Why is Teacher Clarity so Multidimensional and so Complex?

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Satu gambaran yang lengkap dan seimbang tentang kejelasan guru sewajarnya mengenal pasti dimensi-dimensinya serta menghuraikan sebab-musababnya ia begitu rencam.

Dimensi-dimensi kejelasan guru yang dibentang dan dijelaskan satu demi satu tidak memadai. Tumpuan juga seharuslah ditujukan kepada pertalian dan interaksi di antara dimensi. Untuk tujuan ini, maka satu gambarajah atau peta faktor-faktor dicipta. Peta ini menentukan kedudukan dua perspektif iaitu kejelasan guru dari pandangan murid dan dari kaca mata si pemerhati yang lebih matang (mis. hakim, guru sendiri dan sebagainya). Faktor-faktor pembatasan yang penting dan peranannya dipaparkan dalam konteks ini.

Adalah ditekankan bahawa kefahaman fenomenon kejelasan guru bergantung kepada faktor perbezaan individu iaitu keperluan dan masalah tiap-tiap murid yang bersaling tindih mahupun tersendiri. Layanan guru yang menepati keperluan dan masalah tersebut akan mencapai kejelasan yang berbeza-beza dari segi tahap dan liputan. Dengan itu, tidak ada satu kejelasan guru sahaja tetapi berbilang macam kejelasan guru. Selain dari perlakuan guru yang berkesan, maka perhatian yang lebih berat sepatutlah diberi kepada peranan faktor isi terutamanya dari segi logik dan strukturnya. Ini landasan kejelasan guru yang setakat ini telah lumrah dilupakan.

Introduction

Teacher clarity is not a simple construct. The nature of this construct was an issue and still remains one.

It was observed early that there were significant variations in delineating the construct of teacher clarity. Rosenshine and Furst (1973: 156) concluded after reviewing studies on teacher clarity that the variations suggested a significant lack of unanimity in approaches towards and definitions of teacher clarity. This is largely because its semantic boundaries are vague. Its semantic domain could assume different shapes and coverage, depending on the inclinations of the particular research worker. Dunkin and Barnes (1986 : 766) came to a similar conclusion that this construct was not clearly demarcated and pegged. They found the construct used in many evaluation instruments of teacher effectiveness and teacher performance. However, they found the commonality and variations in definitions rather disturbing. They also reported that very often the specific behavioural components and manifestations of the concept were not explained.

A number of research workers were already sensitive to this problem. It was suggested that variations and differences could to a large extent be explained by the multidimensional nature of this construct (Bush et al., 1977; Cruickshank, 1985; Dunkin & Barnes, 1986; Brophy & Good, 1986). Different research studies could have highlighted particular combinations of the facets of teacher clarity.

Reiteration of and continual emphasis on the multidimensional nature of teacher clarity signified some progress but no final solution to firmly anchor this construct. In such a situation

of varying degrees of indeterminate vagueness, uncertainty and vacillations, there remains the continuing danger of reducing it to potpourri. Over zealous research workers tend to pack it with all types of teacher behaviours and facets. Justification was found in often tenuous and indirect relationships to the teacher's task of 'making it clear'. This type of unbridled enthusiasm resulted in frequent over extensions into more encompassing construct like teacher effectiveness, until it is often difficult to set them apart based on the definitions and teacher behaviours supplied.

Focus on Multidimensionality of Teacher Clarity

Significant attempts in identifying the multidimensional facets of teacher clarity are exemplified by efforts to define it in terms of components or aspects or factors of teacher clarity. Rosenshine and Furst (1971; 1973) were some of the earliest to predicate that teacher clarity is multidimensional. They postulated a number of dimensions, namely presentation; comprehensibility of points in a lesson; explanations; answering pupils' questions; appropriateness of the level of organization and coherence of a lesson. Cruickshank et al. (1979) confirmed the multidimensional nature of teacher clarity through factor analysis of evaluations of statements on teacher clarity by pupils. Four factors emerged, and these are assessing student learning; providing opportunity to learn; using examples; and reviewing and organizing. These four factors were operationalized with appropriate teacher behaviours.

McCaleb and White (1980) proposed five dimensions or aspects of teacher clarity. The first is understanding. This is a prerequisite which involves matching what the learner has and what constitutes the objectives of the lesson. Teacher clarity enables this coupling and integration of the old and new to result in understanding. The other four remaining dimensions or aspects are structuring; sequencing; explaining; and presenting.

It is evident from the examples given that the multidimensional nature of teacher clarity was explicated through different and discrete components or facets. No significant attempts were made to study the interrelationships between the different facets. There were also no clear attempts to suggest interactions between facets or dimensions. The presentation of the multidimensional nature of the construct teacher clarity was generally rather simplistic with each facet enunciated one by one, finally ending in a collection of facets. We also see little efforts in elucidating the constraints of a variety of entry and formative factors, and their effects on the operation of the different facets of teacher clarity. We are also not sure how each of the facets proposed could affect and constrain the other facets. In short, the complexity of teacher clarity was not clearly estimated and mapped out through this type of discrete collection of facets or dimensions. Dynamic relationships, interactions and constraints were missing in a most glaring and unsatisfying manner.

Multidimensionality and Complexity not Fully Revealed by Research Methodology Used

The early beginnings of attempts to grapple with the issue of teacher clarity were characterized by lack of consistency in definitions, and the frequent use of abstract and global constructs to peg it. Variations in definitions or no definition at all, and the common use of constructs like 'understanding' or 'insightful presentations' have contributed to the general aura of vagueness and encompassing broadness associated with the construct teacher clarity. Most early research realize intuitively from experience that teacher clarity is hardly a simple, homogeneous and nuclear construct. The majority of researchers would readily affirm the multidimensionality and complexity of teacher clarity.

But this type of facile affirmation of the multidimensional and complex nature of teacher clarity is not fully actualized in early research studies or their reviews. These research studies, in particular, the design and research methodology used, did not fully reveal the multidimensional and complex structure and characteristics of teacher clarity. The usual picture that emerges is generally simplistic, discrete (facets), non-interactive (facets), and far from dynamic or complete.

A typical example of the frustration with the early abstract and global approaches, and a swing towards more concrete, objective and properly operationalized approaches is seen in the research studies conceptualized and implemented by Cruickshank and his associates, or those influenced by them (Bush, Kennely & Cruickshank, 1977; Kennedy, Cruickshank, Bush & Myers, 1978; Cruickshank, Kennedy, Bush & Myers, 1979; Gephart, Strother & Duckett, 1981; Cruickshank, 1985). These studies advanced significantly our knowledge concerning the multidimensional nature of teacher clarity. However, these also provide examples of how the design and research methodology employed cannot fully reveal the complete multidimensional and, especially, complex nature of teacher clarity.

The basic assumptions that Cruickshank and his associates used can be summarized as follows:

(a)   the audience (e.g. pupils) is the final judge of teacher clarity;

(b)   the pupils' eyes, ears, other sense modalities and minds provide the measures of teacher clarity;

(c)   the impact of the teacher on the pupils encapsulates teacher clarity;

(d)   the preference for low or, at most, mid level inference variables, properly operationalized in terms of teacher behaviours;

(e)   the behaviours of teachers as seen in what they actually do in class are rated by the pupils for clarity;

(f)   that a variety of statements of teacher behaviours are rated by pupils, and then factor analyzed to yield factors or facets of the dimensionality of teacher clarity.

The result of these assumption led to a preference for low or at most mid level inference variables, operationalized in terms of teacher behaviours and that variety of statements of teacher behaviours can be rated by pupils and then factor analysed to yield factors or facts of the dimensionality of teacher clarity.

Ling (1986) observed that this type of design and research methodology is partial, and have not enabled the investigations of relationships and interaction between factors. The resulting picture is far from complete. Briefly the objections raised against these researchers are:

(a)   the pupils may not in significant cases realize how and why they found the teacher clear. They are unable to verbalize the reasons for their clear understanding. If they do verbalize, they may only touch on the superficial reasons and surface structures. The deeper reasons or deep structures may be beyond their level of consciousness. Many experienced teachers would attest that there is far more in teacher clarity than found in the exclamations and revelations of pupils. The pupils represent only one source of

measure of teacher clarity. Undue reliance on only one source may not be wise as only a partial picture will emerge.

(b) there could be different levels of teacher clarity, even in a particular lesson. Some pupils would be reacting at the basic or minimal level of understanding, whilst others may find the teacher clear at higher levels. Different pupils too may have different gaps in their understanding; and as the teacher attacks and bridges some of these idiosyncratic gaps, different pupils may find the teacher clear and stimulating for different reasons. The ones whose gaps are spanned by the teacher will find him clear, stimulating and satisfying for those reasons. On the other hand, the ones whose gaps are unattended may find the teacher less clear. It is, therefore, evident that it may be simplistic and misleading to imply a monolithic level of teacher clarity, when in actual fact there may be many different levels of clarity addressing to a range of individual differences. This issue has to be focussed more sharply relating questions of the range of individual differences, degrees of teacher flexibility, varieties of constraints affecting teacher performance and the direction (or even directions) of a lesson.

(c) the glaring omission or neglect of the content variable in conceptualizing, describing, analyzing and measuring teacher clarity. The relationship of these aspects of content, on one hand, and teacher strategies, methodology and teacher behaviours in implementation, on the other hand, must be accorded a more central place. To underestimate and downplay these nexuses is to miss the deep structures of teacher clarity. Some would also claim that in many cases, such neglect and oversight has caused them to miss the jugular in teacher clarity.

(d) there is insufficient attention given to the affects of receptional factors among pupils in teacher clarity. This is the flip side of teacher behaviours in implementation. It is conceivable, for example, that attentional factors among pupils could affect the perception and evaluation of teacher clarity by pupils.

(e) there is usually overflowing exuberance in generating statements of low inference teacher behaviours to be rated by pupils for teacher clarity. The resulting collection of such wide ranging statements tend to overextend the boundaries of the construct teacher clarity to encompass wider constructs like teacher effectiveness.

Further, the influence of constraints in different contexts has also not received sufficient focus and emphasis. Consequently, the full and dynamic picture of the multidimensionality and complexity of teacher clarity has not emerged in the many presentations.

An Attempt to Reevaluate the Construct of Teacher Clarity

A preliminary attempt was made by Ling (1986) to reevaluate efforts in conceptualizing the construct teacher clarity. This attempt addressed many of the objections in earlier efforts in delineating the domain of teacher clarity. Ling proposed seven factors, namely:

(A) Language and communication.

(B) Clarity of aims to teachers, pupils and observers.

(C) Teacher giving instructions ('Do Something').

(D) Presentation of facts and information.

(E) Higher levels of understanding: Focusing on the group.

(F) Higher levels of understanding : Focusing on the individual (Individual Differences).

(G) Facilitative factors.

Factors C, D, E and F depict four levels of teacher clarity. In this reevaluation, a more deliberate attempt was made to locate more centrally the structure, level and logic of the subject matter presented. These aspects are then related to the performance of the teacher. More importantly too, Ling grappled with the issue of understanding and resulting clarity. This is achieved through the teacher attacking gaps in understanding or its converse ignorance. The teacher does these and achieves varying degrees of clarity in two ways, namely:

(a) Supplying components of facts and information (e.g. propositions). These may be new or old components which bridge, fill-in or differentiate the existing state of knowledge of the group or individuals.

(b) Constructing particular linking relationships between new or old components within existing structures; extending or modifying these existing structures through new relationships. These relationships in terms of links can be associative or logical (rules, principles, laws etc.)

It is fairly evident that this approach in focusing on components and relationships must be based soundly on content factors. The complementry part is teacher performance or behaviours addressed to these needs (gaps in terms of components or linking relationships) and concerns. It is also fairly clear that there is a range of individual differences with reference to the nature of these gaps among different groups and individuals.

Factors A and B permeate through the four levels signified by C, D, E and F. Factor G bundles together a host of facilitative or contributory factors. Many of the factors proposed by early research studies and pegged by low inference teacher behaviours fall into this category of facilitative factors. They are supportive and contributory but are not in the core of clarity through understanding. An example is motivating teacher behaviours.

This attempt by Ling missed the study of relationships and interactions between factors of clarity. Still missing is the overall map showing the dynamic configuration of interacting factors within teacher clarity. The issue of constraints and how they can affect teacher clarity very radically, has not been dealt with sufficiently. Consequently, the full picture of the multidimentionality and especially, the complexity of teacher clarity remains an unfinished task and challenge.

Configuration of Perspectives and Factors in Teacher Clarity

Figure 1 shows schematically the configuration of perspectives and factors in teacher clarity. The aim of this figure is to show the groupings of factors; the relationships between factors; the sequence of factors; the interactions between factors; and the constraints which have a bearing on teacher clarity. This figure should be taken together and superimposed on the seven factors proposed by Ling (1986), as summarized in the earlier Section of this paper.

The first important conglomerate factor which has a pervasive effect on teacher clarity is the Teaching-Learning Context (IV). This group of factors comprises three factors, namely Pupil Characteristics (I), Objectives (II) and Teacher Characteristics (III). The Teaching-Learning Context exercises a constraining and determining effect on the nature and direction of teacher clarity. Teacher clarity can only be fully and clearly understood if it is appropriately set in this backdrop of three interrelated and interacting factors, namely Pupil Characteristics, Objective and Teacher Characteristics. Those three entries and contextual factors are contributive, determinative and constraining on teacher clarity. In Figure 1, three arrows emanate from the box labelled Teaching-Learning Context (IV). These three arrows leading to box VII, box VIII, box IV symbolize the direct and indirect effects of the Teaching-Learning Context on teacher clarity.
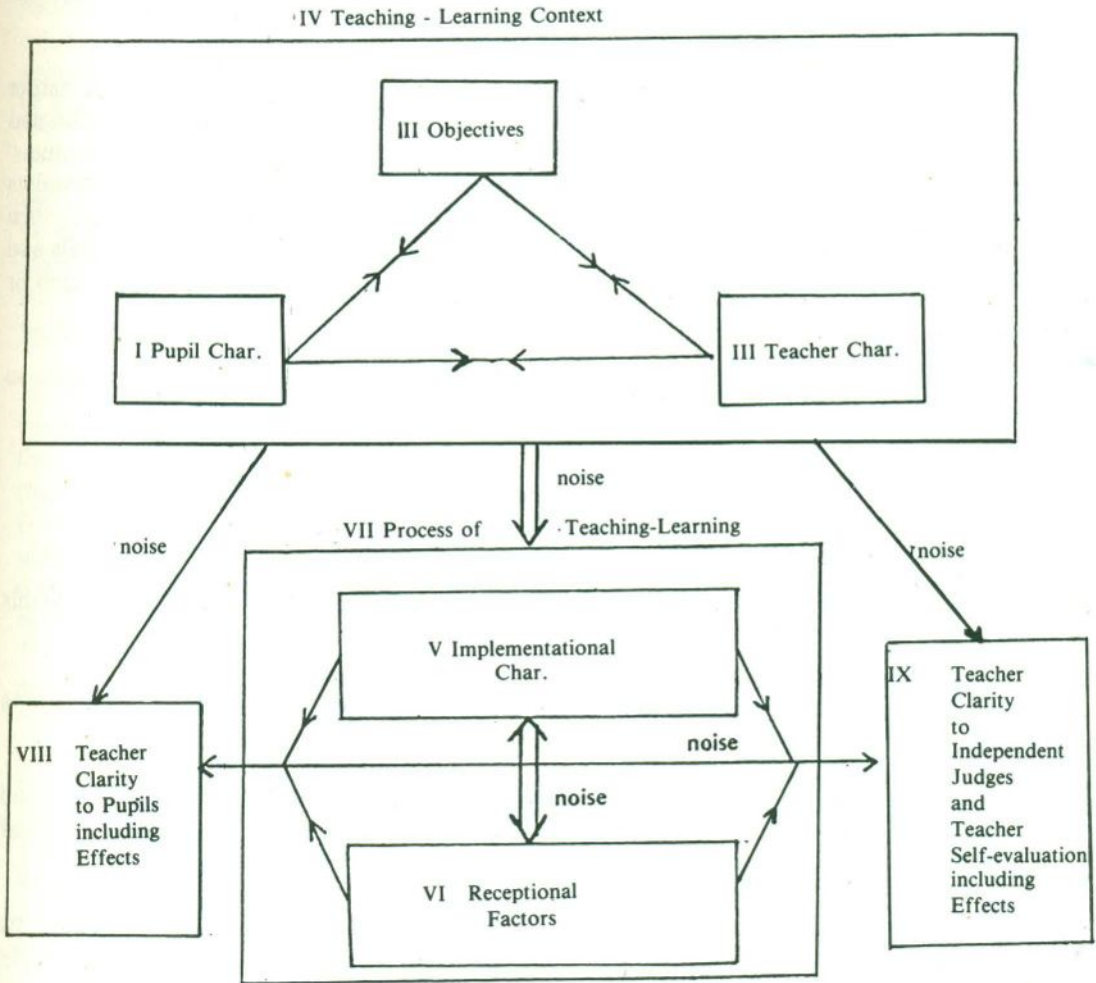

Figure 1: **The Configuration of Perspectives and Factors in Teacher Clarity**

Through these three arrows, we obtain the fact that teacher clarity is, to some direct and indirect extent. a function of Pupil Characteristics, Objectives, Teacher Characteristics, and their interactions. They enter into evaluations of teacher clarity, either directly or indirectly.

Pupil Characteristics or the range of individual differences determine the nature and variety of gaps that the teacher has to span in order to achieve clarity among his pupils. Some of these gaps are common to the group of pupils, whilst others are quite idiosyncratic. These gaps may be at different levels, and may be either small or big depending on cumulative weaknesses or strengths of each pupil. These gaps represent needs and challenges which demand attention for the teacher working towards clarity.

The concept of varying gaps existing among pupils only takes on clearer meaning when we have understood the objectives and relate them to Pupil Characteristics. The arrow connecting Factors I and II shows that the entering gaps and all their variations are a function of the relationship between Factor I and Factor II.

The teacher could begin with and, be influenced by 'estimated objectives'. The nature of the constraining effect on teacher clarity depends on whether these preliminary estimated objectives are largely fixed or still open and flexible, or a mixture of degrees of 'findness' or 'openness'. If the objectives are, for example, still negotiable and flexible then the constraints on teacher clarity are loosened to a large extent. However, if the objectives are fixed then the constraints are much tighter. Additionally, teacher clarity is often judged by pupils and independent observers as to whether the objectives are clear, meaningful, within reach or otherwise.

Teacher Characteristics (III) in terms of the competencies he possesses in relation to Factors I and II, are also pertinent. Some important considerations are:

(a)   communicational skills;

(b)   pedagogical skills;

(c)   command of the content, especially its structure and logic; and the ability to relate this content factor to (a) and (b);

(d)   sensitivity in estimating and perceiving the nature and variety of gaps existing among his pupils;

(e)   motivation and perseverance with reference to mapping out the gaps he has to attend to. The degree of completeness of this will to a large extent determine the coverage and completeness of his clarity, as contrasted to fragmentary and scattered clarity;

(f)   ability to relate Factors I and II realistically to yield a viable ensuing teaching-learning situation. Examples of inability to do this are found when the objectives set are patently beyond the pupils. The gaps are too big to be bridged.

The Teaching-Learning Context may convey degrees of noise. This is evaluated by Pupils (VIII) or by Independent Judges and the Teacher (IX) to give an aspect of teacher clarity. It also feeds into box VII called the Procees of Teaching-Learning. As the teacher begins to implement, his performance, consciously or unconsciously, may be influenced by his tentative estimates of the nature and variety of the gaps among the pupils from box IV.

Alternatively, he may also be largely insensitive to these gaps, and may focus on only predetermined content objectives. In both these cases, the actual gaps he has chosen to attack may be unnecessary or inconsequential, taking into account Pupil Characteristics. In such an instance, much effort would be invested achieving clarity of little significance or relevance to the needs of the pupils.

One can also easily conceive of a Teaching-Learning Context in Malaysian classrooms where the examination, syllabus and time constraints are very severe. These constraints, in many cases, may result in the teacher knowingly neglecting to take into account Pupil Characteristics in estimating the gaps of the pupils from the Teaching-Learning Context. The lesson is largely dictated by fairly fixed content objectives (II). The completion of those content objectives become a paramount consideration. It would not be difficult to see how teacher clarity can be affected under these constraints. Under such conditions too, the teacher may reach a portion of the class and appear to be clear to this group of pupils. On the other hand, other pupils in the class may find him less clear because the bridges he is building are not enough to span their gaps. Consequently, we must often take into account this phenomenon of degrees of 'sectional' clarity, and the different factors which has brought this about.

The box Process of Teaching-Learning (VII) usually provides the most indicators, be they high, low or proxy. The focus is often on teacher behaviours which are considered to be related to the promotion of clarity. Cruickshank and his associates, for example, obtain most, if not all, of their indicators of teacher clarity from this box. They have, however, in the main concentrated on the box named Implemental Characteristics (V). Most of their facilitative factors are located here.

The major weakness of approaches to teacher clarity in the past, has been this overabsorption with Implemental Characteristics (V). This type of thinking seems to imply that teacher clarity depends almost entirely on the teacher. Practising teachers would testify that this is sometimes not the case. A teacher could be teaching clearly and effectively. However, some students could be daydreaming and not attending to the instruction. The teacher could then judged as unclear by such students. In the Malaysian context where the medium of instruction in secondary schools is Bahasa Malaysia, disabilities or weaknesses in the command of the language among pupils would pose frustrating receptional problems. The signals sent out by the teacher could be seriously hindered by such language deficiencies among the pupils. Besides these receptional factors, it is possible to enumerate a host of other receptional factors like environmental noise, degrees of defects of sense modalities among pupils and so forth. This argument suggests that we have in the past neglected the role of Receptional Factors (VI) and its interaction with Implemental Characteristics in evaluating teacher clarity. In Figure 1, both these factors interact and are subsumed under Process of Teaching-Learning (VII). Implemental Characteristics could generate noise. Similarly, Receptional Factors could also generate noise. Together and interacting, they could be generating additional noise. The noise produced affects teacher clarity. It is apparent that any balanced conceptualization and evaluation of teacher clarity must take into account these two complementary factors and how they interact to promote or hinder the process of teaching and learning.

Figure 1 shows two perspectives in evaluating teacher clarity, namely:

(a)   Teacher clarity to pupils including effects (VII). This perspective emphasizes the perception of the pupils. The impact of teacher clarity comes from box IV Teaching-Learning Context (with boxes I, II, III) and box VII Process of Teaching and Learning

(with boxes V and VI). Included in this perspective is the product or outcome aspect.

(b)   Teacher clarity to others who are not pupils. These could be independent observers or judges. They could also be the teachers themselves carrying out self-evaluation. All these evaluators and self-evaluator would use a variety of indicators to judge the effects of the Process of Teaching-Learning (VII) and the constraints of the Teaching-Learning Context (IV) on teacher clarity.

These two perspectives are both supplementary and complementary. Each on its own may just miss the complete and balanced picture of teacher clarity. It has been pointed out that relying on pupils to evaluate teacher clarity (box VIII) may just assume too much that they have an overview and a sufficient understanding of teacher clarity. Many may not be able to consciously verbalize or fully apreciate the extent of their understanding. They may not even be fully aware of the level of understanding, lack of understanding or misunderstanding, they are functioning at. Their evaluation may be more influenced by captivating teacher behaviours in box V Implemental Characteristics. There may be a marked tendency among these pupils to underplay difficulties from box VI containing Receptional Factors, in their evaluations of teacher clarity.

Evaluating teacher clarity from the perspective of independent judges or teacher self-evaluation may also be beset with some daunting difficulties. Most of such evaluation would have to rely on teacher behaviours in box V on Implementational Characteristics holding. The indicators from the pupils are often scattered and not continuous. Consequently, this is a major source of weakness as the observers have to infer and generalize from these sporadic pupil indicators, the level and quality of teacher clarity for all the pupils. There might be a general tendency to judge teacher clarity from the perspective of what is considered desirable from a matured angle (i.e. structure, organization, review, summaries etc.) The difficulty, in such a case, is to miss the pupils' point of view, their specific needs and gaps, and their learning problems especially at the process stage. It is quite clear that such a particular picture and perspective of teacher clarity is generally better obtained through the pupils (box VIII). If this is in addition to sufficient indicators from teacher pupil interaction, the process stage (boxes VI, VI, V), then the picture that emerges from these different perspectives of teacher clarity is more complete and balanced.

The seven factors in teacher clarity proposed by Ling (1986) are more specific and can be located in Figure 1. Thus:

(a)   Language and Communication (A) is found in Pupil Characteristics (box I), Teachers Characteristics (box III), Implementational Characteristics (box V), and Receptional Factors (box VI).

(b)   Clarity of Aims (B) is in Objective (box II).

(c)   Teacher Giving Instruction (C) is located in Implementational Characteristecs (box V).

(d)   Presentation of Facts and Information (D) is subsumed in Implementational Characteristics (box V).

(e)   Higher Levels in Understanding: Focusing on the Group (E) and Focusing on the Individual (F) are nested in Implementational Characteristics (box V), Receptional Factors (box VI), and boxes VIII and IX which include the component Effects (or outcomes).

(f)   Facilitative Factors (G) are found in Implementational Characteristics (box V).

In addition to these factors is the problem of research methodology. It must be emphasized that the issue of teacher clarity at different levels, meeting a range of individual needs and gaps, can only be sufficiently revealed through indepth interviews with pupils, using the Piagetian clinical type of approaches and techniques. The impact and effects of the teacher on each student (or the one interviewed) are then understood in better relief. This is a more idiographic picture of the consequences of teacher clarity or the lack of it, as contrasted with a generalized and average picture of teacher clarity. It addresses in a more pointed manner why the teacher is clear to each pupil with reference to specific understanding achieved. These specific understanding are based on the particular bridges constructed through relevant factual components supplied and through appropriate relational links (rules, principles, laws etc.) connecting components. These can only be revealed by indepth probes at the individual level.

Conclusion

A complete and balanced picture of teacher clarity will only emerge when we have identified more clearly the various multidimensional aspects of teacher clarity. We also need to complement and supplement these efforts with clearer attempts to unravel and map the complexity of teacher clarity. Until we are able to focus on these two interrelated challenges with more valid, effective and encompassing conceptualization together with a more revealing and appropriate research strategy, we will continue to enjoy only a partial, oversimplified and, even possibly, a distorted picture of teacher clarity.

This attempt to produce a more complete and balanced picture is based on an earlier effort to conceptualize seven dimensions and labels of teacher clarity (Ling, 1986). This paper pushes our thinking further to include issues of relationships and interactions between factors. The important constraints which affect these relationships and interactions are explained. This clarification is taken one step further by the mapping of the configuration of perspectives and factors in teacher clarity through a flowchart (Figure 1). This flowchart shows the inter-relationships, interactions and constraints which were missing in earlier efforts.

The thorny and elusive problem of fostering understanding through teacher clarity was highlighted. A resolution was sought through giving more weight to content factors and the construction of meaningful learning in the context of individual differences. A sharper view of teacher clarity can only be obtained after we have understood the individual needs and problems of the audience. As each individual meets his needs and solves his problems with the teacher's help, he achieves varying degrees of clarity. As he is stretched and extended to new and higher levels, again with the teacher's assistance, he reaches varying degrees of clarity. Evaluation of teacher clarity takes on more concrete and realistic meanings as we understand or approximate more accurately how each member of the audience is helped to find his way to his levels of clarity or lack of clarity. This more idiographic approach has received far less attention than the more generalized and nomothetic approach focusing on the group. We need both these approaches to arrive at a more complete and balanced picture of teacher clarity.

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