TWO MODES OF REFLECTION

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Abstract—Most conceptualizations of reflection and reflective teaching are based on logical and analytical ways of information processing during teaching. There are, however, other ways of interpreting data and making decisions in the classroom, which make use of 'gestalts' and seem to be located in the right hemisphere. A broader view on reflection and reflective teaching is proposed which includes the mental "mirroring" of these non-rational processes. Technical, psychological, and philosophical reasons for the underestimation of the latter type of reflection are discussed. Several techniques are described for the promotion of reflection on non-rational processes, such as the use of metaphors, drawing, or painting, making photographs, guided fantasies, and Kelly’s repertory grid. It is concluded that an integration of reflection on rational and non-rational processes is important for teachers.

During the 1980s the concepts of reflection and reflective teaching became quite popular among teacher educators and researchers in the field of teacher education. This development was related to the call for the professionalization of teaching and teacher education. The idea that teachers can learn to subject their own behavior to a critical analysis and to take responsibility for their actions met the long felt need for a kind of teacher education which transcends mere training in the use of specific behavioral competencies. Systematic and rational decision-making lies at the very heart of professionalism (Kinchleoe, 1990; Yinger, 1986), and this explains not only the popularity of reflection but also the way in which the term has been interpreted by various authors. Although there are many different conceptualizations of reflection and reflective teaching (see, e.g., Calderhead, 1989; Grimmett, 1988), most of them seem to share the underlying assumption that teachers should use logical, rational, step-by-step analyses of their own teaching and the contexts in which that teaching takes place. Language, whether spoken or written, plays a central role in these analyses. It is the vehicle by means of which teachers can express their observations or analyses to another person (often their supervisor) or to themselves.

This common core of the concept of reflection goes back to the work of Dewey (1933), to whom many authors in the field refer. Indeed, it was Dewey who stated that

reflection involves not simply a sequence of ideas, but a con-sequence—a consecutive ordering in such a way that each determines the next as its proper outcome, while each outcome in turn leans back on, or refers to, its predecessors. (Dewey, 1933, p. 4)

Although this conceptualization of reflection is important and has undoubtedly proved useful in promoting the professional development of teachers, it describes only one way in which the human mind can process information and direct decision-making. The present article discusses other ways in which the mind can operate, ways which are certainly not always less effective. Moreover, as much of everyday classroom teaching relies on non-rational teacher behavior (Carter, 1990; Clark & Yinger, 1979), it is important to give serious attention to these other

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processes of interpreting information and guiding actions.

Schön (1983, 1987) describes these processes as “knowing-in-action”, in which rational analysis plays no role, at least not at the moment of action. He criticizes the “model of technical rationality” in which professional activity is seen as “instrumental problem solving made rigorous by the application of scientific theory and technique”. Many publications on teacher routines (e.g., Clark & Yinger, 1979; Halkes & Olson, 1984) stress the fact that automatic or mechanical performance of acts is characteristic of much of teacher behavior (see also Unwin & McAleese, 1978). In her review of research on teacher knowledge Carter (1990, p. 297) concludes that teachers’ actions seem to be largely governed by rules and routines, with decision-making in a studied, deliberative sense taking a minor role in their interactive thinking. As Clark and Lampert (1985) put it: “... we are beginning to appreciate that strictly logical thinking is often not the most appropriate tool for solving the problems that teachers confront in classrooms.” Sternberg and Caruso (1985, p. 148) discuss the role of unreflected “tacit knowledge” in teaching. They even regard the ability to acquire this tacit knowledge as a key factor in one’s success or failure as a teacher.

In this article we put forward a tentative framework for a psychological explanation of the phenomenon of non-rational teacher behavior, which we believe will be helpful in developing a broader view of the concept of reflection as a means to promote professional development.

Two Ways of Information Processing

Many authors working in quite different areas have made a distinction between one type of information processing which is logical and analytical and another which is not. This has produced a number of different concepts and terms, all of which seem to revolve around one theme: the duality of human consciousness. Ornstein (1972) uses the terms “analytic” and “holistic”, and speaks of the dichotomy between “rational” and “a-rational”, while Levy-Agresti and Sperry (1968) refer to “analytic” and “gestalt”. Polanyi (1961) distinguishes between “explicit knowledge” and “tacit knowledge”, the latter being “acritical”. Bateson and Jackson (1964) make a distinction between “digital” and “analogic”, and Milner (cited in Bogen, 1973) between “verbal” and “perceptual”, which is reminiscent of Spearman's verbal factor and spatial factor in intelligence. Bogen (1973) points out that these distinctions are to be found in eastern psychologies as well; he cites Akhilananda who, in a work on Hindu psychology, uses terms which can be translated as “rational thought” and “integral thought”, and he relates this “potpourri of dichotomies” to the lateralization of the brain. As Bogen points out, Zangwill (1961), in his review of brain research, was the first author to characterize tentatively the left and right hemisphere as “symbolic” and “visuo-spatial”. Levi-Agresti and Sperry (1968) suggested that “the data indicate that the mute, minor hemisphere is specialized for gestalt perception, being primarily a synthesist in dealing with information input. The speaking, major hemisphere, in contrast, seems to operate in a more logical, analytic, computerlike fashion”. The organization of the brain was later shown to be more complicated; it cannot be completely characterized as a hemispheric functional asymmetry (Bryden, 1982). There is, however, general agreement on the conclusion that, roughly speaking, the two sides of the human brain are capable of two different modes of information processing (see also Milner, 1989).

The dichotomies presented by the various authors cited above are not completely similar, but there is a common distinction in all of them. In this article we will refer to this distinction by means of the relatively broad terms “rational” and “non-rational” or “left-hemisphere” and “right-hemisphere” information processing. Our assumption is that the process of sensory perception, interpretation of the information and action or reaction can take place through two different “channels”, corresponding to the two sides of the brain (cf., Wubbels, 1992). While in the left hemisphere the interpretation of incoming information is mediated by logically structured cognitive schemata, the right hemisphere makes use of gestalts, the principal function of which is to integrate separate stimuli (Ellis, 1969; Johnson, 1987). A well-known example from gestalt psychology is the field process nature of vision, which means that the place and function of each part of a visual structure is determined by the structure as a whole (Kohler,
This principle has been broadened by gestalt psychologists to include human information processing in other fields of life. For example, our interpretation of our relationships with other people is determined by gestalts, formed in earlier experiences with other important persons in our lives. In short, in the right hemisphere the principle of the integration of experience is dominant over the principle of logical ordering, while in the left hemisphere the reverse is the case.

We believe that non-rational, right-hemisphere information processing plays a central role in everyday teaching, and that this is the psychological explanation for the existence of "teaching routines" (Clark & Yinger, 1979). Carter, Cushing, Sabers, Stein, & Berliner (1988), for example, discovered that experts viewing a series of classroom slides reacted quickly to visual stimuli, which indicated whether or not students were "working" well within the system of the classroom. In more general terms: It is our hypothesis that during teaching certain cues from the environment activate a gestalt, triggering an immediate interpretation and reaction. In this way logical analysis can be circumvented, making it possible for teachers to deal with a great many different stimuli at the same time (Day, 1984; Doyle, 1979).

Other researchers in the field of teaching and teacher education describe the same notions in other words. Connelly and Clandinin (1985), for example, emphasize the role of patterns (practical rules and principles, routines, habits, images) in the teacher’s reactions to classroom situations. Narrative accounts of practitioners show that everything the person has been and undergone in the past creates meaningful unions in his or her present experience of classroom situations (Connelly & Clandinin, 1984, p. 147). What we call a "gestalt" is called "image" by Connelly and Clandinin, and considered to be a type of knowledge that "draws both the past and the future into a personally meaningful nexus of experience focussed on the immediate situation that called it forth" (Connelly & Clandinin, 1984, p. 147). We prefer the term "gestalt", because as used in gestalt therapy, it refers not so much to a mental picture as to the whole of a person’s experiences with regard to a certain situation.

Talking about "personal knowledge" of teachers, Connelly and Clandinin (1984, p. 137) state that "knowledge is that body of convictions and meanings, conscious or unconscious, which have arisen from experience, intimate, social and traditional, and which are expressed in a person’s actions". Cole (1988), too, emphasizes that personal meaning is embedded in the actions of the teacher in the immediacy of the moment in the classroom. Tom and Valli (1990) note that values and facts blend together in the meanings that practitioners construct out of educational and other social encounters.

Ziechner and Gore (1990) state that "deeply ingrained and partly unconscious feelings and dispositions developed as a pupil, exert a continuing influence on teacher activity". They present an overview of various life history methodologies used for capturing the socializing influence of the life experiences or "architecture of self" (Pinar, 1986) that student teachers bring to teacher education programs and teaching. They conclude that "a variety of biographical, autobiographical and life history methodologies (....) have begun to provide us with rich information about the ways in which teachers’ perspectives are rooted in the variety of personal, familial, religious, political and cultural experiences they bring to teaching." Hollingsworth (1989) points to the same phenomenon when she describes the role of "preprogram beliefs" on the professional development of teachers. Crow (1987) and Knowles (1988) propose a Biographical Transformation Model to explain the relationships between early childhood experiences with significant others, teacher role identity and classroom actions.

The influence of life experiences on teacher’s actions and reactions is also visible in the way social structure is often taken for granted (Britzman, 1986; Ginsburg & Clift, 1990).

Yinger is another researcher whose line of thinking has much in common with ours. Yinger introduced the notion of interactive teaching (e.g., Yinger & Villar, 1986). Carter (1990) summarizes this notion by stating that it is framed around the idea of improvisation. "Yinger argues that teachers have a rich store of knowledge that enables them to make sense of immediate scenes and bring past experiences to bear on these scenes to invent, virtually on the spot, actions that fit these circumstances" (Carter, 1990, p. 304). In line with this view, Clark (1986)
notes that we should distinguish between knowledge of a discipline in the forms commonly represented in textbooks and the teacher's knowledge, which takes the form of images of cases (cf., Shulman, 1986), vivid experiences, and good examples. In an article on "the language of practice" Yinger (1987) states that the teacher relies on a set of meanings and patterns for thought and action: "In the pattern language, each pattern describes a problem that occurs repeatedly in the environment and then describes the core of the solution to that problem. (....) Each pattern expresses a relationship between a context, a problem, and a solution". This comes very close to our notion of a "gestalt", especially because Yinger emphasizes that the language of practice is not primarily a verbal matter, but that it "includes embodied structures of meaning that are part of orientation, movement, and manipulation." In a gestalt as we conceive it, the person's needs, values, meanings, thoughts, feelings and actions are all united into one inseparable whole.

One-Sidedness in the Use of Reflection as a Means for Professional Development

One may ask why the non-rational aspect of a teacher's functioning receives so little attention in the literature on interventions in teacher education. The main reason seems to be that non-rational processes cannot easily be analyzed and influenced, while rational processes lend themselves to analysis and can be communicated to a supervisor. Teacher educators need such communications in order to clarify concepts, ideas, and alternative courses of action, and in order to provide feedback to teachers. Although we are not critical of this assumption, we do question whether communication in supervision should always be logical, rational, analytic, and digital. Before outlining ideas on possible alternatives, two reasons are considered for why non-rational information processing receives relatively little attention within teacher education.

The first of these explanations is a philosophical one, which draws upon the influence of Plato on our western culture. Plato was convinced of the existence of "the Good", and he believed that its nature can be ascertained by intellectual analysis (Russell, 1974, p. 133). He applied this conviction to the case of "proving" that his ideal Republic was good. A proof, for Plato, consisted of a sequence of logical, causal relationships. We must not underestimate the influence of this stance on our view of the world, our scientific tradition and, more specifically, the way we customarily objectify "good teaching". A comparison with the standpoint of Thrasymachus, a Sophist and a contemporary of Plato, may help to clarify this influence. For Thrasymachus there is no question of proving or disproving; the only question is whether you like the kind of Republic Plato envisions (Russell, 1974, p. 134). One can see how Thrasymachus' view, applied to teaching, would focus more on subjective, aesthetic appreciation than on objective analysis. Such a view has been promoted by Eisner (see, e.g., Eisner, 1985a). He too, points to the influence of Plato on our culture in his discussion of the high status of school subjects like mathematics, compared to the arts. He states that there is also an "aesthetic mode of knowing" and promotes the notion of "connaisseurship" as a counterbalance to the primacy of knowledge acquired by rationality. He defines connaisseurship as the art of appreciation, which here means "an awareness and an understanding of what one has experienced" (Eisner, 1985b, p. 92).

A third reason for the underestimation of non-rational information processing is a psychological one which is likewise deeply embedded in our culture. The non-rational parts of ourselves are regarded as "dark and dirty". They are associated with our instincts and drives, and with the idea that these must be "overcome". In this respect, the work of Freud still has considerable influence (cf., Maslow, 1971, p. 310).

Although there is a great deal to be said for each of the three reasons described above, the emphasis on rational thinking in teacher education has a number of disadvantages.

In the first place, it gives student teachers a one-sided view of teaching and this may create the impression that good teaching is determined by rationality. During their actual teaching they will discover that there is not enough time to reflect on all their decisions, often not even after the lesson is over, and this may leave them with a feeling of inadequacy. In this respect, the emphasis on rationality and analysis in teacher education could be especially disadvantageous.
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Another outcome may be that student teachers regard the approach of the teacher educators as "theory" and the field experiences as "practice", whereby the latter is equated with "reality". There is a grain of truth here, in that it is unrealistic to present rational analysis as the only way of dealing with practice; this may well be one of the reasons for the well-known gap between theory and practice.

Moreover, it is not because of time limitations that teachers cannot or should not always analyze their own teaching. As Maslow (1971, p. 63) points out, rationality can interfere with spontaneity and creativity. According to Ornstein (1972, p. 33) our rational consciousness has evolved for the primary purpose of ensuring biological survival. We believe that there is more to life and to teaching than mere survival. Elaborating on the aspect of spontaneity, one might conclude that too much rational and analytic inquiry on the part of the teacher into his or her own way of teaching can create a gap between the teacher and the here-and-now. We appreciate the metaphor of the dance: In its most inspiring and creative moments, the dance and the dancer become one. We all know of impressive instances in which such one-ness of teaching and teacher occurred, often quite unexpectedly. Would it not have been a pity if in such situations the teacher had mentally stepped backwards for a moment of analysis?

What we are aiming at is not a complete shift from one paradigm in teacher education to another. We are convinced that rational analysis of one's own behavior as a teacher is an important tool in one's professional development. However, we do want to counter a certain one-sidedness in the approach to teacher education. Non-rational processes play an important and often positive role in teaching, and we believe that it can be helpful for teachers to realize this. Moreover, reflection on these processes, after they have taken place is also important; not only does it make the teacher aware of them, but it may help him or her change the way information is processed by the right side of the brain. This requires approaches to teacher education other than only those based on rational analysis. As it is the squeaky wheel that gets the grease, this article will focus more on these alternative approaches. In our opinion they are complementary, rather than opposed to the more rational approach. In fact, these alternative approaches can be used with the goal to firstly promote awareness of the non-rational processes in teachers, and can then be followed by more rational-analytic reflection (cf., Olson, 1984).

Techniques for Becoming Aware of Non-Rational Processes

In this section we describe some strategies or techniques helpful in promoting awareness in teachers of the non-rational processes guiding their actions. In order to find such strategies or techniques, we will have to depart from our usual ways of communicating. Attempting to grasp a right-hemisphere process may be compared to the problem of trying to express the essence of a piece of art in plain language: It is as if there are no suitable words, almost as if words detract from the essence of the meaning that the work has for us.

Before going on to give some examples of approaches to the problem of promoting awareness of teacher's right-hemisphere processes, we would like to point out that we consider the examples that we are going to present as instances of reflection. This implies that we attach a broader meaning to the term "reflection" than is usually done, reverting to the original meaning of the word: the "mirroring" of something (an image, heat, etc.). The idea of a mirror is helpful, because it makes clear that there are different mirrors: a rational one, which is often used in teacher education, and other mirrors, which may be more suitable for reflecting non-rational processes. Any mirror is imperfect in itself, as it cannot reflect every aspect of an internal process. This is why we encourage the use of more than one mirror, to help teachers to become aware of the relationships between their actions and their inner processes.

Metaphors. In recent years several authors (e.g., Marshall, 1988; Tobin, 1990) have promoted the use of metaphors in teacher education and supervision. Amongst these is a group of teacher educators and researchers from Queen's University in Ontario (Munby & Russell, 1989; Russell, Munby, Spatford, & Johnston, 1988). Their line of thinking on professional knowledge...
of teaching has much in common with the theoretical framework described above. They maintain that "(1) professional knowledge consists of more than that which can be told or written on paper and (2) professional learning is something more than a process of using 'rules' to make decisions about how to behave in a classroom situation" (Russell et al., 1988, p. 67). They refer to Lakoff and Johnson (1980, p. 5), who state that "the essence of a metaphor is understanding and experiencing one kind of thing in terms of another." When we interviewed some of our colleagues from Dutch institutes for teacher education, we found that they often use metaphorical language in supervision sessions, although the opportunities offered by metaphors may not always be exploited completely. An example will illustrate the power of metaphors, and their significance for supervision. It was taken from a Dutch research project focusing on discipline problems encountered by beginning teachers, in which a beginning mother-tongue teacher called Heleen was supervised by an experienced teacher educator. (For more details, see Créton, Wubbels, & Hooymayers, 1989.)

In the first few months of her teaching, Heleen had serious discipline problems. In the description of her situation she said that she felt like a "lion-tamer", a metaphor suggested by a colleague teacher. The supervisor discussed the use of this metaphor with her, which brought to light a number of implicit connotations. These were concerned not only with external things like giving her students detention work, which she interpreted as "using the whip", but also Heleen's inner reality (fears, hopes, etc.). For instance, she felt that the "cage" in which she was shut up with the "lions", was locked; she could not get out and had to cope with the situation as best she could. Moreover, she felt that, above all she had to hide her fear, because showing that you are afraid is extremely dangerous with lions. As a lion-tamer you must be constantly aware of the fact that the lions are stronger than you are; Heleen felt that if they ever jumped her, she would be torn to pieces.

Heleen and the supervisor could have used many words in rational analyses of all aspects of the classroom situation without ever grasping the essence of Heleen's interpretation of her situation, as it was possible to do through the use of metaphor. We agree with Schön (1987) when he says that reframing is often a means of changing a situation like Heleen's. The first step in such a process is establishing the essence of a person's frame of reference. Heleen's story is an example of such a first step. Awareness of one's guiding "gestalts" is a prerequisite for entering a phase in which the teacher can ask herself whether she wants to explore other possible interpretations of the situation.

**Drawing and painting.** In the above example the metaphor of the lion-tamer was expressed in words. In the case of a highly visually gestalt such as this, the translation into words may be a problem, although this can be avoided through the use of visual language. Alternatively, the teacher can make a drawing or a painting in order to express his or her experiences. We know a teacher educator who often asks a new group of student teachers to draw a picture of "education". This invariably produces a wide variety of pictures, ranging from jail-like buildings to a group of friendly looking people sitting happily together in the grass. The next step might be to ask student teachers to draw their picture of an "ideal educational setting" and then have them compare the two pictures.

In the same way, the drawing or painting of concrete teaching situations can be used in supervision sessions, to help teachers to become aware of gestalts that direct their actions, or to get into conscious contact with their ideals. The details of these pictures can be very enlightening. For example, when a teacher draws a picture of a classroom, it is interesting to see which students are portrayed and in what positions. Certain messages are sent out by colors or objects which at first sight seem to be there "by chance".

**Photographs.** There are also teacher educators who use photographs as an instrument for expressing personal meaning. Weade and Ernst (1989), for example, ask their student teachers at the University of Florida to take photographs of their field experiences. For student teachers who feel a certain resistance to drawing or painting, this more "technical" approach may be an advantage; the disadvantage, however, is that photographs objectify more than drawings or paintings. In any case, one must realize that the significance of a photograph taken by a student teacher lies not in what is objectively portrayed,
but rather in the answer to such questions as what made this student teacher take this picture of this situation involving these students (or perhaps without students) at this stage in his or her development.

The presentation of pictures. Yet another approach is one in which pictures are presented to the teacher or student teacher, with the aim of promoting associations. Several alternatives are possible, such as drawing one postcard at random from a stack, or choosing one picture from a collection that is shown. We sometimes use so-called OH-cards which consist of two stacks, a smaller stack with pictures and a bigger one with words (hope, hate, game, success, child, dependent, etc.). When a small card is placed in the middle of a bigger one, this usually promotes awareness of a gestalt. It is not necessary to use such an “advanced” tool: Even a pile of ordinary postcards can be effective. If this technique is used in supervision, it can be a powerful tool, bringing the teacher into contact with very personal attitudes, fears, hopes, etc. Supervision in teacher education, however, is not a therapy, and the teacher educator should, in our view, help the teachers to link their associations to concrete teaching situations.

Kelly’s repertory grid. This technique is based on Kelly’s (1955) technique for inquiry into the constructs people use when dealing with their environment, a technique which has been widely used by researchers in the field of teacher thinking (e.g., Munby, 1984; Olson, 1982; Pope & Shaw, 1981; Yinger & Villar, 1986; Yorke, 1985). Our approach is based on the “original grid form” (Fransella & Bannister, 1977) and is quite similar to the way in which Hunt (1982) used Kelly’s technique to assist teachers in identifying their personal theories. Each teacher receives three cards, each containing the name of one child; these children are all in the same class, which the teacher knows well. The teacher must choose one of the three children whom he or she intuitively feels is different from the other two. After that, the teacher formulates the characteristic, or construct, which describes the difference. In this way, a list of personal constructs is generated. For this activity, it is advisable to divide the group into pairs. One teacher shuffles the cards and offers three of them to the other; the first teacher then writes down the constructs his colleague mentions. Then the cards are shuffled again and the procedure is repeated. When a list of about 10 constructs has been compiled, the two teachers change roles.

Whenever we used the repertory grid technique in groups of student teachers, it gave rise to a great deal of commotion and giggling, despite the fact that the prospective teachers always went about their task very seriously. This method confronts them with their own perceptions of the children, which are often highly subjective, and their personal preferences and aversions.

It may be beneficial to the reflection process to realize that all the characteristics represent one pole of a dichotomy, which is why it is helpful for the teachers to also give the opposite of each characteristic on their list. It is important for them to use their own words when formulating the characteristics and their opposites, because the strength of the method lies in the fact that these self-chosen terms have a particular significance for the individual.

In order to promote further reflection on the relationships between the constructs and teaching behavior, the teachers can be asked to explain how they think their reactions to children with the various characteristics differ. This question becomes especially interesting when they compare their reactions to children with opposite characteristics, and discuss other possible reactions in the group. (See, for a more extensive description, Korthagen, 1992.)

Guided fantasies. In her work with teachers, Allender (1982) uses what she calls the “Fourth Grade Fantasy Activity” to help them to become aware of experiences that inhibit or promote learning.

I tell everyone to find a comfortable spot, to close their eyes and I then turn off the lights. (This always produces a lot of stirrings and giggling. Remember that most of these students are used to a traditional lecture series.) I then proceed to have them quietly breathe deeply for 2-3 minutes, listening to the air flowing in and out of their bodies, and then 2-3 minutes tensing and untensing each part of their bodies beginning from the feet up to the head. When I feel they are relaxed I begin the activity. (Allender, 1982, pp. 37-38)

In their imagination Allender takes the teachers in her group back to their elementary school
building. They are told that they are fourth graders and that it is time for their classes to begin. The teachers spend 10 minutes in their fourth grade fantasy classrooms; Allender asks them to look at the desk arrangements, the walls, the atmosphere in the classroom, etc. After these 10 minutes, they return to the here-and-now, and draw a diagram or picture of their classroom. They exchange their pictures and stories in small groups. Finally, the whole class gets together, sharing with each other what was discussed in the smaller groups.

We believe that Allender’s method is a useful way of promoting teachers’ reflection on their own experiences with learning (cf., Hunt, 1987), experiences which on the whole appear to be rather negative. As Rogers (1983, p. 107) notes in his comment on Allender’s approach, many of these teachers’ experiences were characterized by fear, failure, humiliation, resentment, and constraint. He emphasizes that the content of their courses, what they were supposed to have learned, does not even come to mind. It is important for teachers to take note of this point, especially in the light of the fact that often “teachers teach the way they have been taught, and not as they have been taught to teach” (Blume, 1971; cf., Knowles, 1991).

Another way in which guided fantasies can be used is to help student teachers to address their own ideals with respect to education. Visualizing one’s ideal classroom situation can promote awareness of the directions that one wants to take. We will return to this subject in the next section.

Discussion

The description of the various methods, all of which have actually been used in teacher education, shows not only that it is possible to promote awareness of the non-rational processes underlying teacher behavior, but also that this awareness can serve as a powerful starting point for more rational analyses, in which questions about goals and methods are addressed. We believe that the integration of both types of reflection (the mirroring of non-rational processes and rational analysis) would be helpful, because they are directly related to the two different ways in which the teacher’s consciousness operates. The integration of the two modes of reflection can be illustrated by means of Ornstein’s (1972, p. 84) metaphor of building a house: “At first, there may be a sudden inspiration of the gestalt of the finished house, but this image must be brought to completion, slowly, by linear methods, by plans and contracts, and then by the actual construction, sequentially, piece by piece”.

Reflection, conceived as the integration of rational analysis and the process of becoming aware of one’s guiding gestalts, seems to focus more on the individuality of the teacher than such conceptions of reflection as that proposed by Zeichner (1983). The latter emphasizes the need for inquiry into the contexts in which teaching takes place, and the ethical, moral, and political issues that influence one’s teaching. On the other hand, we see no fundamental antithesis between our approach and that of Zeichner. When it comes to contextual influences on one’s teaching, reflection on right-hemisphere information processing is no less important. It can help teachers to become aware of the values that they have incorporated during their socialization into the profession, and the origins of their guiding gestalts. Reflection, thus conceived, can enhance the power of each individual teacher to make a personal, creative, and innovative contribution to education.

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