

Training Reflective Professional Teachers – A new integrative model (research Findings)

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Abstract

The following paper focuses on one **topic** out of a wide completed research (Zohar 2000) which, evaluates a training program for prospective teachers in the development and use of classroom based alternative assessment tasks. The research implemented in one of the leading training institutions in Israel, “Kibbutzim College of Education” in Tel-Aviv. The paper deals with student teachers’ (STs) expressions of reflection and the ways by which they implemented reflection with pupils. The data of the subject of reflection yield a new model that emerged from the work of student teachers and presents an approach that considers teaching to be a reflective occupation. In addition, the findings represent the approach that sees reflectivity as an integral part of good, professional teaching. The model also demonstrates the extent to which student teachers adopted the principles of reflective teaching and how they used them when they worked with pupils while dealing with issues of assessment in the practice classroom.

The focus of the paper is on an analysis of the reflection itself only and deals with characteristics of STs’ reflection. The principles of reflection, which were expressed in the work of the STs with pupils in the schools (Zohar 2002), are not presented in this paper.

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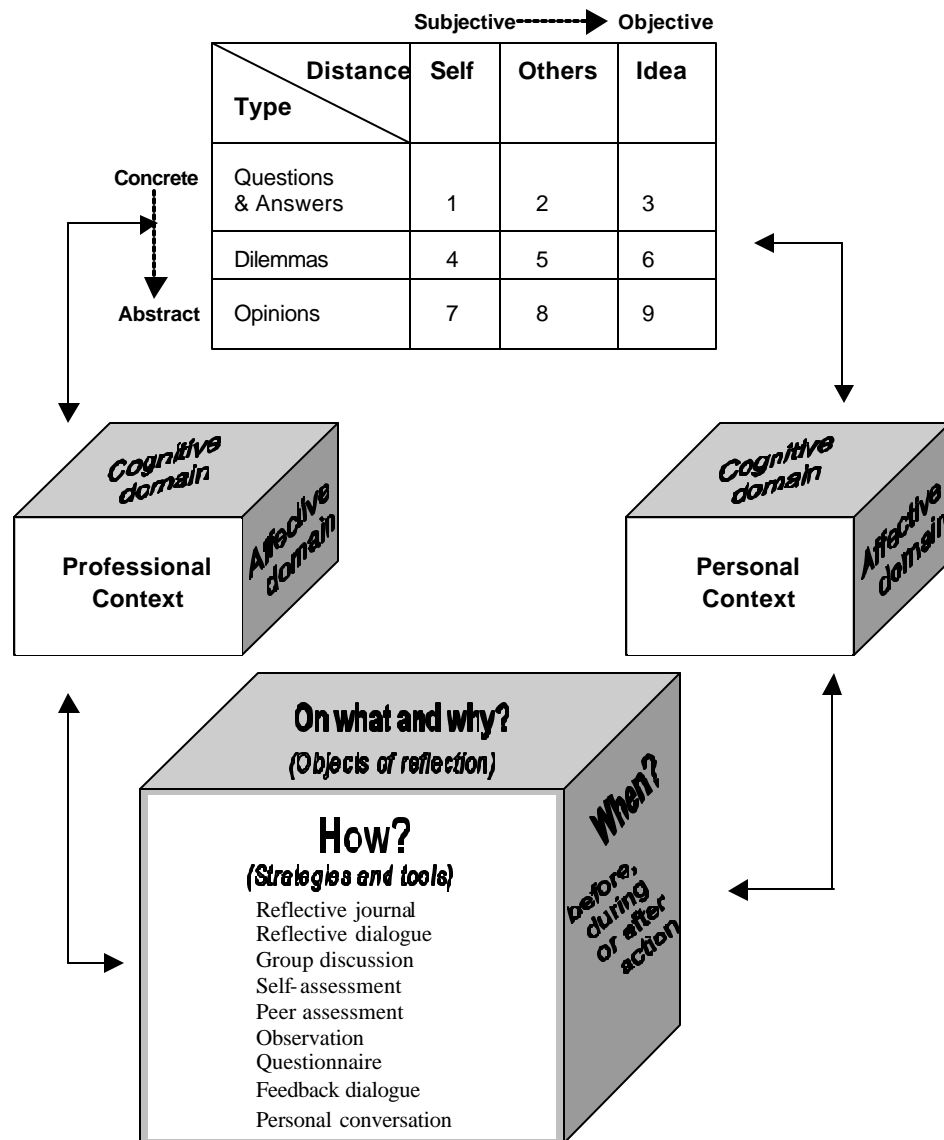
The expression “the whole child” gained real significance when examined through assessment.
- Student teacher

Characteristics of Student Teachers’ Reflection

From the findings it is evident that in the responses of the STs there is a wide range of reflection. By analysing, classifying and summarising the data according to the principles of grounded theory (Strauss & Corbin 1990), an eclectic model was obtained which reflects an integration of approaches. The model, which summarises most of the characteristics of the ST’s reflection during the course, will be demonstrated and explained.

The reflection model

The model below is intended to guide interpretation of the data that emerged from the work of STs.



An interactive and integrative model of reflection as it emerged from the findings

The figure shows that the model is composed of four parts: one two-dimensional table, and three three-dimensional figures. The categories for characterising the reflection emerged as a result of the constant comparative method (Strauss 1987), according to which the themes and patterns emerging from the data were identified, clarified and verified, and are expressed in the two dimensions of the table. The first dimension is the type of response of the STs on an axis describing the three primary manners of expression: concrete questions and answers, which had the characteristics of a report; dilemmas; and opinions and positions, anchored in theory. On this dimension, three points of reference were identified: the “self”, “others” and the “idea”. Both axes can be described as reflecting a continuum: The horizontal axis ranges from subjective to objective, and the vertical axis from concrete to abstract, as indicated in the figure. Each reflective response was characterised on both axes, yielding nine characteristics of reflective responses, presented in the model by the numbers 1 to 9.

While the nine characteristics of reflection are not hierarchical, each number constitutes a junction between two component parts of the dimensions. The model represents a schematic profile of testimonies of reflection, but in reality, the boundaries are blurred and a reflective response may reflect a number of characteristics.

The figure also shows three-dimensional components which relate to the objects of reflection and the context: the professional and the personal in the cognitive and affective domain. The professional context includes pedagogic-didactic knowledge, the Hebrew syllabus and general teaching skills. The personal context relates to self-awareness, sensitivity, and involvement, creating trust, communication with pupils, teachers and colleagues, as well as past personal experiences. The third cube represents the objects of reflection, when the reflection occurred, and the strategies of reflection. The two-directional arrows demonstrate the integration and interaction of the dimensions and the components of reflection.

The findings below are presented according to the two dimensions of type and distance which serve as a basis and a conceptual framework for the other components. The findings are described below according to the types of reflection and each section describes the findings included in one row: 1-3, 4-6 and 7-9. The examples represent the majority of the reflective characteristics found in the research

Reflection through questions and answers (Categories 1 to 3)

The first type of response includes questions and answers in the style of a report.

Questions: Due to the fact that during the course the STs encountered a variety of difficulties and were in need of immediate answers in order to carry out certain tasks, questions served as a channel through which the STs requested concrete solutions for immediate implementation. The questions dealt with a wide variety of topics pertaining to assessment, the syllabus and general teaching skills, such as differences in types of texts, clear formulation of assessment tasks, translating a goal in the syllabus into an assessment task, analysing the pupils' work, drawing conclusions and making decisions on an individual and a class level, dividing the class into small groups, dealing with discipline problems and organisation of time. Most of the questions show that the STs' main concern was to find ways to improve a specific skill or aspect of knowledge of assessment and general teaching skills.

Because most of the questions indicated knowledge gaps, it was possible to provide answers, concrete solutions, or a practical tip to most. The difference between the questions along the continuum 'self – other' is in the focus of the questions. The reflective focus in the first category was on the STs themselves and their needs. The key word in the questions was "I", for example:

Tal: *Is there a minimum number of levels necessary in a scoring guide? I need to be sure in order to feel more confident with this area.*

Here Tal requests a concrete answer and points out specifically that she requires the information to increase her confidence. In contrast, the focus of the following question is different:

Rona: *It is a pity that Barak avoids feedback conversations. I tried a number of times and he refused. It's quite depressing. How should I act with him? Should I*

give up? He specifically needs individual treatment and personal attention, but he avoids me.

Here, the focus is on the needs of the pupil. In her question, “What should I do with Barak?”, Rona demonstrates real concern for him. Barak is a reflective object, and the attention to his needs constitutes the reason for the question. This question thus falls into category 2.

The next question also focuses on others, but has additional implications.

Hila: *What should the composition of the groups be in terms of pupils' levels? How many weak pupils should there be, and how many strong? In the last task, Yoel did not participate and was not included in the group activity. Orit and Dana ignored him. I mentioned this to Orit, and then I regretted it because she seemed to have been offended. In my remark I may have hurt Yoel more than I helped him. In this group, only Yoel is a weak pupil. Would Yoel have behaved differently in a different group of pupils?*

Hila asks about the composition of groups, when her real motive is her concern for the weak pupils and their progress. In addition, she demonstrates sensitivity to the influence of her response on the pupils and their feelings. Smith (1997) views this kind of response as “an affective type of reflection”, equal to the second level in van Manen’s (1977) model - the “practical action”. According to Smith, this stage includes questions like “How did my action in class affect the pupils’ emotions, feelings, motivation, attitude?” (1997: 224).

The following example, representing the third category, focuses on an idea:

Iris: *I believe that a task, which includes items of creative expression, affects the level of achievements on other items. I found this connection in two tasks. Is this always true?*

Iris, seeking support for her observation, expresses an idea based on a causal connection. The essence of the idea is in its contribution to improving pupils’ achievements.

These examples show that most of the questions were formulated in terms like “I want to be sure about...” “How do...” “What is...” “I mainly want to know how...” “I find difficulty in.”; “I am disturbed by the fact that I don’t know how to...”. Regarding the time of reflection, the STs asked the questions orally and in writing, before carrying out the task, during the task, and after it. The frequency of the questions testifies to the importance of the presence of a professional and accessible person to accompany the STs and answer their questions. Sometimes STs expressed such a level of urgency that I called their questions “survival questions”. The many questions are also testimony of their motivation, involvement and desire to succeed.

Reports: While the questions described above were asked at the initiative of the STs and in keeping with their needs, most of the responses defined here as reports were written answers to questions. The STs answered in their self-reports. In these self-reports, STs were asked, for example, to explain their decisions when selecting assessment tasks from the collection, changes they made in tasks, conclusions derived from the pupils’ results and decisions regarding how to deal with individual pupils and the entire class. The form of the answer was usually “I chose the task because...” “I learned that...” “I got the impression that...”. In answers such as “I chose a task

which I know well” or “*I chose a text that I liked personally*”, it is possible to see that the reasons for choice stem from personal needs, while other answers imply considerations stemming from pupils’ needs, for example, “*I chose this task because of the natural connection between the characters and the pupils*” or “*The first task frustrated Boaz, mainly because of its length...so this time I chose a task which is short and not difficult*”.

Other answers in the self-reports related to an idea. An example of this can be seen in the following: “*Because explanation is basic to the thinking person’s functioning, it is essential to start working on the pupils’ ability to explain themselves.*” Here, the consideration behind the decision to deal with the item is its contribution to the pupil’s general functioning. Other STs’ explanations were intuitive and included statements such as, “*I have the impression that the children...*”. Such explanations are defined by Dewey as psychological, and indicate formed habit rather than thoughtful judgement. According to LaBoskey (1993: 32), intuition may be the result of prior reflection.

Because the reflective response is an external means of reflecting internal processes, the cognitive and the affective domains seem to be inter-linked. Feelings and emotions found in words such as ‘*feel*’, ‘*bother*’, ‘*frustrated*’ and cognitive actions represented by ‘*manage*’, ‘*choose*’, ‘*explain*’ were mentioned together, so that it is difficult to determine which proceeded which, and which is more dominant. The fact that in reflection the affective and the cognitive nourish and affect one another is evident in Dewey’s (1933) approach, which incorporates emotion in cognitive actions.

The question arises whether it is possible to view concrete questions and answers as an expression of reflection. The answer, in my opinion, is yes, as they represent a type of knowledge and a certain level of awareness. The questions show that the STs recognise their difficulties and their level of mastery of different activities connected to the implementation of assessment and their teaching skills. They are aware of pupils’ difficulties and the complexity of the teacher-pupil interaction. Intuitive expressions like “*I have the impression that...*”; “*I believe that...*” have been defined as automatic response of reflection (Korthagen & Lagerwerf 1996). Bain et al. (1999) define reporting as the first level of reflection where “the student describes, reports or re-tells with minimal transformation” (60).

Most of the examples above can be related to what van Manen (1977), in his instruction model, calls “technical reflection”, i.e., educational knowledge and basic curriculum principles approached through “how to” questions. The answers in self-reports can be related to what Louden (1991) called “reply”, reflection on issues that occurred in the past.

Reflection through dilemmas (Categories 4 to 6)

Dilemmas are well known in literature when dealing with problem solving (Dewey 1933; Schon 1988; Calderhead 1987, 1989; Louden 1991). However, what Dewey and Schon call a “problem” is closer to a difficulty or conflict. Evidence of reflection on situations of difficulty and embarrassment were expressed in different variations, different emphases and different levels of complexity throughout the course. The dilemmas usually related to four situations: personal-emotional difficulties, surprising situations in the classroom, dilemmas dealt with in a deliberate manner and dilemmas based on experience. Following are representative examples of the four situations:

Personal-emotional difficulty

The three examples of reflection below describe situations of personal-emotional difficulty related to the use of a scoring guide; however, they differ in their focus. In the first example, the reflection focuses on the self; in the second, on others and in the third, on an idea.

Keren: *There were questions over which I lingered for a long time. I cannot stand poor writing. I am also affected by spelling mistakes...It's a 'fault' in my character ...I had to watch myself not to grade according to my own weakness and ignore what the pupil was trying to say... (Reflective dialogue).*

Hagar: *I learned something about my prejudice and myself....But the most important thing is that by means of the criteria and the scoring guide I found integrity in myself as a teacher (Reflection journal)*

Gil: *Only after checking the tasks with the scoring guide did I understand its importance for strengthening my self-confidence, and how much it contributes to the required fairness in assessment. Teachers are only human and they are not free of bias. The scoring guide, in my opinion, allows justice not just to be done, but to be seen as well. When I summarised the results of each child separately, I connected with the frustration I felt when I was a pupil. No one put his/her finger on my problems or informed me in a differential manner about my exam results. I envied the children who can now get comments such as "This you did well", "Here your answer is not complete" (Report).*

In the first example, Keren defines the problem: the influence that the pupil's handwriting has on the assessment. According to Schon (1983), presenting the problem by naming and framing is an important characteristic of reflective thinking. This is an example of personal reflection where the ST criticises her own behaviour. This emphasises that the ST is so bothered by this tendency that she views the experience of assessing answers as a means of coping with the difficulty in attempting to overcome her natural tendency.

In the second example, Hagar interprets her behaviour through self-awareness. She admits to a negative personality trait, and uses the scoring guide as a means of improving her functioning as a teacher. In her reflection, she transfers the personal experience of discovery from the personal context to her functioning with others; that is to say, to the professional context.

In the third example, Gil demonstrates the difference between reflection focused on self or on others and reflection which focuses on an idea. She focuses on the importance of the scoring guide as a tool for ensuring equality, fairness and justice. This idea takes its strength and power from her personal experience. Reflection of this kind is identified as the third level in van Manen's (1977) model, and demonstrates Zeichner's (1983) perspective of reflection. For Zeichner, "reflection implies the examination of the moral, ethical and political issues that are embedded in teacher's everyday thinking and practice" (1983: 6).

Only about one third of the STs reached this high level of reflection. Most of the dilemmas had a common background, based on the STs' past or connected to very emotional experiences. Reflective responses anchored in highly emotional dilemmas of this kind demand courage, awareness and self-confidence. Admitting to prejudices, being influenced by external elements in assessing a child's work, a character "defect" and sharing personal experiences to a pedagogical supervisor, is not easy.

These “discoveries” were achieved by means of two main tools: feedback conversations and the reflection journal, two tools that allow intimacy and exposure. I found these written and oral conversations fascinating both personally and professionally.

Surprising situations in the classroom

Dilemmas stemming from what Schon (1983) calls a surprising and problematic situation arose when the STs were asked to respond to an immediate problem which arose during the training period. Such situations were common, but not all activated reflective processes which produced learning. Most of the situations occurred during interaction with pupils, teachers or peers. The first example demonstrates the response of a ST to a surprising situation in the classroom, where no learning took place as a result. Despite the fact that she provides an account of the event after the action, one can see that the ST is focused on the self, both during and after the event.

Liraz: *I had a very unpleasant experience. I brought the game “Give and Take” to the class, in order to observe and assess communicative skills. I put the game on the table, and as always, the children gathered around me. After everyone sat down, I asked him or her: “Who wants to play?” All the children raised their hands. For a moment I was stunned, but when they began to shout “Me, me” I got nervous and wanted to leave the classroom. But I restrained myself and asked them to lower their hands. After they calmed down, I told them that their shouting would not do any good because the game was for five children only and I would choose them. The children raised their hands again as if I hadn’t said anything. The noise began again, and I heard one of the pupils says, “But she asked who wants to play”. This time I could not silence them, so I closed the game and put it in the bag. I was angry at their ingratitude. I was also angry with them because I felt so stupid. “Who wants to...?” is an expression I often say and they took the question literally. Now I am deliberating how to respond before I bring a game again (Reflection journal).*

In this example the affective aspect fills a central role. The ST was so focused on herself and on the insult she suffered that she was neither emotionally nor cognitively open to seeing her own role in the event. From her perspective she was the victim; the pupils’ “ingratitude” caused her to feel “stupid”. She learned nothing from the occurrence even after the passage of time. The only dilemma she had was how to return to the class with a game.

A different response to a situation led to learning after reflection. While Hadar was observing a group of pupils, one approached her and said, “I don’t want you to write about me.” Hadar was surprised at the pupil’s resolute tone and asked, “Why?” The reply was, “Because – I just don’t want you to.” Hadar thought for a moment, and then said, “All right. If that’s what you want.” Every few minutes, the pupil turned to Hadar to remind her of her promise. After the observation, Hadar asked the pupil for an explanation. “Teachers only write good things about pupils they like”, the pupil said and ran out of the room. After the event, the ST said in a feedback conversation:

Hadar: *I only now realise that he actually was telling me that he doesn’t believe in me or in my assessment of him. When it happened, I was embarrassed and surprised, and I gave a spontaneous answer. On one hand, I was angry at him because his demand was impossible. On the other hand I felt sorry for him because he barely participated in the activity after what happened. But it all makes me wonder – do I really observe them objectively? Aren’t we influenced*

by what we know about the pupils? His suspicions are probably based on prior experience. What bothers me most is the question to what extent can a teacher's assessment really be objective? To what extent am I to blame for his distress? (Reflective dialogue).

Hadar's response to the child during the lesson represents "reflection-in-action" (Schon 1983, 1988), which resulted in a solution to her personal embarrassment. But in reflection-on-action, she relates to the event as a dilemma regarding the essence of the term "assessment". She presents the problematic nature of the event from a personal and emotional perspective; however, in reflecting, she shows sensitivity and understanding towards the pupil as well. In contrast to the previous example, Hadar tries to understand her contribution to the child's feeling of discomfort and relates her own discomfort to a moral question regarding the ethical side of assessment.

Deliberation

A different kind of reflective response in situations of dilemma is a process characterised by a chain of thoughts and intermediate decisions until the final decision and conclusion. The following examples demonstrate this. In the first example the focus is on others; in the second, on others and on an idea:

Liraz: *Noa wrote in her feedback that she wants to work at home more.... Initially, I tended to refuse, but I reconsidered. Why say no? I agreed (Report).*

In this example, after the action, Liraz describes her reflective process upon receiving the pupil's feedback. She examines her automatic response (to refuse), her thoughts in reconsidering (why say no?) until she reaches her decision (I agreed). Reflective thinking of this kind contributes to personal and professional growth by examining routine-automatic responses and avoiding any one behavioural pattern.

The following example focuses on the needs of the other and the idea, and deals with choosing the second task from the collection of assessment tasks.

Vered *In the task "We Dream", there are 21 items. This is too many because the children lose patience towards the end, and for this reason Ruti shortened it to 16 items. I tended to do the same; however, it seems a pity because every item is important. There is also a certain order in the items. I considered splitting the task into two separate tasks, but then I would have to ask the children to read the same text twice. I deliberated and ultimately decided to have the pupils carry out the task in two separate blocks of time. I would give the first part in the morning and the second part after the 10 o'clock break. This solves the problem of the length of the task for the children, because when they see fewer questions they have more motivation. For my part, the purpose is to get a real picture of the situation and ensure that the results of the assessment are not affected by unrelated elements (Reflection journal).*

The cognitive aspect plays an important part in this example. The ST considers different alternatives and reflects before the action; in other words, on the planning level. Louden (1991) calls this kind of reflection "rehearsal". Dewey views it as "not simply sequence of ideas, but a consequence - a consecutive ordering in such a way that each idea determines the next as its proper outcome while each outcome in turn leads back on, or refers to its predecessors" (Dewey 1933: 4).

The two examples demonstrate a process of deliberative cognition where the STs carried out a chain of cognitive actions, during which they examined, deliberated and

interpreted the phenomena in order to make a decision. The second example also has an element of learning from experience. In the deliberative process, the ST relies on the experience of her friend Ruti. However, she does not accept Ruti's solution, she re-examines the dilemma and reaches a creative solution of her own.

Learning from personal experience and from the experience of others is a variation on reflection in situations of dilemma, where the experience may serve as a solution to the dilemma.

Learning from experience.

The following examples demonstrate learning personal experience and from the experience of others:

- *I changed the scoring guide ... because in the previous task...*
- *After reading the children's answers, I recommended changing the original item because...*
- ? *In light of Iris's experience and as a result of her suggestions, I changed the questions...*

Another variation on learning from self-experience accompanied by reflection after the action is expressed in learning about the collection of tasks (Collection of assessment tasks 1995) and their characteristics. In the following examples, the STs re-enact the learning process. In the first example, the ST used the collection to clarify the formulation of her own answers:

Efrat: *At first, I answered the questions myself. Before each answer, I checked what exactly the question was asking. When I realised that my answers were not precise, I understood that I still have not mastered the subtleties. I guess that this happens a lot with children too (Reflection journal).*

In the second example, the ST practices understanding the considerations of the authors of the tasks in the collection:

Hagar: *First I read a few texts, and tried to understand the authors' intentions. Afterwards I checked to see if I had understood their reasoning. Then I decided on the level of the question and checked my answer. Thus I actually dealt with many considerations.*

The two examples demonstrate the use of self-feedback during the reflective process. If the STs were not attentive and honest with themselves, then learning would probably not take place.

Learning from experience accompanied by reflection and focusing on an idea can be seen when STs adopted the idea of experts. After a number of attempts by the group of STs to develop criteria for the cognitive levels for a specific text type, one ST wrote:

Mira: *We had difficulty in setting the performance level. Ultimately Ronit found a brochure among the sample texts. We adopted the scoring guide there with certain changes (Reflection journal).*

Reflection showing learning from personal experience and from others occurred mainly during group discussions at the college.

Reflection through opinions and positions (Categories 7 to 9)

Reflection on opinions and positions relates to the connection between theory and practice. The following examples demonstrate references to the theory focused on the self, on others and on ideas, and how the theory is clarified when it is connected to experience.

Iris: *I learned a lot from the collection. I know how to use it, and what it lacks. In my opinion beginning with the collection was excellent preparation. In this, I see application of both routes to teacher autonomy [Silberstein 1984]. In selecting tasks from the collection, I experienced teachers' choice. Now I am on the route of a teacher who develops new learning materials (Reflection journal)/*

In this example, Iris takes a stand on the course syllabus from a personal perspective. She connects the personal learning experience to the theory. First, she relates to the learning she personally derived from the course, and then expresses a more general opinion of the rationale for determining the order of subjects to be studied. She then consolidates her position and connects her personal knowledge and the learning process she has undergone, to theoretical knowledge in the field of educational science. The private context (me) is connected to the general one (teacher chooses, teacher develops). The personal experience (of choice) connects to the theoretical significance (the routes to teacher's autonomy). This is an example of an inductive cognitive process, from the private to the general, from the concrete to the abstract and from the practical to the theoretical. Throughout, the theoretical terms nourish the personal-specific interpretation.

In the following example, the ST takes a stand on work in heterogeneous groups, focusing on the pupils.

Ruti: *From a summary of the results of three tasks it became clear to me that there are four levels in the class. Since the children's achievements are not uniform in every task, there is a need to create changing homogeneous groups for some topics, and heterogeneous groups for other topics. This solves the 'problem' of the good pupils and doesn't stigmatise the weaker ones. It also provides an answer to Vygotsky's view that the good pupil in a heterogeneous group helps to advance the weak pupil (Report)*

In this example, the ST's basis in approaching the theory begins with the children and with assessing their level. She bases her claims on the research approach and distinguishes between different solutions in different areas. Ruti voices her concern for good and weak pupils alike, and shows sensitivity and an honest desire to avoid injustice, distortion or incorrect perceptions relating to pupils. She finds theoretical grounding for her position in theories from the field of psychology and child development. Vygotsky's theory (1978) provides her with the required rationale and the bridge between the theoretical and the practical.

In the next example, the ST integrates different ideas from the field of psychology and education and points to their manner of expression in the theory of assessment. The bridge between the two is created by personal experience:

When I think today about assessment I think of teaching, because assessment reflects on the whole of teaching.... In the first year [I was taught that] theoretically one should relate to each child personally. Through assessment I learned that it is possible to do this. I learned [about] individuality. Through assessment, I discovered that individuality was also part of assessment. In the second year, I

studied the humanistic approach [of Karl Rogers] which relates to significant learning. Through the assessment experience I understood that significant learning is expressed in authentic activities and contents which deal with real problems. And finally, the expression “the whole child” gained real significance when examined through ... assessment.

This example demonstrates the consolidation of an educational credo based on the connections between different educational ideas and approaches. Through the inclusive reflective perspective, the ST demonstrates and the mutual relations between theory and experience. On one hand, the process of learning theoretical and abstract terms becomes concrete by clarifying the experience and giving it significance. On the other hand, the experiences give life to the theory, and were it not for experience, its practical significance would be in doubt.

This example does not represent the reflective ability of all the students in the course. She was the only one (of 24 STs) who made such connections by creating “distance from the self” in order to express a general position. According to Bengtsson (1995), good teachers are those who, through self-reflection, create distance from themselves and their actions. This self-distancing increases their efficiency and creates self-knowledge which allows them to learn about their teaching and take a stand about their teaching and themselves.

Another aspect of reflection, which relates to expressing opinions and positions is that of assessment and criticism.:

On the course: I did not enjoy filling out reports after each assessment activity.... There was a heavy load of articles to read.... Regarding the scoring guide, in my opinion, I did not gain enough experience in this.

On the Hebrew curriculum: There is a lack of guidance in the curriculum on how to translate the goal into an activity.

On the collection of tasks: There is no expression of all we have learned about alternative assessment.... What about individual competence...? Is this not the basic idea of school assessment?

Especially interesting was the reflective data received as a result of watching video recordings. Most of the STs, when they watched the recordings after more than a month, reacted mainly to external behaviour patterns, saying, “*I spoke too fast*”, “*I saw that most of the time I played with my hair*” or “*I make faces when I get bored*”. There was even reference to dress: “*I don’t like what I was wearing that day*”. Only a third of the STs related to personal behaviour patterns, to communicative processes with their peers or to changes in their opinions. In contrast, when STs watched the recordings a day or two after the occurrence, they tended to analyse the event and reach conclusions. The difference may stem from the time lapse itself. It seems that as time goes by, emotional and cognitive gaps are formed. In reflective feedback, which took place close to the time of occurrence, by means of mediation, it was possible to fill in these gaps.

Examining reflection is a broad subject; it is impossible to cover all its aspects. Since most of the data in the research was arrived at through reflective tools, testimony to reflection is found throughout these findings.

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