1.2
General Issues Relating to Pupil Achievement

Gilbert De Landsheere
Belgium

1.2.1 SUMMARY AND POINTS FOR DISCUSSION

Pupils may fail assessments of varying degrees of objectivity either because they have not achieved the standards set by their school or – and this might not be at all the same thing – they are inadequately equipped to cope with certain aspects of everyday life. Variations in educational achievement are only important if they serve as a guide to how much pupils know, compared with what they really ought to know.

In this workshop, which will be in no sense definitive, a number of major issues relating to pupil achievement might be discussed:

1. The importance of assessing needs and methods.
2. Educational policies or systems can sometimes fail just as much as individuals. Hence, the need to steer the system.
3. School populations are becoming increasingly heterogeneous. To what extent are organisational arrangements and methods designed for homogeneous populations still valid?

4. Education always takes place in a specific physical and social environment. What form should machinery for reproducing and creating excellence take?
5. Posthumus' Law continues to hold: how and why?
6. Minimum competency may be defined as the very least that pupils must know. Must this be the same for everyone?
7. Success breeds success. Let us therefore select the methods which take us in that direction.
8. Motivation plays a key role, but what is really known or done about it?
9. How can teachers become agents of success?
10. What organisational arrangements are required?

Saying that a pupil has failed can mean two, often quite different, things:

- It may refer to a syllabus, which is often a compromise between traditional and new subjects and objectives, and about which teachers will have exercised a certain measure of choice – which may include the rejection of greater emphasis on certain aspects.

  Moreover, setting a pass mark, for which there is rarely a clear basis, means establishing a frontier, one side of which represents failure.

- Alternatively, the objectives have been defined in terms of the skills which analysis has shown to be necessary for life in contemporary society. The minimum competence thus defined marks the borderline or zone separating success from failure.

To take things to extremes, it could be said that, in the first case, the individual failed because he did not satisfy the school while, in the second case, it was because he was inadequately equipped to cope with the demands of modern society.

Current thinking about school failure takes the pessimistic view that there has been a general fall in standards, at a time in human history when the need for high quality education has never been greater.

Whether standards are rising or falling does not, in itself, have any significance as long as the validity of the criteria has not been established.

Even if they have been measured correctly, a rise or fall in standards in a syllabus which is valueless is a matter of no concern. For example, is a possible decline in spelling standards really a sign of decadence or of unpreparedness for life?

As J.M. Domenach has stressed (Domenach, 1989, p. 12) what is really important is to compare what pupils know with what they ought to know and, even more, to ask whether the latter conforms to society's needs and to the duty to educate people to fit into that society, while retaining the capacity to understand, criticise and improve it. An additional condition is that the individual concerned should feel comfortable and well adjusted - in other words, happy.

In this discussion, society and the individual are really two aspects of the same problem. Ideally, what benefits one should also benefit the other. However, in practice it would be an illusion to think that the tension between the individual and the general interest will ever disappear completely.

Individuals sometimes differ widely, both in how they can achieve maximum personal development and in what constitutes an appropriate way of living in and contributing to society.

That is why, as far as possible, we must cater for individual educational needs and why everyone must be allowed to follow the most appropriate path for their specific needs.

This is the background against which the issues relating to educational achievement must be set. It will not be possible to touch on all of them during the workshop.

1.2.2 ASSESSING NEEDS

It follows from what has been said that the fundamental principle of education is to help individuals to achieve selected objectives. Since children entering school have already acquired many skills it is important to recognise the distance which separates their existing level from the one it is hoped they will attain. This gap is called "need".

There are three traditional methods of assessing needs: measuring shortfall (for example, between what is already known and what has still to be learned), the establishment of ideal standards and the interpretative approach (which usually involves operationalisating goals and objectives which have already been established in educational projects, official curricula etc.) (cf G. De Landsheere, 1982, pp. 334-335).

Two questions arise. Who is to measure the shortfall? Is it sufficient,

merely to ask an individual what he wants in order to identify his real needs?

V. De Landsheere (1988, pp. 51-52) reports that Scriven and Roth (1978), who strongly criticised the conceptual and practical weaknesses of these assessment models, draw attention to a number of obvious weaknesses:
- children who need dental care rarely ask for it;
- adults who ask for sedatives rarely need them;
- everyone is aware of the need for food but very few people know what constitutes a balanced diet.

Scriven and Roth therefore ask five questions:
1. How will an individual's need for a specific skill be identified, and by whom?
2. If a want is felt sufficiently strongly, does it become a need?
3. Can one have a need for a skill without realising it?
4. Needs can be met in a number of ways, so how can one know which is the best?
5. Can we exclude the possibility of meeting needs, particularly competence needs, without some form of artificial intervention, for example through the maturation process?

V. De Landsheere states that one of Paulo Freire's main contributions (1974) was his stress on the importance of dialogue between pupil and teacher in identifying and understanding needs. J. Raven, one of the participants in the workshop, has also frequently made this point.

V. De Landsheere (page 53) also says that educational dialogue, as Freier (1974) sees it, is the expression of an equal relationship between teacher and pupil. The failure of an individual or group to achieve a particular standard does not, in itself, constitute educational need. This only arises when the individual concerned is aware of the shortfall, considers it to be undesirable and decides to try to bridge the gap. It is only at this point that genuine need exists.

This subject should certainly be considered at the workshop.

1.2.3 STEERING THE EDUCATIONAL SYSTEM

Educational failure is normally considered from an individual point of view. However, the education system may also be deemed to have failed, either totally or in part, if its main objectives have not been attained

beyond a specific threshold. If the system is to be properly controlled, appropriate assessments must be undertaken on a regular basis to provide information, not only on the situation at any given moment but also on trends.

The two main forms of systems assessment are surveys of educational achievement and surveys of attitudes and motivations.

An achievement survey may take one of two forms: a general survey of the most important or representative aspects of curricula, or one which is more exhaustive, covering a sample of representative aspects from each of the areas covered by the curriculum. These types of survey are referred to, respectively, as normative and criterion-referenced.

The normative survey's advantage lies in its relative simplicity and the speed with which data can be processed, particularly if analyses are confined to single variables. Its disadvantage lies in the very general nature of the information obtained. This can provide at best, a warning light, signalling the possible existence of a serious weakness either in a specific sector or in the system as a whole. It is then still necessary to identify the weakness.

Criterion-referenced surveys benefit from the wealth of data they provide, thus permitting a more sophisticated diagnosis. In addition, the large number of questions asked and analysed can provide the basis of multi-purpose data banks. The disadvantage of such surveys is the amount of work involved, even if analyses are confined to single variables.

Whether normative or criterion-referenced surveys are sued to assess educational achievement, if their analyses are restricted to single variables a number of particularly important explanatory factors will be missed.

It is certainly important to know that a particular percentage of a population or sub-population of pupils is not achieving a minimum competency level, that the mean or the standard deviation of a set of results is X or Y, or that the functional illiteracy rate is Z; however, it does little to assist decisions which might improve the situation. Ideally, one should know why particular results have occurred, in other words what other circumstances they relate to. Hence the importance of bivariate or multivariate analyses, ranging from simple correlation of the result measured and another variable to an analysis of the relationships between what is often very large number of variables.

That said, attention should again be drawn to the difference between a correlational "explanation" and a full understanding of causes.

A large number of variables may be related to the levels of achievement measured: age, sex, socio-economic status, teaching methods, opportunity to learn, "time on task", forms of teacher training, etc.

The selection of variables should usually be consistent with a particular theoretical approach, otherwise anything might be included in the analysis.

The most frequently used data collection instruments are questionnaires and machine-readable attitude scales (i.e. using closed responses). Open responses in all their forms, including anecdotal evidence and direct observation in the field, are nearly always unmanageable in large population surveys.

This is not the place for issues relating to sampling or data processing, nor for discussing the importance, however great, of using qualitative observations to validate quantitative measures.

Finally, one can never overstress the importance of how the results are disseminated. Heavy investment in educational achievement surveys has too often produced no return because the results were not properly disseminated. Lengthy reports, no matter how good they are, are only of real use to specialists. They should always be supplemented by;
- a highly condensed summary aimed at decision makers;
- a very carefully presented summary, in clear, practical language, aimed at a wider public.

1.2.3.1 Homogeneity and the heterogeneity: A fundamental choice for the macro-system

The increasing heterogeneity of secondary school populations is one of the most frequently mentioned explanations for educational failure.

It is not necessary to repeat the now classic finding made by the ILEA more than twenty years ago, that in both selective and comprehensive systems the performance of the top 4-5% of pupils remained as high as ever, or even had a slight tendency to improve.

In any comprehensive system, the longer the period of compulsory schooling the more heterogeneous it will be.

One problem, perhaps the most important one to be resolved, if the maximum number of pupils are to succeed, is how to replace teaching methods and forms of organisation which were appropriate for intellectually and socially homogeneous populations with ones which will work with heterogeneous groups.

Moreover, the longer the period of compulsory schooling, the more pupil motivation will vary, with the inadequacies of the system resulting in increasing numbers of unmotivated pupils.

Assessments of the ways in which motivation and strategies to increase motivation have evolved are not nearly as common as current circumstances warrant.

1.2.3.2 Integrating the school and educational activities into their local environment

In attempts to improve pupil achievement, reference to which has already been made, particular attention should be paid to local environmental characteristics: both the climate within schools, a subject which is again becoming topical, and their immediate surrounding environment.

A detailed qualitative analysis must be made of the most common forms of educational practice – those often more or less explicitly required by the educational hierarchy – in order to identify what Bourdieu (1970) calls the machinery for reproducing excellence and Perrenoud (1984) the process for creating excellence.

1.2.4 POSTHUMUS' LAW STILL HOLDS

Posthumus' Law states that a teacher will tend to adjust the level of difficulty of his teaching and his assessments of pupil performance in order to retain approximately the same distribution of marks, and thus the same percentage of failures, from one year to the next: 25% weak pupils, 50% average pupils and 25% good pupils.

What we have here is not a social reproduction mechanism, introduced into the system by those in authority, but rather an adjustment of the level of difficulty of the teaching to the average ability level of the class, as subjectively assessed by the teacher, and a range of assessments, irrespective of the average, which results in a Gaussian, or "normal" distribution. It would in some respects be an "abnormal" situation if this were not the case.

It is possible to defend the principle whereby the level of difficulty of the teaching is adjusted to the class's ability level: education involves creating new challenges and helping people to meet them. Experiments have also shown that pupils can lose motivation if their lessons are too easy.

The tendency for teachers to award marks in a Gaussian fashion has also been confirmed experimentally, particularly by Gjorgjevski (Rot and Butas, 1979). This also conforms to reality: pupils may all be strong, but not equally so there will still be the strongest, the least strong and the averagely strong.

This would not be serious if the pupils with the lowest marks were not then labelled "inadequate" and, in many countries, required to repeat a year. This is how the stigma of failure and all the damaging consequences which go with it makes its appearance.

In her lecture, Mrs. A. Grisay will present experimental data on this phenomenon and discuss ways of combating it. We should simply add here that, where a system of fixed classes is retained it is preferable to have automatic progression from one class to the next, coupled with a diagnostic and remedial service for children with learning difficulties.

It is also difficult to understand why it is still rare for teachers to have access to objective tests which would enable them to assess their pupils in relation to others. The Swedish system of equalising marks appears to be good mode in this respect (Henrysson, 1964).

In addition, it should also be noted that assessment should not be used primarily for judging, ranking or excluding pupils, but for helping them and establishing their worth. This leads on to the subject of formative assessment [1].

1. This is defined as assessment which, in theory, takes place after each individual learning stage has been completed. The aim is to inform pupils and teachers about the progress made and to identify any learning difficulties which the pupil might have experienced, so that he can be shown, or can discover for himself, alternative ways of making progress. The term "formative assessment" was coined by *Cronbach and Scriven* (1980) and highlights the fact that assessment is above all an integral part of the normal educational process, in which "errors" are treated as specific events in the problemsolving (or, more generally, the educational) process and not as reprehensible weaknesses or forms of pathological behaviour.
   Formative assessment also makes it possible to decide whether a pupil is capable of tackling the next stage in the sequence of tasks.
   As an element of course (or curriculum) evaluation, formative assessment facilitates the identification and correction of problems as they develop.
   (G. De Landsheere, Dictionnaire de l'évaluation et de la recherche en éducation, p. 113).

1.2.5 THE IDEA OF MINIMUM COMPETENCY

In an education context, minimum competence represents the very least that a pupil must know. However, can or must this "very least" be the same for everyone? This is a thorny question. It is linked to the issue of needs assessment, which has already been considered.

To these fundamental issues relating to educational content must be added an equally tricky technical question: how can we determine, as objectively as possible, the dividing point or zone between competence and incompetence, success and failure?

V. De Landsheere (1988) has considered this issue in great detail. Firstly, she shows just how debatable are empirical decisions such as requiring a minimum 60% mark or the successful completion of two exercises out of three, or declaring a 90% success rate as the criterion for mastery of a specific learning task. In some cases, such as knowing how to land an aircraft, the required success rate could only be 100%. In other cases, such as playing the piano, it would be a very wise man who could define success in terms of a simple figure!

The number (well into double figures) of so called objective methods for determining pass marks immediately makes them suspect, especially as they nearly always produce differing, sometimes widely differing, results. This empirically observed divergence still further highlights the potential unfairness of fail marks.

Does this mean that all attempts to achieve objectivity should be abandoned? Certainly not; V. De Landsheere shows clearly which methods the teacher can use in the classroom and which seem to be the safest for broad ranging assessments and/or have the most significant consequences.

1.2.6 THE DYNAMICS OF SUCCESS

At about the same time that Piaget (1969) was condemning the psychological errors linked to the concept of "difficult subjects to understand", theories of mastery learning began to be tested and to gain currency (Block, 1970). Subsequently, Bloom (1984) successfully overcame the "2 sigma problem": even in a traditional class following a traditional curriculum, mastery learning, if properly applied, can result in most pupils achieving success rates close to those which would result from private tuition.

Even though some consider this approach to be too technocratic (a subject on which P. Perrenoud has much to say), it is surely preferable to achieve success systematically at a high standard rather than hope that a pupil will succeed independently of his real abilities, simply because he was "lucky" enough to have been put in a class, the majority of whose members were less able than him.

Success breeds success and unfortunately, the failure syndrome soon becomes established. We must now go on to consider the individual, rather than the system.

1.2.6.1 The individual psychology of success

So far, the discussion has focused on the institution or group. However, the consequences of success or failure mean that it is primarily an individual problem.

It has long been known that failure is by no means always the consequence of a lack of abilities. Mauco (1959) found that more than 50% of a sample of 1,000 pupils with educational difficulties had an IQ of between 110 and 130 and that nearly 10% had an IQ of over 130.

To understand the problem it is therefore necessary to look at the personality.

There will be particular interest in the preliminary conclusions which Professor *Wedman* (1985) will be able to draw from a three year longitudinal study which is just finishing. This deals with the personal characteristics of a sample of 400 pupils aged 14 to 16 years who have either been very successful in their studies or have failed. In his study, Professor Wedman has paid great attention to motivation.

D. McClelland (1955) attempted to measure systematically the needs which play a decisive role in motivation. His conclusions, which were expanded by Raven, particularly in the education field, are of great importance for us.

The need to achieve drives the individual to excel himself and to overcome difficulties which block his way. His reward comes less from external gratification then from personal satisfaction. Many exceptional pupils appear to belong to this category, success sometimes being more important to them than the actual content of what they learn.

Clearly, pupils who are motivated by a powerful need to achieve are more likely to succeed than others.

Raven has studied this subject in depth. He has also explored the possibility of stimulating a greater need to achieve among young people who lack it. He will have the opportunity to tell us about his activities.

They nevertheless raise an ethical problem which is rarely considered in this context. Some pupils appear to fail in school because they like to take things as they come and prefer to relax with their friends rather than strive for success. Does one really have the right to change an easy going fellow into a winner without his consent? On the other hand, some people are so obsessed with the constant need for further triumphs that they put their physical and mental health at risk. Does one have the right to set out deliberately to reduce this need? This would be a good subject of debate for the workshop.

1.2.6.2 Teacher training

The issue of pupil achievement has many aspects, only some of which have been discussed: basic psychological and sociological issues, methodological aspects of teaching and learning, the theory and practice of assessment, etc.

How might teacher training be altered in order to make teachers more effective agents of success?

1.2.6.3 Institutional arrangements

Which institutional arrangements would be most likely to promote success? For example, following the British and French examples, Belgium has just established educational priority areas (zones d'éducation prioritaires – ZEP).

Should we not also be introducing more general measures? For example, consideration might be given to the abolition of the fixed class system: either totally, by making progress completely dependent on the individual, or partially, for example in the five to eight year age group. The abolition of the system whereby pupils repeat a year might also be considered. What else?

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