

CHAPTER 2

THE TEACHING AIM

Introduction

The word “teach” is derived from “taecan” (Old English) which means to show, and this root meaning emphasizes the activity of the teacher. However, the root meaning of the Afrikaans word* “onderrig” (to teach) includes both the teaching and learning activities that are necessary for there to be a teaching situation. The first part of the word, “onder”, means “together” and “rig” means “to show”. “Onderrig”, (to teach) literally means, then, “to show together”. When [educative] teaching or instructing occur, this implies that an adult shows the children a path (to adulthood) that necessarily has to be taken. The path mentioned here represents the learning content around which the teaching revolves. The manner in which this path originally was indicated, as noted in the first chapter, was by “reading to”. Thus there were particular manuscripts available to whoever was well-read or well-versed in the sciences of the time. This person then presented or taught this knowledge by reading it to someone.

The word “lesson” developed from the concept “reading to”. To read, read to or give a lesson, therefore, implies giving a form to teaching. In other words, to teach means to create a teaching situation within which presenting particular content is the primary concern. In the teaching situation, it literally happens that the teacher (adult) shows the children that the content really involves the human lifeworld.

In this situation there are two noticeable aspects and they also were mentioned in the previous introductory chapter. The form is an aspect that is so intrinsic to teaching itself that it cannot be denied. Further, teaching does not occur for no reason. A very specific and particular form is given to teaching by the adult in the same way

* And also the German word for teaching, “Unterricht” = “unter” + “richt”.

that the proverbial potter gives form to clay. That is, the adult aims to make this instruction successful; it is purposeful teaching. Consequently, there obviously is a teaching aim that the adult has in mind and that he tries to realize or fulfill in the teaching situation.

On the other hand, purposive teaching only is possible and meaningful because there is content. One is not able to teach “nothing” and also a child cannot learn “nothing”. The “something” that crops up in teaching is the teaching content. Thus, a teacher can make use of the narrative method to give form to his teaching (as a variation of conversation as ground form). He relates something; he is busy presenting particular content in the form of narration (a story) to the children. In such a case, the story itself is the lesson content. The relationship that one should notice here is that in the form of a story, the teacher brings home to the child particular content and that the relationship of this form (i.e., the narrating) and the story itself (i.e., the content) constitute the basic aspects of the lesson.

There also is a third aspect that at this stage has to be studied thoroughly. The teacher or adult does not give a lesson just because it can't be avoided. As indicated above, the adult's teaching has an aim. The ultimate aim is the child's adulthood. Were children not able to become adult, educative teaching would be a meaningless and unnecessary time consuming practice. Yet, children can learn, they will learn, they want to become adults themselves. Indeed, since to become adult they have to learn, the teaching aim that the adult has in mind is that the children have to learn so that eventually they themselves can become adults who can stand in the world independently and on their own feet. Consequently, it is understandable that in each teaching situation there also is a learning aim.

The responsibility that the teacher takes for the entire process of preparing the situation and the classroom activity can be summarized as follows: On the basis of particular content that the children have to learn, the teacher formulates a teaching aim from which is derived a learning aim to be realized by the children. One also can talk of a teacher's lesson aim which is to attain the learning aim that he will awaken in the children. Viewed in this way, “lesson

aim” is a narrower concept than “learning aim” which really implies the result, end-product or effect of the teaching.

Here it is important and meaningful that the student teacher be aware that the teaching aim is built on the lesson and learning aims. The lesson aim has to do with the role that the teacher takes in so far as this concerns the presentation of teaching content. The learning aim refers to the role that the pupils are going to or must take in order to bring about real learning (or teaching) results. These two aspects (the lesson and the learning aims) are united and made meaningful by the teaching content presented in the lesson situation. Yet another summary: The lesson aim refers to the aspects that the teacher is going to take responsibility for and what he himself is going to carry out regarding the learning content so that the learning aim can be attained. The learning aim includes the matters that he plans regarding the learning activities of the pupils themselves--what the pupils ultimately have to do to appropriately master the particular learning content or learning material.

We have to be clear that the learning content is the connecting factor. The teacher teaches in terms of this learning content. On the other hand, the children learn nothing other than this same learning content. Therefore, when there is mention of a lesson aim, this refers to the role of the teacher in presenting the learning content while the learning aim has to do with the learning activities or participation in learning for which the child himself ultimately has to be responsible in the teaching situation.

At this stage, it is meaningful to consider what is meant by “lesson aim”, followed by an exposition of the meaning of the “learning aim” and what it means in the teaching situation. The fact is that at this point the lesson structure shows itself as the relationship between form and content in the teaching situation. Because the teacher has an aim in mind, he also has the responsibility to explain in his lesson aim the ways he will realize this teaching aim. This aim that he has in mind culminates in the fact that he expects the pupils to learn. Thus, he has a learning aim in mind. Literally, his lesson aim flows out to a learning aim--the matter around which this revolves is the content. Understandably, the lesson aim as well as

the learning aim always have to do with the content or are related to the learning content. The purpose of the following section is to further explain the relationship of the lesson and learning aims to the learning content.

The teaching aim and the learning content

Although this matter will be explained fully in a later chapter, still for purposes of orientation and of clarifying the previous paragraph, it is necessary to make a few observations about the meaning of the learning content as the connecting factor between the lesson and the learning aims within the lesson structure as well as about the ways the teacher is involved with the learning content in determining the lesson and the learning aims.

Certainly there is little doubt that in the history of didactics the question of the lesson content has been central in so far as a lesson structure was discussed. The teacher's preparation turned on the matter of the lesson content and everyone was satisfied that a lesson is thoroughly prepared if the way in which the teacher had been involved with the content indicated that it was put together thoroughly, systematically and in agreement with the pupils' level of becoming (development). Everyone who is familiar with the practice of teaching also will readily agree that each of these aspects regarding the lesson content is of particular significance and even makes a decisive contribution to the success of the teaching. The teacher himself had little voice about the themes that are elevated to lesson content because this was prescribed for him in the syllabus and/or in the particular work scheme of the particular subject and even in particular indicated to him.

However, this is of less significance for the purpose of this explanation. The fact of the matter is that in each lesson situation, there is particular content. This content is the matter that is shaped, transformed, kneaded by the teacher as the first aspect of his lesson preparation. At the same time, this content serves as the learning material for the pupils who, in the ways in which they become involved with it, have to acquire a mastery of it. That the presenting (the teacher's role) and the learning (the pupils' role) can be simple or complex is not the point at this stage. What is of

particular significance here is that in his efforts the teacher tries to disclose the meaning of the content. That is, he tries to disclose and interpret the inherent meaning of the content for the pupils in order to enable them to assimilate the content and make it their own. On the other hand, for the child the learning task is to discover this inherent sense which is unique to the content, hopefully with respect to the teacher's presentation.

The important matter for the teacher stemming from this is that neither he nor the pupils should be arbitrarily involved with the content. When he deals arbitrarily with the learning content, this implies that he cannot account for a lesson aim that fits into a whole series of teaching aims. On the other hand, should the pupils be arbitrarily involved with the lesson content this indicates that they do not see the point of it, that their motivation to learn is lacking because they cannot understand why they should stay involved with this content.

Anyone who presumes that the teacher's and pupils' involvement with the learning content is a simple matter does not understand the teaching practice. The problems related to this, however, remain primarily the teacher's responsibility. As a matter of fact, he guides and steers the situation by designing a lesson structure in such a way that this inherent meaning of the content can be presented. What happens in a classroom, say on the part of teacher or that of the pupils, has to be included in the [lesson] plan that the teacher launches as the initiator of the event. Certainly it is valid to allege that if the teacher does not know what is going to be essential in the lesson, it is asking too much that the child, on the basis of his own initiative, be required to discover this for himself.

As far as the pupils' involvement in the learning content is concerned, more will be said in Chapter 4 on the didactic modalities. What is of particular significance here is to unravel the primary principles which will guide the teacher's ways of being involved with the content. Here there are three matters of particular importance, and they should never be lost sight of in designing a lesson:

1. Reducing the content

2. Stating the (lesson) problem that the teacher has identified
3. Ordering the content.

All three of these aspects again will be focused on in the discussion of matters concerning the learning aim. This is only logical since the teacher's planning of the lesson aim has to be branched off in accordance with the learning aim in the sense that it has to be phrased so it is within the possible grasp of the pupils. Therefore, we treat the three matters separately.

Reducing the learning content

In its original meaning reduction involves the act of reducing something back to an original or first matter with the aim of clarifying it. All deductions, opinions, points of view, interpretations etc. regarding the matter are not set aside by this reduction but, for the time being, they are ignored in order to disclose these origins.

A reduction in content in the lesson situation simply refers to the fact that a teacher discloses the essential facts of a chosen theme that are meaningful for understanding a problem that arises with the theme. In this light, a teacher should view the reduction of the learning content as a purification of the facts in order to truly separate the grain from the chaff.

In dealing with all themes there is mention of core facts that carry the insight and incidental facts that make interpretations, applications etc. possible. Understandably, these incidental facts are of particular significance for interpretations, applications etc. Yet these new products resulting from the insight are not the insight itself.

The insight itself is possible only if the teacher sees the essentials, i.e., the core facts of a matter, on the basis of which the matter itself becomes clear. To reduce learning content with the aim of designing a lesson implies, therefore, that the teacher has to be able to distinguish between essentials and non-essentials and to integrate these distinctions into his lesson structure. For attaining the

learning aim, as discussed above, this activity has far-reaching consequences. More on this follows later.

To be able to distinguish essentials from non-essentials implies that the teacher knows his learning content extremely well. In the first place, reducing content is a matter of thorough subject knowledge and, indeed, for the following reasons:

1. All content that the teacher raises figures in one way or another in the pupils' lifeworld. This fact is of particular significance in pre-primary or primary teaching but continues to be so in the secondary school in spite of the fact that in the highest classes work is on an entirely abstract level, i.e., objective and scientific. The scientific discoveries, theories and inventions that these facts place at ones disposal as knowledge are a matter of history, among other things. Thus, the Pythagorean Theorem, the development of Gothic Architecture and the development of the internal combustion engine all are recorded in human history. Thus, there is mention of origins. So far as our knowledge of them is concerned, things have origins.

Hence, each child is aware that there is lightning, that a heavy ship floats on water, etc. However, while he is growing up, he strives to clarify phenomena, events and experiences that in one way or another his lifeworld confronts him with. The clarifications that he seeks, for the most part, are the themes about which his teaching is concerned.

2. It is impossible for anyone to arrive at the essentials of matters or things without thoroughly analyzing them. Any analysis of a thing that remains on a superficial level cannot disclose its essentials. Essentials are a matter of depth, of delving beneath the surface of the matter. It often happens that in the teaching situation a teacher has to contend with lots of facts which are much too many for one lesson and entirely too comprehensive for the conceptual and developmental stage of his pupils. In such a case, his analysis of the matter in accordance with his stated learning aim has to show him which facts will convey the insight to the children. In other words, what must the pupils know to really arrive at the heart of the matter?

The analysis which the teacher is obligated to make will largely determine if his lesson is planned around the issue of essentials. Once again it has to be strongly emphasized that if a teacher is satisfied with a superficial knowledge about and investigation of the theme about which his instruction will be given, such an analysis is not possible for him. Consequently, it also is not possible for him to assimilate the essentials of the matter into his lesson structure and really guide his pupils to a fundamental mastery or an insightful grasp of the theme of his teaching.

3. It is well-known that in one way or another, say directly or indirectly, the theme figures in the child's lifeworld, and on the basis of his thorough analysis of the facts to be presented, the teacher still has to express these essentials or basic facts in words. He has to be able to clearly formulate the essentials which he will present to the children to be instructed as a meaningful, comprehensive and clear image of the theme as such. The importance of this aspect of his reduction of the content cannot be over-estimated.

The language of the natural sciences, history or theology are not the language of the pupils who sit before him. These laws, interpretations and perspectives usually are formulated by persons of great learning who, in the first place, did not aim to make them accessible to children. Every teacher has to understand that the language of a particular science can crush a pupil. It is only by means of the language he uses that there really is communication between him and his pupils. Should he proceed to introduce the facts that he has disclosed merely in scientific language, this implies that he locks up rather than unlocks this aspect of reality for the children.

In his lesson, a teacher can lock up instead of unlock the content by how he verbalizes the essentials he has disclosed. Purely and simply and without a doubt, it is a teacher's task to change into the language of the pupils before him the facts that clarify and that lead to the solution of a scientifically formulated problem. If he can not do this, his teaching often will be in vain.

The above three aspects are of fundamental importance for reducing the learning content for the purpose of setting a lesson aim that will lead to a learning aim. A few other aspects previously touched on still have to be attended to if the practical situation is to really progress meaningfully.

The facts that the teacher arrives at in his reduction are not unrelated to each other. His analysis of the data of a particular theme can make it impossible for him to separate the particular facts from each other with respect to the theme to be understood. In thinking through any matter or problem, it is these relationships among the facts that make the solution to the problem possible. One fact leads logically to another and together they lead to a solution, to an issue that has become coherent and clear. In reducing the learning content, the teacher tries to understand the relationships among the facts. Also he judges the value of these mutual relationships for the learners' eventual insight into such a problem. He puts himself in their place to try to determine how they will understand these relationships in the lesson situation and to anticipate the best ways he can disclose these relations to them. This is not an obvious matter in the lesson situation. The teacher makes the relationships obvious because he has disclosed these relationships among facts and his presentation focuses on them in order to lead his pupils to them, in his footsteps, to discover for themselves these relationships and their significance for insight into the problem.

Finally, the teacher also knows that these facts have to be interpreted. In the original Latin, "inter-pretatio" refers to clarifying, indicating or narrating. An interpreter is someone who helps another to clarify or explain or to draw a conclusion about something. When a teacher interprets the basic facts or matters that relate to his lesson theme, this implies that he has clarified, explained, pointed out or made particular judgments for the child. This interpretation is one of the guiding and very important tasks of the teacher. The inherent meaning of the learning content as it is analyzed and is evident in the coherence of factual relationships cannot acquire an appropriate form without interpretation. For these reasons, interpretation is an especially important aspect of

reducing the learning content which is required for the lesson structure to be brought about.

Stating the problem

Although each teacher is aware that every lesson is concerned with a particular theme this does not mean that this theme, as such, confronts the children with a problem. The themes included in the syllabus or work scheme of the subject often are not conspicuously related to a child's lifeworld and least of all to the world of meanings he constructs for himself. The usual procedure at the beginning of a lesson simply is to announce a particular theme as the subject of the lesson for this particular day or period. Such an approach makes it factually impossible to work through the lesson aim to the learning aim and to eventually stimulate the pupils to learn effectively.

The school syllabus is bursting with themes. These themes are already ordered in particular ways in the syllabus and sometimes necessarily follow each other. A child cannot master the one aspect or theme until the preceding explanation is grasped by him and is made his own insight. Therefore, in the lesson structure, it is so easy to give an overview of what previously was handled with the child and then proceed immediately to announce the theme for the particular lesson. In such a case, the teacher's assumption is that, by nature, the child will have an interest in this theme, that he will be curious about the matter that is introduced in this way. Also, it is assumed that somewhere in his questioning-consciousness, a problem of this nature has emerged and that the child then diligently looks forward to the teacher clarifying this matter for him in his presentation such that all question marks become exclamation points. Anyone familiar with teaching practice knows that nothing could be further from the truth. The announced theme often is no problem at all for the pupils. It is relevant neither to his world of interests nor his lived-experiences and only has value if it contributes to passing an examination.

As one delves more carefully into the different aspects of everyday practice, one can conclude that effective learning occurs best when the pupils are offered a definite problem. In themselves, themes are

not problems. Yet they contain very definite inherent problems that, in view of the pupils' stage of development, ought to be brought to light in the teacher's involvement with the learning content in such a way that it really is a meaningful, conspicuous question that is worth the trouble of answering.

Earlier it was indicated that nothing really happens in a class that the teacher does not allow to happen. The learning content also is not a problem unless the teacher is able to make it one. In the few examples touched on earlier, this matter was clarified to some extent. Archimedes' principle, as such, is not a problem for the children. Why a ship floats or why in a swimming pool a small boy can relatively easily lift a bigger one, however, are problems that ask for a solution and in terms of which these imposing formulations regarding real and apparent loss of weight and the volume of water displaced can be meaningfully put within the questioning-horizon of the pupils. Similarly, the arrival of the British Settlers in 1820 is not a problem for the pupils. The preponderant English orientation of the Eastern Provinces, especially some of the larger towns and cities, the first local newspaper and the establishment of the first Cape Parliament indeed are aspects of this theme that the pupils can be made aware of and that somewhere in the midst of the facts of the matter there are questions that can be posed that have to be answered.

With this, it is not professed that each individual lesson should have a stated problem. In the lower grades of the primary school where there is mainly work with small units of learning content, it probably will be the case that each lesson ought to have a separate problem stated because the lesson unit forms a separate unity. As one progresses in the school hierarchy, it can happen, e.g., that in the senior classes five, six or even eight lessons can be offered with respect to solving one single problem. The lessons, separately or together, shed light on the different aspects of the problem and ultimately culminate in a final synthesis or construction. This summary, synoptic image that the teacher then offers will direct six, eight or ten lessons and indicate the ways in which the problem is taken up and solved.

Understandably, this aspect also differs from subject to subject. Numerous problems in fixed, exact subjects like mathematics or arithmetic are meaningful and logical. Here the insights support one another and systematically are built up to a larger whole of mastery by the pupils themselves. In a subject like history one problem likely will have the benefit of putting all of the Napoleonic Wars in perspective and correspondingly interpreting and making clear their meaning in the course of history.

The pivotal matter, however, is that without an appropriate problem, the lesson or series of lessons cannot have a functional design which will lead the pupils to effective learning. The problem has to place the learning content in the pupils' world of meaning. This is an extremely difficult task for the teacher and places the highest demands on his ingenuity, knowledge of his subject, skillfulness in reducing the basic facts, ability to analyze, interpret and summarize. If as a problem the matter or theme remains missing from the pupils' experiential world, the teacher has to expect that effective learning will fail to occur. Thus in designing a lesson or a series of lessons the matter that will shed light on the theme has to be formulated as a real, penetrating and meaningful problem for the pupils. This not only provides the teacher with the opportunity to make full use of the pupils' experiences, lived-experiences, perspectives, abilities and dispositions but it especially stimulates his class' motivation to learn and in a very direct way branches off from his lesson aim to his learning aim.

Beyond any doubt, the most important matter to which attention has to be given is the way the teacher formulates and interprets this problem in accordance with the pupils' stage of development. This matter was already referred to above. Still one cannot stress this difficulty strongly enough. A teacher simply has to be able to arrive at the matter or theme after which the fundamental problem he wants to state has to be formulated in such a way that it will function meaningfully, grippingly and inquiringly in the lesson situation. When a stated problem does not direct an appeal to or stimulate the questioning attitude of the pupils, in reality a problem has not been posed. Should this aspect of the lesson be missing, in so far as the content is concerned, this means there is an immediate

distance between teacher and pupil which is exceedingly difficult to bridge by the presentation itself.

Therefore, stated in the planning of the lesson design, especially in expressing the lesson aim, is how the teacher is going to make sure that he is clear about how and in what ways a meaningful and far-reaching problem will appear in his lesson.

Ordering the learning content

Since this aspect is discussed in more detail in a later chapter, a few remarks will suffice here. The only matter that has to be indicated is that the content cannot function meaningfully in planning the lesson aim unless consideration is given to the fact that this content has to be ordered in meaningful ways. Unknown content is and remains a chaotic matter for the pupils. Out of this chaos, the teacher's presentation has to create order that will be of a lasting character.

The meaning of the ordering is closely related to the meaning of the content. When the theme of the instruction has a natural relationship to the child's surroundings, it really should not be otherwise than that the teacher take these natural surroundings and the child's knowledge of them as his point of departure in formulating his problem and in ordering the learning content in accordance with the symbiotic principle. Should the content be abstract and distant in nature, probably the teacher will use divergent ordering to be able to present different examples of the matter of concern as bringing to light, illustrating and clarifying the problem. Also these concepts of symbiotic and divergent ordering are discussed more fully in the following chapters. Even so, the teacher has to note that the question of ordering already arises in this first involvement between him and the learning content, and he has to purposefully give attention to it in searching for the most reasonable, meaningful and functional ways of ordering in light of the class before him, the learning aim he has in mind and how he plans his present presentation.

At this stage the teachers lesson preparation thus is begun:

(a) such that he has reduced the learning material to its absolute essentials with the aim of knowing what it is in this particular matter that is going to convey to the pupils' insight into this particular matter;

(b) such that he has formulated a lesson problem in meaningful ways in order to place the theme, as such, within the questioning-horizon of the children;

(c) such that he gives attention to the possible ordering of this content to be able to meaningfully work through it to stating his learning aim.

Some brief comments on the essentials of the lesson structure*

Here a brief focus on the essentials of the lesson structure is offered because the teacher is responsible for this structure in his presentation. In the following chapters, the essentials of the lesson structure are discussed and illustrated further in an attempt to give the student teacher an idea of the whole that is of significance for the lesson and for his lesson design as such.

Reducing the learning content, stating the problem and ordering the basic facts assume that the teacher now knows what he wants to do. The question that now confronts him in the further discussion of the lesson aim is: How should this be done? The first issue that this involves is the choice of his didactic ground form. For one who to some extent has been introduced to didactic theory, this concept is not unfamiliar. By ground form is meant that basic or fundamental form that the teacher chooses to bring his lesson into motion. For example, he can do this by making use of conversation. On the other hand, perhaps the learning content offers him the possibility of giving form to his lesson by means of play.

These two familiar didactic ground forms manifest themselves, among other ways, in the familiar class discussion or lecture, a free or controlled discussion and other forms of conversational teaching

* This heading did not appear in the original text, but it is apparent that the author has moved from the topic of ordering the lesson content to a more general consideration of the aspects of the lesson structure. (G.D.Y.)

which are or ought to be common knowledge when a student has advanced as far as the lesson structure in his didactic studies. Computational games, singing games and others are forms of bringing a lesson into motion by means of play. On the other hand, a teacher can give form to his lesson by means of an example (exemplar) or an assignment.

The exemplaric way or ground form is very familiar in arithmetic or mathematics instruction where a teacher chooses a particular example of a problem as his point of departure and leads the children to master it on the basis of his analysis of it. Project teaching is a familiar way in which assignment as a ground form is actualized in the classroom situation. Since these matters are discussed in more detail later, at this stage we will not go into this any further. The particulars are readily available.

What is still of importance here regarding the ground forms lies in the fact that again one has to point to their fundamental significance for the lesson structure. The didactic ground forms are basic human forms of living. They refer to particular ways in which persons in general life situations go out to the world by means of very identifiable forms by which they learn to know their lifeworld in spontaneous life situations. This activity of the child learning to know which, as everyone knows, is studied by pedagogics is a matter that is guided by the adults. Consequently, the didactic ground forms really refer to the forms by which an adult, in the spontaneous life situation, guides and instructs a child when this child is faced with a particular learning task.

All children must learn. They learn long before they enter school. Their first teachers are their parents. By the time a child goes to school, he has learned more than he ever will learn in the rest of his life. Therefore, in explicating the lesson structure, the didactician searches for these original forms by which educating (including instructing) is actualized in spontaneous life situations. What speaks here is an original human experience which cannot be exceeded in the lesson situation. A parent instructs his child by dramatizing (playing to), by prompting (conversing), by showing (demonstrating) and by giving him work (assignments). The didactic ground forms are inferred from these four activities which

in the lesson situation now have to be compiled in formal ways by the teacher into a functional whole.

No matter how one looks at didactic practice, one cannot come to a conclusion other than that each teaching situation is cast in one or more of these basic forms of living. It is impossible to provide teaching with a ground form by going outside of these fundamental forms of living. All known systems and forms of teaching are variations or refinements of techniques of teaching embedded in these (four) ground forms. Therefore, the student teacher has to make a thorough study of what these ground forms imply and, with good reason, in preparing his lesson he has to exploit to the utmost the didactic possibilities of the ground form(s). The importance of this matter will be emphasized further in the following chapters.

Should a teacher then decide that in his lesson he is basically going to make use of play, conversation, example or giving assignments, this is the first and probably most important decision he makes regarding the way he is going to present the content.

The following matter in setting the lesson aim has to do with which didactic principles the teacher aims to use in the lesson situation. Also, this aspect of the lesson structure is discussed more thoroughly under the topic of didactic modalities. To orient the student, here it is only noted that in so far as there is mention of a didactic principle in the lesson structure, it is the direct link between the lesson aim and learning aim.

Possibly one can best understand this by considering two of the principles. Should a teacher select the principle of activity to weave a connection between his lesson aim and learning aim, this means that the pupils will play a conspicuous role in the course of the lesson itself. For example, with assignment as the ground form, in his presentation he will lead the pupils to themselves discover, experiment or practice and in these ways try to reach the learning aim.

Another example of the use of a didactic principle is found in the question of tempo differentiation. Tempo differentiation indicates that in the lesson situation, the teacher clearly distinguishes among

different aspects of his presentation of the learning content and the anticipated learning activity of the pupils. Thus he will work slowly with certain structures of the content while he will offer other aspects with a faster tempo. His aim is to break directly through from the presentation to the learning activity. Although both of these principles entail more than what can be mentioned here in a few sentences, the intention only is to bring to the attention of anyone disposed to plan a lesson an illustration of the idea of the choice of a didactic principle. It also has to be understood clearly that when the student teacher has progressed in his didactic studies as far as the lesson structure, a multitude of such matters will already have been thoroughly considered in the theoretical course work that has preceded his teacher training.

The following aspect to which attention is given in preparing and explicating the lesson aim is that of method. Also, in this case the teacher takes a fundamental standpoint in regard to his ways of approach before he chooses a method or combination of methods. The main thing of concern here is the distinction between a deductive and an inductive approach.

One briefly can explain the distinction as follows: With a deductive approach the teacher begins with a law, proposition or established fact and then moves to particular examples or illustrations in order to elucidate the validity of this fact, proposition or law. Thus, in such a case, his point of departure is a definition itself. This definition is verified and demonstrated in his presentation.

In the case of an inductive approach, the teacher begins with the matter itself instead of with a definition or description. In this case, the teacher takes an example or an aspect of reality itself as his point of departure and through his reductions and analyses arrives at the formulation of a law or definition. Where in the case of the deductive approach, the definition is the point of departure, in the inductive approach it is the result or end of the instruction.

In light of these basic approaches regarding the presentation of his learning content, the teacher now chooses one or more methods by which he will actualize his lesson design. The narration, question-and-answer, demonstration, experimenting, textbook methods and

more all are examples of methods which can tie the lesson structure together in an instructional unity that is focused on learning.

The teaching aids the teacher is going to use are chosen in accordance with all of the above aspects and placed in the lesson structure. This aspect also is discussed in detail in later chapters. Here the primary fact the teacher takes into consideration is that he will concretize, make visible, introduce his lesson aim, as explained in his reducing, stating the problem and ordering the lesson content, by the teaching aids he chooses. The use of teaching aids in the course of a lesson never is concretizing or making visible for the sake of the concrete and the visible. Teaching aids have to help the teacher teach. In other words, teaching aids have the advantage of helping the teacher unlock reality in order to help insure the pupils' learning.

In Chapter 4 on didactic modalities important principles are taken up that have to be considered when teaching aids are chosen for and ordered in the lesson structure. The implication of this last statement is that in designing a lesson, one does not merely make use of good teaching aids. The teaching aids form part of the ordered lesson structure and the teacher has to be able to give professional and scientific reasons why just these aids will be applied to the course of the lesson in this way at this place and time.

In summary, it is clear that the lesson aim which the teacher decides on implies an aim broader than the learning aim. The lesson aim addresses the contribution the teacher intends to make to the progress of the course of the lesson. Therefore, the lesson aim also determines the basic structure of the lesson design or the form that the lesson as, presentation, ought to take. The lesson aim has to do with the role of the teacher in the situation. In the exposition that follows, this aspect is described, among other ways, as guided actualization of the lesson content. This simply means that the actualization of the learning activities by the pupils through the guidance (presenting, instructing and all they imply) of the teacher are planned. Literally, in his preparation he walks through the expected learning activity in advance by trying to instruct such that authentic, effective learning really occurs.

In contrast, the learning aim is a much narrower concept. In formulating the learning aim the concern is with the pupils' active participation in the course of the lesson, i.e., with the pupils themselves actualizing the learning content. This aspect is the theme of the following section.

The learning aim and the learning content

In the concluding remarks of the above section it was indicated that as far as the lesson aim is concerned its essence can be summarized as an attempt at the guided actualization of the learning activity in the didactic situation. In contrast, stating the learning aim of the lesson is directed at trying to insure that self actualization, "self learning" by the child, is in the lesson structure as far as possible. One finds the relationship between these two concepts in the fact that the teacher guides the learning activities of the pupils with the aim that effective learning by them (self actualization) will occur.

From the above section, the primary and most important task of the teacher regarding the lesson aim is to reduce the learning content to its real, essential, insight-conveying core. From this reduction of the learning content the teacher is in a position to himself examine and plan (design his lesson) his own presentation of the facts of the slice of reality he wants to unlock. In so far as there is mention of a learning aim as an aspect of the lesson structure, this learning aim presumes that the reduction of the learning content has been satisfactorily considered in explicating the learning aim. Therefore, the reduction of the learning content is, indeed, the primary and most important aspect of the explication of the lesson aim.

In contrast, the learning aim links up with stating the problem which the teacher has arrived at on the basis of his reduction of the learning content in connection with his lesson aim.

For the sake of a complete and thorough orientation of the reader, the following are presented again as essential aspects that should be taken into account when the teacher works out a formulation or statement of a problem for his lesson structure. This matter is of particular importance because, as already indicated, eventually the lesson design really comes into motion with respect to the statement

of the problem. While the teacher is busy reducing the learning content to its essentials in order to find those matters that will convey the insight to the pupils in the learning situation, with stating the problem he proceeds to link up, directly and explicitly with his pupils. It is through stating a problem that is based on his reduction that the teacher finds a link with his class. In stating the problem, for the first time the pupils enter the horizon of the lesson as real, living persons. Stating the problem is the primary link among the teacher, the learning content and the pupil, with the aim of effective learning, which always remains the sense of the situation that is created. For these reasons, when he is ready to state the problem, he has to pay attention to the following matters in his involvement with the learning content:

1. The way in which the problem is formulated or expressed in words.

A teacher can state a problem such that its formulation is a mere verbalism. In such a case, it does not have a problematic character for the pupils. The way it is formulated is not directed to the matter or matters placed at their disposal by the adult and that they have to master. On the contrary, it has to be meaningful for the pupils. Where at all possible, the teacher proceeds in stating the problem to express the matter in words in such a way that, considering their particular level of development, he poses a question that is meaningful, understandable and interesting to them. The dangers that one has to watch for in stating the problem include, among others, the following: Being vague, ambiguous, unwisely using exact and scientific concepts, assuming that the child's foreknowledge regarding the problem is functional, being bombastic, oversimplifying and being verbose.

2. In terms of one or another of his formulations, the teacher tries to place the problem within the pupils' framework of meaning regarding their lifeworld. Thus, he thoroughly takes the experiential world of his pupils into account in order to formulate the problem so that it has relevance to the class as a problem and is in accord with the experiences and lived-experiences that normally are manifested in the life of a child of this age. Hence, the problem

has to be life-related, educatively valid and not foreign to the pupils' lifeworld.

If reducing the learning content gives an indication that such a problem is relatively foreign to the pupils' experiential world, the teacher tries to put it in a real, significant framework of meaning by direct or indirect intervention regarding the pupils' lack of experience. He usually does this by trying to replenish their deficient experiences, e.g., by showing a film or film-strip, reading a piece to them, telling a story with the aim that his introduction of matters will create a contrived experiential space on the basis of which the problem can function purposefully as a matter of motivating learning. Without a real, significant framework of meaning there cannot be a statement of an actual problem in the lesson. The consequence of a defective problem statement is that effective learning suffers.

3. The teacher also tries to make the problem actual. To make a problem actual simply means to hold it before the child as an important matter. But in addition, it is to convince them that this is an important matter that they have to understand, learn to know and master. Matters that are not actual or are not introduced as actual matters do not attract the pupils' attention. Also they do not stimulate any motivation for learning. Therefore, the first and the second aspects mentioned above are extremely significant when they flow together into this third matter of actualizing a particular problem, taking into account the life experiences, lifeworld or totality of lived-experiences already at the pupils' disposal. It often happens that in a lesson situation the pupils ask the question: Why do we have to learn these things? In such a case, the teacher has failed in regard to this aspect of his stating the problem.

4. In order to be able successfully to integrate these three aspects of stating the problem, the teacher has to link up with the foreknowledge already at the pupils' disposal. This foreknowledge can exist in the experiences that they have already had. It also can be formal knowledge that the pupils already possess, that they already have assimilated for themselves and which they (hopefully) can implement in a functional way. This knowledge, already at their disposal, is not separated into different compartments. It is one

large totality that functions in extraordinary, amazing ways when a child again proceeds to learn. When this foreknowledge is ignored or inadequately taken into account in the statement of the problem, this simply means that his statement of the problem will not break through to the lifeworld of the pupils.

5. The teacher has to try to create a problem that is as functional as possible. Above all else, children are acting, moving, doing beings. They are constantly doing things long before they think about it. Indeed, this is why we educate and instruct them. Should a problem not have a functional character, for the pupils this implies that it is a dry, abstract whole that has little to do with the ways they participate in the world and in life. Hence, the statement of the problem should already include indications about what a pupil will be able to do with the insights he is going to acquire with this lesson or series of lessons; how he will be able to implement them to act or come to know additional things, to learn to master new structures. The lesson itself is a functional whole. How then could it be possible to set a lesson in motion on the basis of a non-functional statement of a problem?

6. The statement of the problem has to be conceptually graspable for the pupils. Certainly it really is obvious that the statement of the problem in a lesson already is an indication of the essentials of the content to be interpreted in this lesson. A teacher can never formulate a problem without using particular concepts which, in their turn, necessarily flow from the reductions to which he has come in working up his lesson aim. Thus, the concepts flow spontaneously and equally (hopefully) from his own insight into the lesson content.

If one now also takes into account the matters under point one above, this implies that a teacher is extremely sensitive to the use of concepts of a scientific subject which, at this stage, are meaningless sounds to his pupils. If at all possible, he should state the problem in the language of the pupils themselves. It is precisely his aim in the lesson to break out of the naive, casual way in which the pupils deal with the content to a stricter, more formal and even more scientific engagement with things. However, to begin with the aim in order to attain the aim is a contrast in itself that does not

function in the explication regarding the learning aim of the lesson structure.

7. A last aspect that is important in stating the problem is that, if at all possible, the teacher has to take up the high points of the course of the lesson contained in the problem. Therefore, its formulation has to give a precise and direct indication of why this content is involved in this course of the lesson. In this sense, stating the problem really is a summary of the lesson itself in reverse. It includes in itself all of the most important, essential and unavoidable data that, as such, will be brought up in the lesson. Thus one can understand that the simpler the lesson content, the simpler the statement of the problem and the more complex the lesson content, the more complex the statement of the problem. The simple problem that characterizes the reductions of the learning content in the junior classes of the primary school make room in the last classes of the secondary school for stating multiple problems that can lead to direct and sufficient abstracting in the scientific sense of the word.

From the above, one can draw the following important conclusions about the fact that stating the problem enables the teacher to directly break the learning content through to the pupils themselves. To the extent that the pupils are involved in the course of the lesson, the entire matter of content revolves around the problem the teacher has stated. This focuses their learning intention on solving this problem in terms of the teachers presentation and the mastery of more (and/or) similar problems that arise, as such, from the lesson. Really, he reduces the learning content with the direct aim of formulating the statement of a problem that will serve as a bridge between his insights and those which the pupils have to acquire. For these reasons, stating the problem is the nodal point of the lesson and, as such, is a precondition for unfolding the course of the lesson as embodied in the lesson aim.

For these reasons it is understandable that formulating a meaningful, functional problem is one of the most difficult tasks continually faced by the teacher. It takes study and thought to formulate a problem on the basis of effective reduction that is

functional within the questioning horizon of the pupils and motivates effective self actualization (self learning). Should the teacher succeed in this, he can give attention to the following aspect which is of essential importance to an explication of the learning aim with a view to effective learning.

It certainly is reasonable, at this stage, to ask the question: How does the teacher progress from his reduction, through his stating the problem, to the pupils themselves learning effectively? The answer to this question probably lies in the fact that the insights the teacher has disclosed in the statement of the problem are actualized through the pupils' anticipated modes of learning in the lesson situation. To anticipate modes of learning in a lesson situation means that the teacher literally puts himself in the situation that the child must learn and tries to understand how these pupils are going to lived-experience this problem as a learning task and how they are going to take on the task that the problem contains.

As far as the modes* of learning are concerned, Sonnekus lists the following for consideration:

1. Sensing
2. Attending
3. Perceiving
4. Thinking
5. Imagining and fantasizing
6. Remembering

* The modes of learning originally listed in this chapter being translated are: "(1) sensing; (2) perceiving; (3) imagining and fantasizing; (4) thinking; (5) actualizing intelligence; (6) remembering; (7) here Van Niekerk adds a seventh, namely, attending". The slight change in their order and the absence of actualizing intelligence are in accordance with more recent developments in psychopedagogic thought that, obviously, were not available to the author of this chapter. However, the meanings of each of these modes of learning essentially remains the same. For example see: M. C. H. Sonnekus (ed.), *Learning: a psychopedagogic perspective*. Stellenbosch: University Publishers and Booksellers (Pty.) Ltd., 1985.

It is not the purpose here to give an extensive explication of the modes of learning. In this connection, didactic pedagogics links up with psychopedagogics which answers the question about how these modes of learning manifest themselves in a child's lifeworld. Also, this entire matter of modes of learning and their implications are interpreted didactically in detail in Chapter 4, titled "Didactic modalities".

What is emphasized here is that the teacher participates effectively and fruitfully in the didactic situation in accordance with the fact that a child senses in this or that way (by perceiving, thinking, imagining and fantasizing, and the other modes of learning). These modes are the ways in which a child masters a particular bit of learning content or solves the problem that the teacher has formulated for him in his learning aim.

With respect to learning, to put oneself in the lifeworld of a child implies that a teacher is able to accurately anticipate the way or ways in which his pupils probably will become involved with and master the learning task which is contained implicitly in the statement of the problem. In agreement with the conclusion to which he has come, the teacher plans his lesson design such that his presentation (i.e., the way in which he gives structure to the lesson content) will help actualize the anticipated mode or modes of learning.

Consequently, in planning the learning aim, the teacher should never simply leave the modes of learning to chance. Indeed, he should try to design his lesson such that it is likely to promote learning. If, for example, he constructs his lesson design around the idea of an exemplary demonstration, and at the same time decides that the way in which the pupils are going to learn to know this matter or problem probably lies locked up in their (visual) perception, obliges him to let his demonstration unfold such that perception, as a mode of learning, is given its full justice in the lesson situation.

The correct anticipation of the modes of learning and the contribution of the lesson design to their actualization really

represents, then, the break-through from the lesson aim to the learning aim. Stated more clearly, this implies that his designing and presenting his lesson are going to contribute to the fact that the pupils will learn effectively.

Summary

In the ways indicated above, the lesson structure acquires its form. In designing a lesson, the teacher makes the following choices:

1. Ground form(s)
2. Didactic principles
3. Principles of ordering the learning material
4. Methods
5. Didactic modalities

These five matters are the skeleton of the lesson structure. The content covers these bones with flesh and muscles.

In the following chapters each of these aspects are described and explicated in more detail until, in the last chapter, an explanation is offered regarding how a teacher explains and justifies his lesson as a matter of his preparation*.

* The few examples of lesson write-ups presented in Chapter 5 are concrete illustrations of how a teacher can plan a lesson by implementing all of the aspects of the lesson structure considered throughout this book. (G.D.Y.)