

TEACHERS' COMMENTS ON THE FORM 2 MATHEMATICS SYLLABI

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Introduction

My personal teaching experience suggests that at secondary level the mathematics syllabi are generally overloaded to such an extent that they are hardly ever adequately covered. Consequently, teaching is dominated by the notion of covering as much of the syllabus as possible, even if superficially, in time for the all important exams. The NMC approach certainly requires well-designed syllabi (see *Cockcroft Report*, 1982, paragraphs 449-451) which permit the individual students to work at their own pace on topics which they can understand - a far cry from what I suspect we presently have in Malta.

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This paper sets out to examine whether the limiting effects of the syllabi as experienced by the present writer are more generally felt. In particular, a group of form 2 mathematics teachers from different schools were invited to share their views on the subject.

Methodology

Between the 12th and the 14th July 1995 an in-service course was organised by the Education Division for teachers of mathematics in the state and private sectors currently teaching at form 2 level⁽¹⁾. The course was attended by 25 participants. At the end of one of the sessions the teachers were asked to fill in a questionnaire based on a 3 or 5 point Likert-Scale. Participating teachers were guaranteed both anonymity and confidentiality. One of the participants chose not to respond. Of the 24 respondents, 8 taught in junior lyceums [JL], 12 in area secondaries [AS] and the remaining 4 in either church or private schools (hereafter referred to as private schools [CP]). Present writeup offers only partial analyses of the collected data limited to teachers' comments on the syllabus according to the type of school.

Results

When viewing teachers' comments on the coverage of the syllabus, it is interesting to note that 88% of all the teachers report that it is either difficult or very difficult to finish the syllabus in time. None of the 24 respondents finds the full coverage of the syllabus easy or very easy to

achieve. 88% of the junior lyceum teachers and 83% of the area secondary teachers report difficulty to various degrees in finishing the syllabus. All private schools teachers (100% in the difficult range) are experiencing problems as regards the coverage of their respective syllabi.

Teachers were also asked to express their opinion regarding the effect of the syllabus on students' mathematical understanding (see table 3). 71% of the teachers report that students' mathematical understanding suffers due to the prescribed syllabi. All private schools teachers and three-fourths of junior lyceum teachers are of the opinion that students' understanding is suffering because of the syllabus. Area secondary teachers seem a bit less pessimistic: while 58% claim that students' understanding is suffering, one-third of these teachers are of the opinion that the effect is negligible.

Present data suggest that the vast majority of teachers consider that the present syllabi ought to be revised. The overall percentage in favour of such a revision is 75%. While some (25%) think that a revision of the syllabi may be due, none of the teachers are of the opinion that there is no need. It should be noted that it is the junior lyceum teachers (100%) who are the most in favour of a revision. Corresponding figures for private schools and area secondary teachers demanding a revision are respectively 75% and 58%.

75% of the teachers report that they find the teaching of their syllabus either quite or very stressful. Apparently, it is the junior lyceum teachers who are the most stressed in this regard. As much as 75% of these teachers report very stressful experiences. The bulk of the other groups of teachers are in other categories. For instance, 75% of the private schools teachers and 42% of the area secondary teachers sustain that they find it quite stressful to teach their syllabus. Another 42% of the area secondary teachers only mention average stress.

Given the right to choose only 13% of the teachers involved would prefer not to teach at form two level. While 54% of the teachers would like to keep the same form, the remaining 33% are undecided what to do. It is interesting to note that all those who prefer not to teach any further at form 2 level are junior lyceum teachers. Private schools and area secondary teachers are apparently more willing to keep the form. The percentage of teachers willing to teach again at form 2 level is 75% for both private schools teachers and for area secondary teachers.

Discussion

All the results in the previous section and the comments hereunder are to be taken with utmost caution. Not only is the sample not random and representative,

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but the items of the questionnaire are by no means exhaustive enough of the topic at hand⁽²⁾. Again, the analysis undertaken is very limited. It is advised that the reader takes this paper for what it is worth: namely, an indicative piece of research which definitely calls for future more vigorous investigation. In spite of all these limitations the present study still has its own merits. For instance, the sample size (referring here only to state schools) is more than adequate as the state schools teachers in this questionnaire represent the bulk of the state schools teachers teaching at this level⁽³⁾.

It is evident that teachers at form 2 level are experiencing great problems when it comes to the coverage of the syllabus. Present findings suggest that this problem is shared by all irrespective of the type of school in which one teaches. Again, most teachers think that the syllabus is negatively affecting their teaching, something which is felt mostly by junior lyceum teachers. Although the majority of the teachers express fears that students' mathematical understanding may be suffering because of the syllabus, teachers in area secondaries are less pessimistic on this point. Teachers' responses also suggest a desire on their part to see a revision of the current syllabi. While, junior lyceum teachers are very determined on this point, the minds of the area secondary ones are less made up. Stress caused by the syllabus is another problem which form 2 teachers have to live with. While the majority of teachers, irrespective of the type of school, report stress, it is the junior lyceum teachers who are apparently the most vulnerable in this area. However, in spite of the above findings, the vast majority, given the chance to choose their classes, would still not rule out teaching at form 2 level again.

The results in this paper suggest general trends which are worth discussing further. For instance, junior lyceum teachers emerge from present findings as the most negatively affected by the syllabus. They are the most dissatisfied with their teaching methods, very much aware that students' understanding is suffering, the most in favour of changes in the syllabus, the most under stress and the least willing to keep teaching at the same level. On the other hand, present data show area secondary teachers in a more positive light. Their responses suggest that they are the least negative group of teachers regarding the effects of the syllabus on their teaching methods and on students' understanding. And although their majority are in favour of changes in the syllabus, a substantial number of them are undecided on this issue. Not only do they emerge as the least stressed but they are also the most willing to keep teaching this form. It is very hard to comment on the private schools teachers given their small number. However, one may hazard to comment that present data appears to suggest

that private schools teachers usually lie somewhere in between the two positions taken by the other groups.

Conclusion

Although teachers' perceptions of the syllabi seem to vary according to the type of school, the overall picture is rather unacceptable. Teachers' responses are generally negative and one can generally say that positive responses are conspicuous by their absence. This paper undoubtedly suggests that the limiting effects of the syllabi as experienced by the present writer are also being felt by other teachers, namely Form 2 mathematics teachers, across the whole spectrum of schools. The present study, inconclusive as it is, does sound a warning. Teachers, even if informed and willing, are basically not in a position to translate the NMC's recommendation into sound classroom practice due to the severe limitations imposed by the syllabi. However, further investigation is recommended. Should future more scientific investigation replicate the present findings, positive action, along the lines suggested by the *Cockcroft Report* (1982), ought to be taken immediately in order to improve on the current syllabi. On a more immediate level, I feel that educators entrusted with the announced revision of the NMC stand to gain by keeping in mind the present teachers' comments.

Notes

- (1) The in-service course was held according to the agreement between the Education Division and the Malta Union of Teachers (see Agreement 1994).
- (2) For instance, it would have been interesting to ask the teachers if the syllabus matches the ability of their students, or whether or not it is a balanced syllabus.
- (3) Information provided by the education department.

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