in detail, it is worth noting that the Trump Foundation plan defines a “professional community” as a group of teachers who receive in-service training and are led by “master teachers.” However, this is not always the case in various programs that have come under the Foundation's auspices. The “communities” are essentially frameworks for enrichment, guidance, and supervision, some of which indeed meet the definition of a community. In other cases, the teacher receives guidance, support, and supervision from some professional source: sometimes a regular instructor who meets with the teacher on an individual basis, and sometimes several participants and several instructors in diverse formats. Although these distinct formats are significant in examining the teachers' responses to these activities, we chose to address all the formats more or less as a single entity.

From isolation to fellowship — Several of the teachers' comments, particularly the more enthusiastic ones, address this aspect. The community provides an opportunity for the “lone” teacher to experience a sense of partnership, examine themselves in reference to others, and express their needs, satisfactions, and frustrations as a teacher. In many cases, this is accompanied by a sense of friendship and the enjoyment that comes from meeting people with whom the teacher shares so much in common.

Self-awareness and professional awareness

— A recurring theme in the teachers' reports, and one we have already noted, is the lack of any space where, according to the clinical teaching compass, teachers work with themselves just as they are supposed to work with the student, class, and community. Various comments on this subject suggest that ironically the community framework, in which teachers are among peers, actually permits this introspection. Through the mediation of other teachers, through comparison to them in conditions that are

relatively open yet protected, including the giving and receiving of individual feedback, teachers gain deeper insight into themselves as teachers and as humans.

“We have modeling days as part of the program. They observe us, and we observe our colleagues. And suddenly the door opens and everyone is observing me. At least I have some feedback, reinforcement, criticism.”

“It adds confidence. We exchange materials, spread our wings, it motivates us and inspires us. It helped me to address problems from a more qualitative angle. I use the tools I get there with all the groups, not only the five-unit group.”

Professionalism — The various comments readily illustrate the manner in which the teachers' concept of professionalism is expanded and empowered in the community framework. In addition to enrichment in mathematics knowledge, teachers also benefit from the entire world of quality pedagogy. The components of this world range from the acquisition of more tools, methods, and techniques for conveying the material, and sometimes the provision of “softer” skills in the behavioral dimension that are required in order to undertake the demands of clinical teaching properly, through to an aspect that was also mentioned in the reports, albeit less frequently: deepening and enrichment on more principled issues underlying the entire structure. Many teachers report that the community made a real contribution on these aspects. Even more experienced teachers, who sometimes report that they have developed their own well-shaped professional theory, note that the community sessions increased and expanded their repertoire, at least in terms of teaching techniques and methods.

Renewal — Aspects that can be noted here include the perceived benefit of the community in terms of the teachers' willingness to move beyond their safe zone

of action, to take a risk, and adopt working and teaching methods that differ significantly from those they have been used to and have seen as characterizing their work. In some cases, this might go as far as putting on a multicolored hat in a lesson to convey some kind of symbolic point. But even in the teachers' less exceptional behaviors, as many of them note, there have been significant changes compared to how they previously permitted themselves to act.

“The community gave me something else — my teaching became less about learning with the student and less about frontal teaching all the time. For example, research labs — you give [the task] to the students, they move ahead, and I guide them. In the past, I was nervous about giving tasks like that, because I thought it would waste my time... and I wouldn't get through the material for the matriculation... The community removed obstacles that I face, too — not just ones the students face.”

The aspiration to excellence — The way in which the aspiration to excellence is gradually built and reinforced by this group framework can be identified clearly. This excellence has a relative character — the teacher is exposed to the performances of their peers, just as they are exposed to his or her performance, and naturally no-one wants to fall behind and ideally, they want to outstrip their peers. There is also a more absolute dimension to the aspiration to excellence, when clinical teaching is divided into various segments, each of which has its own rank of achievement. Thus, alongside the more familiar challenges of increasing the number of students studying at five units, preventing dropout, and so forth, additional challenges emerge in terms of the teaching process, the activation of various teaching tools, and so forth.

These aspects all take place through a process of intensive discourse that also offers significant opportunities to receive feedback, together with a constant drive to improve

achievements. More than a few teachers describe this process using such terms as “enthusiasm,” “new energies,” or “a spark in the eyes.” They explain that this leads them to take themselves and their students to new places that previously were the reserve of the few.

“Basically, the fact that I was in the community and discussed these things, first of all influenced the number of students in the track. I can't point to anything specific, but the whole atmosphere of participating in the community, and having tools that you can use, makes you more confident about what you're doing. And this confidence enables you to accept more students, even ones who aren't especially strong, because you know how to cope with them...”

The community as a role model — From the descriptions of what happens in the teachers' community and what these frameworks achieve, it can readily be seen that much of what is reported is similar to the classes where these teachers teach. The analogy we noted just above — the nurturing of the value of excellence in the teacher's community that is then translated to nurturing excellence in the class — is just one of many. Indeed, almost every significant aspect of the community activities has its parallel in the classroom. The teachers' growing awareness of themselves in this framework is analogous to the emergence of greater awareness among the students of their own capabilities and difficulties. Tools such as mutual feedback are naturally employed in both these arenas. Above all, the creation of an open atmosphere, honest talk, mutual respect and trust that forms the basis of quality teaching with students is no less characteristic of the teachers' experience in the community. In this sense, the community functions as a living model and a forum for the preliminary exercising of what will later be applied in the classroom. In some cases, of course, the order is reversed. These embody what we might sum up as an approach of “do not do anything to your student that hasn't first been done to you in the community.”

However, the teachers also raised reservations regarding the work in the professional community:

The teachers' comments regarding their participation in the various frameworks of what is referred to as the "community" clearly show that most of them believe that this component of clinical teaching makes a real contribution to the quality of their own teaching. Nevertheless, it is worth distinguishing between the majority of teachers and a minority in this respect. For the majority, in particular for younger teachers, this is a process of learning and empowerment without which they would find it difficult fully to perceive and implement the clinical teaching approach. Others, particularly more veteran and experienced teachers, do not relate to the community in such generous terms, though as we already noted the framework provides an opportunity to refine their professional approach and enrich their repertoire with additional tools and skills. A third group includes teachers who expressed reservations regarding this concept and many of its components. Those who stated their position overtly appear to have less substantive or general reservations, though here and there the reports mention other teachers whose colleagues believe have not gained from the joint learning process and from this experience, and who have effectively stood their ground as teachers and declined to move.

Nevertheless, the clear impression is that the overwhelming majority of reporting teachers underwent a meaningful learning process in the community, including a prominent component of acquiring tools and knowledge, as an experiential and emotional dimension. The community has thereby made a real contribution to their development as teachers and to their ability to achieve what is supposed to be the ultimate test of activity in this framework — a higher quality of work with the students.

A possible reservation that could be raised here is to suggest that the gap between the teachers' community and the class of students cannot be bridged in such a simplistic manner as implied by many of those involved in the process. The more experiential, rich, and elevated the events in the teachers' learning group, and therefore the more they manage to overcome and rise above the reality in the field, the more likely the possibility that this framework will distance itself from the more prosaic and less sparkling reality that faces teachers in the field. The comments to this effect, of which there are not many, appear in the reports in the context of what were defined as "systemic elements" — aspects such as the large number of students in the class, time pressures, the need to meet the demands of the curriculum, and so forth.

The question is not confined to the possibly natural tension between the "field," which of course is in itself not monolithic, and the community classroom. An even more important factor may be the presence of open discussion regarding this tension and its ramifications. Are these voices raised and given a genuine response, or are they unwittingly blurred and diminished? The number of references to this aspect in the reports is limited, but the following examples illustrate the issue from two distinctly different perspectives:

"If I only followed the approach of the hothouse, it wouldn't be realistic. There's this sword hanging over us to complete the material. You can't always do the ideal thing — it isn't always realistic when we have to cover the material. If we had a freer hand that would really be great, but that's not the situation at present. I imagine that each school can take what is relevant for itself..."

"You can't give too much room to this method in the classroom, because of the time it requires (the activity requires four hours, so

it cannot be implemented regularly). But this really heightened our understanding that if you just stand in front of the class and tell them stuff, and you're sure they've understood, it doesn't really work — in the next lesson you realize that they're failing on a similar question. Not every lesson revolves around this axis, but it heightened our understanding of this."

Conclusion

1. Clinical teaching as a selected teaching method for teachers of mathematics and physics at five units receives significant support from our analysis of the content of the written and oral reports of teachers and directors of the programs in which these teachers participated. These programs do not address the inculcation of clinical teaching, but rather provide enrichment, enhancement, and improvement of the quality of these teachers' teaching, each in its own way and according to its own world of concepts. Precisely because of this, it is very significant that most of these teachers saw a close affinity between the clinical teaching compass and what they learn in the programs, their daily practice as teachers, and the way they teach in their classrooms. These are not individuals who have undergone indoctrination in the method validated here and who therefore pay lip service to this ideology. Even if we take into account that these reports were prepared in a semi-professional manner, they nevertheless paint a very positive picture of clinical teaching and of the Trump Foundation's choice to sponsor these programs.

2. Most of the teachers state that the programs they have participated in have benefited them significantly, with an emphasis on programs that, in the language of clinical teaching, embody the interactive teacher-community component. The

main benefit is in the sense of sharing, overcoming professional isolation, and improving their professionalism as teachers. Among other aspects, this includes the acquisition of teaching tools and methods, the clarification of relevant pedagogic issues and concepts, and various teaching and communications skills.

3. Most of the teachers also report a significant change in the way they teach in practice. This change is consistent with most of the characteristics of clinical teaching. This begins with setting more ambitious goals for their teaching, through to creating relationships of mutual trust and respect with the students, and the use of a richer repertoire of teaching methods and tools than in the past, adapted to the students' needs and capabilities, after these have been diagnosed. The teachers sense that this creates change which favors preparing the students for matriculation in five units of mathematics and physics and enhancing their achievements.

4. The description by most of the teachers of what happens in the professional learning community to which they belong, and to a large extent what happens in the classrooms, embodies a change in the professional culture and language of teaching. The exposure to clinical teaching, directly and through programs and communities that speak its language, the keywords in their new discourse, and the accompanying values all have a more participatory, social, process-based, emotional, open, and creative character.

However:

5. To what extent is this clinical teaching, or something similar to clinical teaching? Does the manner in which the clinical teaching compass is validated as the common denominator of the Foundation's programs, and the way the teachers actually teach, not also allow for the possibility that what

is happening here is a certain blurring of the existing variance in teaching methods and means? Do a number of ways exist to apply the compass, all of which count as clinical teaching? To what extent is this an approach or philosophy of education, and to what extent is it a defined and closed set of behaviors? To what extent is the goal to create an open process of improvement and depth, and to what extent is it to secure results that can be measured in examinations? The profound inculcation of clinical teaching would seem to demand attention to these questions, too.

6. The affirmation and approval provided for clinical teaching by the teachers in the programs are not unanimous, even if most of them clearly offer their seal of support and acceptance. A minority of teachers appeared to emphasize the fact that their mature and well-developed teaching method has not changed much following their participation in the program, though it has been enriched through the provision of greater diversity in teaching tools and methods. Some other teachers — by their own statements and as testified by others — have not “connected” to this method. Which of these three groups best represents teachers who have not participated in any of these programs? At this point, it is doubtful whether we can offer a clear answer to this question, particularly since the test is what happens to the regular teacher following participation in the program, exposure to the concepts of clinical teaching, and how he or she is subsequently classified.

7. As noted, the component of the compass relating to the interaction between the teacher and the individual student did not receive the same support and affirmation from the participants in this study as the other components of the model. This finding raises various questions. Firstly, what is the reason for this? Do the teachers lack skills and suitable teaching skills which

prevent them from implementing this aspect as required? Or does the blame lie in the conditions of learning in the field that make this impossible? Perhaps the problem is not one of learning conditions or the teachers' skills, but rather relates to a lack of confidence on the teachers' part in their abilities, or a lack of conviction regarding the importance of this matter, so that they need to be convinced on this point. Of course, it is also possible that this is merely a matter of poor communication and definitions.

There is a lack of clarity that obscures such questions as the meaning of work with an individual as part of a class. To what extent do the teachers really understand the expectations presented by the compass? The actual situation on the ground may be much closer to the demands, so that the point of disconnection is indeed the language used to describe the situation. What do individual diagnosis and an individual learning plan really mean? Lastly, if the significant gap between the demands in this field and the actual situation is a genuine one, does this relate to a substantive component of quality teaching, as implied by the frequent references to teaching of a “clinical” nature? Whether the answer to this is positive or negative, there seems to be a need for a thorough clarification of this aspect and of the teachers' work based on the findings presented here.

8. Is there a danger of a “herd mentality” regarding clinical teaching? Although the reports seem to reflect free and open discourse in the various programs, as also inculcated in the classrooms, this question is always present. This is particularly true since it relates not only to teaching techniques, but also to an approach that has a value-based dimension, faith in the system, and even an element of preaching. There is always concern that the vital need

to win over minds and to inculcate the preferred educational approach may, by way of an almost inevitable side effect, result in the emergence of a herd mentality that allows more room for criticism within the method than for criticism of the method. This is all the more the case given that we have identified here a change in discourse and communication, as noted above. What about those who encounter difficulties, or who refuse to speak this new language? And what happens when someone challenges its basic assumptions? Do all the teachers join the programs, or only a certain type of teacher?

9. The systemic factors in the school and beyond are usually mentioned in the reports by way of “background noise” that impairs the ability to implement clinical teaching properly. It is reasonable to assume that the opposite is also the case, but this is not mentioned as often. There would appear to be a need for more information about the school and about other relevant elements in this respect. What barriers impede clinical teaching? What encourages it? To what extent is it supposed to adapt itself to the conditions in the field? Excessive adaptation to the grassroots conditions is liable to damage the aspiration to excellence and lead to a tendency to accept “second best” and mediocrity. Conversely, ignoring these conditions and over-idealizing the system is liable, once the initial enthusiasm wanes, to reveal teachers who have been left behind because they perceived their daily reality as too far removed from the impassioned — but in their view unrealistic — picture presented in the community. ■