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Institute of Education

Staff Seminar

REVISED SCHOOL SYSTEM by Mr Balakrishnan on 4.11.78.

In this paper I propose to highlight the major structural and organisational innovations made in our school system in recent years.

It may be wondered why IE staff members would want to examine these changes now when the systems engineers are currently studying the education system with the objectivity of the applied sciences free from the encroachment of educationists, like the conclave of cardinals in the election of the Pope.

When the Chairman of the Staff Assn professional sub-committee approached me, it occurred to me that we could look at our Education system in Singapore and examine the various aspects from different points of view; to sift the educational issues from other considerations dominating educational policy and administration. It is not suggested that we look at our school system in vacuo, that would be an exercise in futility. It is suggested that we, as a community of educationists, share our insights and experiences on matters that are of primary concern to us as teacher educators.

There has been in recent months frequent reference made to professionalism in education. Principals and teachers have been urged to show greater professionalism in their work. Professionalism would mean greater concern for and interest in and the application of sound theoretical principles in educational practice.

It is in this light that I propose firstly, to map out two major aspects of the school system and then to elicit the issues and consider the rationale of recent innovations. These two aspects are the structural changes in our school system and the organisational innovations. There are other areas of equal concern namely the instructional domain, curriculum development, and evaluation which we would want to look at, in subsequent sessions.

Primary School

In 1977 the primary school system was restructured to provide for all ability levels. This was achieved by establishing two courses, namely the standard course and the basic course. The standard course retained the former system of a six-year primary education which had to be completed in eight years and culminating in the Primary school leaving examination. Mastery learning in languages mathematics and science was the basis of promotion between levels and automatic promotion was abolished. A four-year basic course with automatic promotion was established particularly for pupils who were less academically oriented. Pupils who failed in the standard course a third time at any level from primary ~~three upwards were channelled~~ into the basic course where the curriculum was less demanding and flexible. The bifurcation of primary education into the standard course and basic course was the major structural innovation in the primary school.

With the abolition of automatic promotion, retention at the same level, and streaming by ability in or after the first year were established.

Secondary School

The primary school leaving examination, although the sole means for admission to secondary education, was not an adequate indicator of adequacy for academic education. At the 'O' level examination on the basis of past performances only some 30% obtained 5 or more 'O' level passes and around 60% 3 or more 'O' level passes. Many did not even reach secondary IV level. Wastage was substantial.

In 1979 secondary education will be bifurcated into a general stream and a vocational stream. The general stream will retain the present system and include the Arts Science technical and commercial courses from secondary III. The vocational stream will run parallel to the general stream and comprise courses offered by the ITB and the AEB.

Pupils in secondary I and II in the general stream will continue with the present system and would be channelled into one of the four courses at secondary III. But pupils who fail at any level in the general course and are overaged will be counselled and channelled into the vocational stream.

Automatic promotion will be abolished and retention or transfer from the general to the vocational stream will be established.

Just like primary education, secondary education will also be bifurcated.

Issues

That being the emerging picture of the school system I now propose to deal with some of the issues that these two innovations raise.

Some 35 percent of primary pupils are unable to cope with the standard course and it has been acknowledge that the course is more appropriate for the above average, less for the below average.

The reforms involving streaming, retention and subsequent transfer to the basic course/vocational stream appear to be directed at the lowest ability band of pupils in schools. It is intended that through these measures the minimum standards of achievement in literacy and numeracy would be achieved. Several issues arise.

Firstly, insistence on minimum standards affects mainly the below average ability pupils. There is evidence from research studies that ability streaming is not favourable to their progress and tends to depress their achievement.

Secondly, streaming affects the attitudes and personality of the pupils and these in turn affect pupils' progress.

Thirdly, streaming affects teacher expectations which have been found to have significant effects on pupils' achievement.

Fourthly, streaming also affects the friendship patterns of pupils in that streaming may deny opportunities for friendship and co-operation to develop across ability ranges.

Fifthly, streaming in separating pupils early in school life according to ability and achievement and in subsequently assigning to the basic course the 'failures of the standard course' may well undermine the national aspirations of society and the measures taken to develop a cohesive and united nation.

Sixthly, it raises a fundamental curriculum issue. The appropriateness of the programme for the pupils.

And finally, it raises the criteria for channelling pupils into the basic course/vocational stream.

A just and equal society ipso-facto implies that its citizens will be treated justly and everyone will have an equal opportunity to benefit from the facilities provided in schools. Where no discrimination is made against anyone for admission to schools on grounds of race, religion, or language it may be argued there is equality in the provision of education. However where grouping by ability is adopted it may be justified on educational grounds in that it brings about a better match between the pupils in the group and the instructional procedures. While the proposed reforms suggest remedial action for the retained pupils, they will nevertheless, at the end of the year, take the same grade examinations to qualify for promotion. They will be required to cover the same syllabuses. If they are already classified as below average ability against a course which is claimed suitable for the average and above average pupils, it would seem that teachers may have to perform miracles to bring them up to the stipulated minimum standards to qualify for promotion. Differentiation can easily be justified if:

- (1) the syllabus is appropriate for the retained pupils,
- (2) the pace of instruction is modified to enable pupils to cope with the work, and
- (3) appropriate methods and suitable instructional materials are provided for them.

In the absence of any or several of these measures, they cannot but perform even more poorly than in mixed ability groups. The most favourable circumstances would appear to be mixed ability groups under the charge of teachers sympathetically disposed to such pupils . It may be argued that equality is denied to these pupils in that the standard course does not take them into account.

Under the proposed reforms, pupils who do not make the grade after three attempts in the standard course will be channelled to the basic course. In their early childhood pupils run the risk of being separated because of their inability to cope with a standard primary course and alienated into a basic course, where they will be engaged in home-economics or craftwork or workshop practice and basic literacy and numeracy programmes. This would seem to imply that pupils who are channelled into the basic course would only be suitable to become cooks and carpenters and those who thrive on academic work would go on to secondary and tertiary education and thereafter into the middle class occupations. It would seem that the system may well lead to the strengthening of stratification of society and worse still, this would begin at the middle of primary schooling - the only level of the school system open to the entire nation's children without restriction. It follows that such a system might well undermine the national aspirations for a cohesive unified nation and lead to a divided nation. The recent changes and all the other major innovations and measures that had been adopted to realise the national aspirations could well result in contradictions in the educational enterprise rendering it dysfunctional. That having been said, it must be stated that the basic objectives of recent changes are not only meritorious, they are long overdue.

Certain minimum standards of literacy and numeracy must be achieved after eight long years. That to my mind is beyond question.

If indeed the bifurcation of the primary course into the standard and the basic course coupled with streaming works in the short run in realising the basic objectives, it may well be difficult to assess with some accuracy, the impact on political stability ultimately. Speculation may be dangerous but awareness of probable consequences might help us to steer clear of potential hazards.

Pupils and teachers would attempt to attain the basic objectives of literacy and numeracy and, initially perhaps comparatively fewer pupils will be channelled to the basic course. It may well happen that a generous interpretation of the minimum standards would help to keep the majority of pupils in the standard course. But when the primary school pupils enter post primary institutions, academic or vocational and later national service, their proficiency in language and numeracy will be put to the test. If there is significant improvement and one of the official language becomes an effective means of communication for nearly all citizens, the reforms would have been justified.

However the bifurcation of primary education would create in the middle of primary schooling a division of the pupils into the able and not-so-able groups. The danger is that, it may persist with all the attendant effects on personality and social development. The standard course pupils may be regarded as brighter, superior and more capable and the basic course pupils as less capable, lazy and 'ineducable'. A 'school class' stratification may emerge with a substantial number of frustrated disappointed and discontented citizens. Where the peace and prosperity of the nation depends on the happiness and contentment of all its citizens such divisive trends, which may run parallel to the 'haves and have-nots' in society, may well affect stability in the long run.

Streaming and achievement

The research studies do not provide conclusive evidence one way or the other on grouping. There seems to be no differences in average attainments among the three groups of pupils - the above average, the average and the below average - in streamed and non-streamed schools. In streamed schools, however, the above average pupils achieve better scores and the below average pupils achieve lower scores in comparison to the non-streamed schools. The distance in terms of achievement widens significantly. This has been described as 'the rich getting richer and the poor getting poorer' phenomenon.

It follows that the above-average pupils do not perform to their optimum levels in non-streamed schools and streaming then would be most favourable for them to maximise achievement. On the other hand the below average pupils seem to benefit by the presence of the above average pupils and streaming would seem to deny them this opportunity to improve their performance. Where the objectives of the reform are the attainment of basic literacy in at least one language and numeracy, as in this case, for the reasons advanced, non-streaming would appear to be most favourable generally.

It has been noted that primary education is the only level at which all the pupils are brought together, and it is here that pupils can appreciate their similarities and tolerate their differences and learn to co-operate as well as compete. But streaming by ability would seem to deprive the pupils of an opportunity for community living within the classroom. And channelling pupils into the standard and basic course would further affect the situation. It is noted, however that pupils will still have the opportunity for community living outside the classroom in school activities. But the nature of relationships will certainly be different.

The above average pupils will after completing primary education go on to secondary and tertiary education where they will have ample opportunities to develop their cognitive faculties to the maximum. Non-streaming in the primary school will then not deprive them completely of developing their talents to the fullest; while streaming will deprive the below average pupils of working with the above average pupils and benefitting from their presence and co-operation.

Streaming also affects personality and social development. Pupils of average ability may resent their grouping and the below average would be adversely affected. Teacher-expectations and the 'halo effect' then may well affect their performance adversely. Streaming without the categorisation of failure is one thing but channelling pupils into another course - basic or vocational - after failure can hardly engender favourable

attitudes towards school and school work. It also deprives pupils the opportunity to choose friends across a wide ability range. A heterogeneous grouping on the other hand would promote greater cohesion and develop mutual cooperation.

In relation to the standard course it has been suggested that 'those who are not academically inclined are presently plodding along a curriculum for the average and above average'.

This raises a basic curriculum issue. Any curriculum that is designed should take into account the pupils for whom it is planned. It would seem that the standard curriculum, by design has excluded a good proportion of the primary school pupils. If the PSLE results are accepted as a measure for consideration, some thirty-five percent of pupils are not provided for in the standard course.

A first level education can be expected to provide for all ability levels. When it does not the below-average learners cannot but fail in a course that is beyond them. Truly the course would have failed such pupils rather than the pupils failing in the course. Retention in the circumstance becomes an exercise in futility.

The need for the curriculum to be related to the wide ability range of pupils at the first level cannot be over-emphasized.

It is recognised that pupils differ in their abilities aptitudes and interests. A school system that is relevant to the pupils it serves would reflect this in the programme it offers and provide for the heterogenous mix of pupils. From this point of view the diversification of courses at primary and secondary level would be welcome. But the basis of channelling seems to be making a mockery of enlightened educational practice. Pupils will have to fail three times in the primary school to

qualify for the basic course and junior training scheme. Or having reached secondary school they will have to disqualify themselves from the general course by failing at one level or another before being counselled and channelled to the vocational course in a vocational institute.

I need hardly elaborate on the implications of this restructure for the pupils themselves. But a re-think to marry the academic excellence of our schools and the varied programmes on the one hand and the wide ability/aptitude range of our pupils is imperative both for the individual and our national development. And the systems engineers may well be dwelling on these issues.

Finally, I would like to highlight the role of the curriculum and the teacher in pupil progress.

- The curriculum

Curriculum planning and development to be practical relevant and meaningful would clearly require that it be predicated on educational objectives, learning theories, and the abilities of learners.

Primary education which is increasingly being made available to all pupils in Singapore between the ages of six and fourteen, it is suggested, should be made relevant to the pupils. The pupils in an elite system may well be homogeneous in ability and social background. But in mass-based primary schools the pupils, necessarily are drawn from a heterogeneous ability range and varied social backgrounds. It might be expected that the curriculum would reflect the heterogeneous character of the pupils. A curriculum that does not reach all these pupils, clearly is inadequate. A curriculum that caters for the average and the above average and ignores the below average is narrowly conceived at best and misconceived at worst. Bearing in mind that primary education is the initial introduction to formal education for all pupils it would be difficult to justify the standard curriculum in Singapore as at present constructed.

It does not seem to make sense of educational aims, to impose a curriculum in the primary school (standard course) beyond the capacity of a substantial proportion of the pupils from the very first grade. On the basis of past performances at the primary school leaving examination, around thirty-five percent of the pupils would be failing at one grade or another in the standard course.

Automatic promotion in the past muted the impact of failure and postponed the selection of pupils on a purely academic basis until they reached the age of 11 or 14. Remediation was advocated, but the rigidly graded curriculum did not permit teachers to provide for slow learners. As a result the system failed the pupils at the end of their primary school career and the pupils who emerged as drop-outs and push-outs were illiterate or at best semi-literate in only one language.

The recent proposals which reflect a serious concern for education in general and the educational enterprise in terms of literacy and numeracy in particular, are both an opportunity and a challenge for those professionally-concerned with education to suggest modifications if necessary to realise effectively and efficiently the educational objectives and Singapore's national aspirations. Towards this end, curriculum developers have a significant role in the development of a curriculum that is appropriate for all ability levels with enrichment programmes for the gifted and remedial measures for the others.

The need to bifurcate the curriculum at the primary level into a standard and a basic course may be re-examined. It may be desirable to stress literacy and numeracy in the lower primary exclusively for all pupils and to continue with such programmes for the low ability to enable them to acquire the basic skills in literacy and numeracy and to provide a differentiated curriculum in the upper primary classes for the above average and average pupils who will proceed to secondary schools.

The bifunction of secondary education into the general stream and the vocational stream is not without merit. The provision of differentiated courses on the basis of pupil ability and aptitude is a legitimate strategy in developing the potential of our citizens. But as was pointed out earlier channelling into the vocational stream at Sec I, II or III levels is dependent on failing in the general stream. On the one hand there is so much reference to professionalism these days and on the other hand one wonders how sound educationally is the basis of channelling to the vocational stream.

The relevance and the suitability of the curriculum for pupils at secondary level is another problem. Unfortunately the Revised Secondary education system does not deal with this directly.

The role of teachers

Research studies in the last two decades have not conclusively established the relationship between pupil progress and the type of intra-school grouping. But there is overwhelming evidence to suggest the importance of the role of teachers in enhancing or depressing pupil progress regardless of the type of organization.

It was seen in a NFER study in England that in the non-streamed school the teacher who was sympathetically disposed to the slow learners and was committed to the values of 'progressive' education made significant impact on the pupils. The 'self-fulfilling prophecy' also placed great emphasis on teacher expectation and pupil progress.

It is significant therefore to orientate teachers to share the view that every child is potentially capable of being educated; it is what they do with the children and how they act about their tasks which are singularly important for the pupils; how they mediate the curriculum and utilise the organizational arrangements; and how they deploy the curriculum resources; these are the factors that will crucially affect pupils' progress.

Where there are organizational differences, teachers may be suitably deployed to match their values to the systems of grouping. Above all, teachers must realise, and those who have responsibility for education must by their support show, that learning is primarily a personal matter for the pupils. It is what pupils make out of the experiences provided in schools that ultimately matters. It may not be inappropriate to conclude this paper with a quotation from Noel Entwistle, Professor of Educational Research in the University of Lancaster.

How can we arrange teaching in primary schools with sufficient structure for the anxious, with enough pressure, competition and stimulation for the brightest, and with encouragement and remedial support for the weaker pupils, so as to make learning an enjoyable and rewarding experience to all of them. Neither simplistic slogans nor patent "cure alls" are likely to provide answers. Sensitive interpretation of research findings provides a sound basis from which imaginative and dedicated teachers can help pupils of all personality types learn more effectively irrespective of the organizational arrangements adopted in their schools.