The 1943 programs for elementary schools: mathematics

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Abstract In 1943, immediately after the Allied landing in Sicily, the Allied Military Government deemed it necessary to modify the programs of Italian schools, starting with elementary schools, which were in their opinion too heavily influenced by Fascist ideology. To this end the Allies constituted a commission coordinated by the American pedagogist Carleton Washburne, who thought it opportune to introduce in Italy the latest pedagogical theories derived from American schools. He entrusted the drafting of the programs to a group of teachers led by the Italian pedagogist Gino Ferretti, who worked with methodological and didactical issues. The programs were quickly sent to the schools in the territories that were already liberated, but immediately withdrawn at the request of Catholic authorities, who did not appreciate what Ferretti had written: in his ‘Preliminary Note’, he maintained that it was necessary to eliminate the teaching of religion from Italian schools. In spite of this, the pedagogical structure proposed by Ferretti appears to be valid, describing a school imprinted with activism and pragmatism. Of particular interest are his instructions regarding mathematics teaching, which are discussed in detail in this present article.

Keywords Post-Fascist school reform · Mathematics teaching · Carleton Washburne · Gino Ferretti · Pedagogy · Didactics

1 Historical peculiarities

Most people interested in the history of Italian education are aware that in 1944 new curricula for primary school appeared; they were drawn up by a board established by the Allied government. Adopted by the Ministry of Education and partially modified in contents, they were issued with the *Decreto Luogotenenziale* N° 459 on 24 May 1945. Formally, they were issued by a “Lieutenant” (*luogotenente*) since at the time Italy was still under the rule of the House of Savoy, with Prince Umberto as Lieutenant General of the Realm. The curricula became effective in school year 1945/46 and were substituted in 1955. In 1945, the curricula for junior secondary schools, for *licei* (humanities- and science-oriented secondary schools) and for *istituti magistrali* (teacher training schools) were also drawn up, again prompted by the Allied government collaborating with the Ministry of Education. For this reason, they are known as “Allied government curricula” and, unlike those for primary schools, they were not issued by a regular decree, but just by a communication to schools (C.M. n. 155, 2 January 1945) under the title *Piani di studio*. The curriculum for junior secondary school would be substituted in 1973. Those for *istituti magistrali* and *licei* even later: the former was kept until 1997, when this kind of secondary school was cancelled; the latter were in place for 65 years, until as late as 2010, when in other countries the teaching of mathematics had undergone major changes [2]. Their longevity makes them especially important.

It is less known that curricula for primary schools were drawn up and sent to schools in 1943 as well, this time too on the initiative of Allied government.

On 10 July 1943, British and American troops landed on the shores of Sicily; on 25 July Fascism was overthrown; and on 8 September an armistice was signed between the

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Allies and the Italian temporary government led by General Pietro Badoglio. Italy found itself divided into two distinct entities, at war with each other: in Southern Italy, the monarchy still ruled (King Victor Emanuel III had taken refuge in Brindisi, after having fled to Pescara), under the control of the Allied Military Government of Occupied Territory (AMGOT), while in Northern Italy Mussolini created the *Repubblica Sociale Italiana*. The Allies, after freeing Sicily, went on occupying Italy, starting from Calabria and arriving later to Naples (1 October 1943) and Rome (4 June 1944).

Soon after the liberation of Sicily, the Allied government deemed it necessary to restore as soon as possible public order and a normal way of life. Regularly operating schools would contribute to this: ‘The children off the streets, the parents confident since their children were guaranteed an education’ [3]. It was also necessary, in the opinion of the US and the Allied government, to quickly start a process of democratisation for Italy, beginning with education as given in schools. To this end, the Allies formed a committee and several subcommittees, including one for education, to be led by the American educationalist Carleton Washburne, a pupil of Dewey, mainly known for creating schools in Winnetka, Illinois, where he had been appointed superintendent of schools when just 30 years old.

The Allied committee deemed it necessary to revise textbooks and curricula, starting with primary schools, those most influenced by the Fascist regime: Mussolini, in the Allies’ opinion, had done his best to turn the Italian education system into ‘a machine to produce Fascists. The education system we found in Italy looked very much like the ruins of Rome’ [2: pp. 370–371]. Since the Allies meant for the reform to come into force immediately, and the beginning of school year 1943/44 was drawing near, the first phase consisted in a simple purge of all references to the fallen regime in textbooks. As Washburne wrote:

Since there was no time to draft a whole series of new textbooks, my aide (a teacher of English in secondary schools) took the Fascist texts and deleted every word, sentence and content of propaganda; then my teachers were instructed to substitute new arithmetic problems, grammar exercises, reading matter, and so on for the deleted ones.

Later, curricula themselves were revised. Washburne’s goal was to spread the American kind of new theories and organisation that had been used so successfully in the USA. The fundamental pedagogical points stipulated that all pupils should:

- be enabled to give their best, according to their qualities;

- have their basic needs satisfied (physical, mental and emotional health);
- learn to read and write;
- reach a good knowledge of spoken language, history, geography and basic science;
- learn to identify their personal well-being with that of their families, the State, the school, and the world.

2 Drawing up the curricula

The curricula were drawn up by a group of competent Sicilian schoolteachers and by the educationalist Giuseppe Luigi (Gino) Ferretti, professor at the University of Palermo, charged by Washburne with drafting guidelines for modernising the Italian educational system.

The text is divided into two parts. The first one, written by the schoolteachers, consists of the actual curricula, while the second one, entitled *Avvertenze* (‘Remarks’), was written by Ferretti:

This second part of the curriculum, written by a distinguished educationalist of an Italian university, aims to direct teaching towards a more modern understanding of culture, nearer to international democratic trends. The teachers who feel ready for this may gradually experiment with this new method.

There is an American-feeling cast of mind, aspiring to a way of teaching that discards an authoritarian approach in favour of a free spirit and more active methods. The section written by Gino Ferretti is very interesting for its recommendations about teaching methodology. The contents of the curricula, even though hastily assembled due to the scarcity of time, are commendable as well, and mostly consistent with Ferretti’s recommendations. Many parts of them would not show up badly in present-day curricula.

Printed by Allied government, the curricula were sent to the schools in the regions of Italy then liberated, in two parts titled ‘Programmi di studio ed indicazioni didattiche per le scuole elementari per l’anno scolastico 1943–44’ (‘Curricula and didactic guidelines for primary schools for school year 1943–44’) and ‘Consigli per la modernizzazione della scuola elementare’ (‘Suggestions for the modernisation of primary schools’) [1].

The text did not meet with the Catholic Church’s approval, mostly because, in the part written by Gino Ferretti, the teaching of religion in schools was advised against. This led authorities of the Church to invite the Allied government to withdraw the curricula. On the cover of one of the surviving copies we can find this handwritten note, possibly by Ferretti himself: ‘This booklet was printed and distributed by the Allies to all schoolteachers in

Sicily, and then returned and destroyed at the request of the cardinal archbishop of Palermo’.

What is actually written in the foreword by Ferretti is:

In our proposal we give a great weight to suggestions for teaching moral. It did not receive any attention in the fascist curricula, which presumed it to be attended to by the paramilitary institution of the *Gioventù Italiana del Littorio* and to the teaching of religion. In our proposal we have omitted rules for both military and religious education. Religion should not be a subject for grades or exams. It should be only entrusted to those teachers, if any, who are and declare themselves to be morally inclined to take care of it.

On another copy there is a handwritten proposal for a different version of the last sentence, as follows: ‘Religion should not be a subject to be taught, with grades or exams. It should be only entrusted, with no connection to school, to the Church and those who are interested in it’.

But in fact, this recommendation is not at all followed in the actual curricula (the first part of the booklet) drawn up by the teachers appointed by the Allies, where religious instruction is indeed present, with an hour and a half in each of the first 2 years and 2 h in each of the last three. In the ‘General remarks’ the teachers say:

Let the teaching of religion conform, from the first to the last year, to the spirit that moves the religious works by Alessandro Manzoni. Let the families be assured that the religious education is not intended to coerce consciences, but to free and raise them. Our religion springs from a freshness of both feeling and careful reassessment.

In the “Clarifications about timetables”, they go on as follows:

Religion, considered by law as the foundation and the completion of primary studies, finds its space in several subjects, since it necessarily permeates them with its spirit. The curriculum for singing prescribes religious songs; that for Italian frequently offers opportunities to remember and praise the heroes of the faith; that for recreational intellectual activities includes religious motifs among the elements to be used in the teacher’s tales; and we do not need to stress the large part of history reserved to people and events that are important for the religious culture. For this reason there are not many hours especially devoted to religion and they are to be devoted to meditating on the topics given in the specific curriculum, which serve as a focus for all elements of religious culture scattered throughout other subjects.

Specific guidelines for each class are then given.

Even though Washburne had intended the curricula to be temporary (they were in fact entitled ‘Didactic guidelines for school year 1943–44’) and only weakly prescriptive (being presented as ‘recommended to the teachers who wish to adopt it’), hence not mandatory, they were withdrawn from the schools they were sent to.

This is probably the reason why the text can be found in few libraries, and sometimes with one of its two parts missing. In the library of the Ministry of Education itself, it is nowhere to be found. The handwritten notes appearing in several copies suggest that they belonged to private individuals and were subsequently donated to, or somehow acquired by, the libraries. In 1944, in Naples, which had been liberated in the meantime, the Allied government formed a new committee, again led by Washburne, but without Ferretti and with the addition of a monsignor. As Washburne would write:

The first of these [curricula], drafted for Sicily, was for primary schools. The Church objected to it, since the main author was a known anticlerical (he was the only person I could find in Sicily who was acquainted with modern pedagogy) and he had apparently inserted subtle attacks against the Church, too subtle for me to recognize them. So in Naples I had a Monsignor in the committee, and he ensured that the other members did not include anything that could offend the Church.

3 The methodological remarks about mathematics by Gino Ferretti

At the beginning of his text, Gino Ferretti explicitly expresses his position:

Starting this year, with Liberated Italy, we are going to substitute the school of the blind, Fascist [motto]—believe, obey, fight—with a school based on a free development of children’s natural inclinations and strengths, for the cultivation of their intelligent judgment, their personal initiative and industry, their desire for dignity as human beings and for responsibility towards and solidarity with everybody.

The pedagogic structure proposed by Ferretti, which characterises the entire text, is informed by action and pragmatism. Play and work are largely mentioned as instruments to

lead children to develop an increasingly precise and efficient awareness of the world and expression of themselves, through a systematic programme of

games bound to turn, in each case, into work and willing and joyful practice of several cultural activities, clearly guiding them to a realisation of their own ways to improvement.

In Ferretti's opinion, school classes should become small societies in which the children are directed towards a kind of self-government and mutual collaboration. The shortage of suitable textbooks is seen as an incentive for young students to write them themselves: their experiences will take the place of the usual purely factual teaching. 'Doing' should become an occasion to 'research, observe, experiment, work things out in an imaginative and thoughtful way, with a view to grow up by reconquering what was already conquered by grown-ups'.

In his remarks a special attention is shown to science and technology, seen not as instruments for a theoretical, intellectual education, but as a means to attain improvement in social life.

Ferretti next gives some suggestions about single forms. The references to mathematics given in the guidelines for first form are:

We advise against spending time in carrying out separately the teaching of art ..., of singing ..., of drawing ..., of numbers and arithmetic, when the children's experience and the desire to make progress are not able to follow it. ...

And, later on,

the demands of elementary agriculture ..., the knowledge of concrete things and processes ... will require a general setting, including geometric land measurements and basic measures and precise calculations of the yield of seeds and of the quantity to be prepared for new crops Children can be induced to invent other numberings and computations and measurements, by establishing a correspondence between the objects to be studied, first with the fingers of both hands, initially closed and then successively extended in some order, next using peas or hazelnuts, and by dividing areas into equal squares in order to measure them. And then they can enumerate the drawn squares, or their subregions, by drawing hazelnuts in them. So the children will discover the square-lattice arrangement of circles, the easiest way to divide an area into squares and to picture and to grasp numbers at a glance; so they will master numbers not just verbally but actually, that is, in a true, deep mathematical sense, and be able to perform the earliest operations on these numbers, as far as it is possible to do so at a single glance, that is, successively, up to 8, 16, 20. And, for reasons that we shall see in the curriculum for second form too, it is

advisable not to move on to writing numbers in Arabic numerals in the first form.

The suggestions refer to rural life, since, as is well known, at the time Italian society was still mostly agrarian and only industrialised to a small extent.

In his guidelines for second form, Ferretti writes:

Thanks to the broadening of the experiences and collaboration now possible, they shall move from the convention of a division into two patriarchal families as in the first form, to a division into tribes of families and so to the first exchanges and the establishing of temporary markets to promote (with the help of the scales, of the weights and the devising of measures such as the palm, the arm, the foot, and the earliest measures of capacity) arithmetic and geometry. To perform computations the square arrangements of tokens will not suffice anymore. We shall deal with larger quantities of objects, with tens and units, with one hundred of them, or perhaps two or three So we might introduce the idea of computing with tokens with different colours and values according to a serial progression in space, corresponding to the progression of counting in time; so, the leftmost token will denote hundreds, the second one tens, and the rightmost units. At times, we shall observe, for instance, hundreds and units, with no tens; then the place of tens can be marked by a white token So we set up the passage to decimal notation for numbers, where the place of the empty-place token will be taken by the zero digit. But computing with square arrangements may still give rise, in a suitable size (for instance of 20 units per side), to the construction of tables to make it easier to add, multiply and divide.

In the guidelines for third, fourth, and fifth forms, games, experiments and other activities as teaching instruments are again discussed:

The first two forms followed the themes of the passage from a case-by-case exploitation of nature to an active use of nature in its generating power, of animals in their physical strength, to obtain an output regulated according to human need, and to early manufacture to obtain artificial products. In the third form another general theme may follow, in which school representation prepares children for life, that kind of concrete representation lived in children's play, whose very spontaneous motion is bound to turn to work, in an organic development. A representation that can be strengthened in school with imaginative moments offering problems and possible approaches and processes, sometimes pretending they are real, with the help of more or less symbolic substitutions,

and with instances both of practice that can be fully performed by children and of observation (possibly with some active participation on their part) of actual actions performed by grown-ups, corresponding to goals requested by their own imaginative invention, as they unwind the thread of human culture as if it were their own.

4 Timetables and curricula for mathematics

The subjects were, besides religion: singing–drawing–calligraphy–acting; reading–writing–exercises in Italian; spelling; arithmetic–geometric drawing–accounting; various notions and recreational intellectual activities: gardening–housework–home maintenance; physical education and games; natural and physical sciences–general hygiene; history and geography, notions of law and economics.

The timetable for mathematics consisted of 4 h in the first three forms and 3 h in the last two. The subject, even though it included basics about geometry, was always called simply ‘Arithmetic’. Then again, school was supposed to teach ‘reading, writing and arithmetic’.

In the “General remarks” written by the teachers who authored the curricula, just as in the guidelines by Ferretti, it is recommended that arithmetic is taught with a practical approach and a sense of actual closeness to everyday problems, and in particular to life as the pupil experiences it. The teaching of arithmetic in primary school was supposed to provide a general orientation, made of intuition and techniques, especially for those pupils who would not pursue this subject in later studies. The teachers suggest a very gradual approach to introducing numbers and operations: up to 20 in the first form and, should the level of the class allow so, up to 50, but not compulsorily:

Very slowly, by degrees, confidence and fluency in the four operations with whole numbers from 1 to 20 should be reached. The teaching will follow this progression: from 1 to 5; from 5 to 10; from 10 to 15; from 15 to 20. The child will get to know the numbers and to use them in spoken and written exercises, at first with the help of objects and small geometric aids, until he has acquired a sufficient confidence when performing the four operations in the different number ranges to get rid of the need for an aid. When performing multiplications and divisions, use only single-digit multipliers and divisors. If the pupils’ ability is sufficient, the numbering can be extended up to 50, without extending compulsorily the operations as well.

An analogous gradualness is advised for the later forms: up to 100 in the second form, up to 1,000 in the third one, where decimal numbers are introduced too, up to a million in the fourth one; finally, up to a billion in the last form. The same gradualness is suggested as regards operations. The knowledge and use of the multiplication table is obviously expected, and in the last form of simple book-keeping too. Units of length and capacity, gross and net weight (and, gradually, the metric system), a knowledge of money, the notions of profit, loss and apportionment, directly proportional quantities and the rule of three are introduced. Forming a habit for mental calculation is recommended. As for geometry, quadrilaterals, polygons (the most familiar ones), the circle and the areas of those shapes, as well as the volume of the cube and of the cuboid are introduced. It is suggested that alongside all the topics practical applications are given, taken from situations familiar to the schoolchildren.

On the whole the curricula appear to be well structured, since they intend to give the pupils instruments that are useful in everyday life, once out of school. It is necessary to keep in mind that, at that time, not many continued their studies beyond primary school. In fact, not many concluded even primary school and the illiteracy rate was still very high. However, the curricula appear sufficiently well thought out to provide a good basic preparation for those who would go on with their studies too.

Naturally enough, the curricula are outdated in several respects: nowadays, numbers and operations are introduced more quickly. But many commendable and still relevant points are made, such as encouraging mental arithmetic, which is quite useful for mastering the properties of operations and, in practice, to be able to perform calculations when pen and paper (or, today, a calculator) are not at hand. References to mental calculations, which are given in 1943 curriculum, are missing in some of later curricula. But in the present century’s curricula they are clearly mentioned: in those of 2001 (never put into force) by minister Luigi Berlinguer (‘Calculations: mental, with pen and paper, with a calculator’); in those of 2004 by minister Letizia Moratti (‘Give procedures and strategies for mental calculations by using the operations’ properties’); in those of 2007 by minister Giuseppe Fioroni (‘Perform with confidence the four operations, assessing the opportunity of mental calculations, using pen and paper or a calculator according to the situation’); and in the recent 2012 curricula by minister Francesco Profumo (‘The pupil will confidently deal with written and mental calculations with natural numbers and be able to assess the opportunity of resorting to a calculator’). The reference to ‘real world’ situations, or rather of the world as the pupil concretely knows it, as a starting point for the understanding of mathematics, is also very interesting and relevant: it is an

approach that Ferretti expressed more than once, and one that has been strongly reasserted in all recent curricula.

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21 years, of the UMI-CIIM (the permanent committee of Italian Mathematical Union). She taught in SSIS (graduate courses for secondary schoolteachers) for Lazio and published several scientific and educational papers.

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