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Education, Schooling and the Global
Universalization of Nationalism

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The first decades after World War II were characterized by an earnest optimism about planning progress and by a fundamental belief in the potential for social and cultural improvement through technical innovation in general and education in particular (see e.g. Vogt, 1967a, p. 70). This conviction became manifest in the development of tremendous energy sources (e.g. nuclear power) serving both large industries and the armed forces, in numerous technical aids to facilitate daily (house) work, in automation processes of industrial activities and in family planning devices such as the contraceptive pill. This attitude did not stop at education; quite the contrary (Rudolph, 2002; Tröhler, 2013a; Rohstock, 2014). One example was the field of learning technologies, which – along the lines of technical innovations and the associated rationalization processes – claimed to make the transfer of knowledge easier and faster and – above all – more efficient and secure.¹ In the field of pedagogy, it is undoubtedly programmed instruction which represents the model of this ideology of development (Horlacher, 2015), and which is connected with teaching and learning machines (Hof, 2018; Deplazes, 2020) and the language laboratory (Bosche & Geiss, 2011). In addition, the introduction of new math (Phillips, 2015), the fundamental discussion about the use of educational technologies and the media in schools and their effects on pedagogy, educational sciences and research are to be located in this context (Nicholson, 2007; Kurig, 2015; García del Dujo & Martín-Lucas, 2020; Hof, 2020).

Spurred in no small part by the hope of keeping the costs of education under control, as they had risen steadily due to increasing numbers of students (Vogt, 1967a, p. 155), all these innovations were not limited to a specific, nationally framed context, but understood themselves explicitly as global phenomena. Some, like especially programmed instruction, had been developed initially in or advocated by Cold War-US and discussed, exchanged and implemented across national borders and even across the Iron Curtain (Boretska, 2019). This worldwide discussion, however, was not an expression of a dogma like the Habermasian “domination-free discourse,” but must be seen in its geopolitical entanglements. This is all the more true for the politically heated climate of the 1960s, when development and progress were always a question of the respective political power constellations, although not all curriculum and school reforms undertaken in the 1960s and 1970s can be subscribed to this particular discourse (Openshaw &

Walshaw, 2019, p. 6). Thus, this chapter deals with the “national dimensions” of the various learning technologies and pedagogical innovations which were designed to be globally valid and independent of culture, as they were based on psychological and thus “natural” principles (Skinner, 1961), on the logic of mathematics (Bourbaki, 1939–1968) or on the spatial independence of broadcasting. It illustrates that – and in which ways – this claim to universality was expressed and how the implementation of pedagogical innovations had to be adapted to national frameworks and cultural characteristics. Consequently, the question is addressed as to whether the national characteristics of pedagogy are more than just coincidental manifestations of a “uniform idea” or whether they are culturally determined adaptations of general principles that are adaptations to the circumstances of the individual, nationally shaped schools.

The first part of this chapter deals with programmed instruction, a teaching method which was overwhelmed with extensive expectations, but very soon also aroused great fears. The second part discusses the implementation of new math, which claimed a gain of substantial quality of “thinking” instead of “dumbing down through calculation.” The third part deals with film education, which soon developed into media education and tried to position itself as an up-do-date education science and a theoretical guideline for contemporary education and curriculum. The fourth and concluding part focuses on the pedagogical discussions accompanying these new subjects and pedagogies and asks whether and to what extent the national characteristics of pedagogy must be seen as a result of independent national logics.

1 The introduction of programmed instruction

Programmed instruction roots in behaviourist psychology and is mainly associated with the American psychologist Burrhus F. Skinner, who, since the early 1950s, had made some very effective criticisms of traditional teaching methods (Skinner, 1965). Skinner emphasized a strict stimulus-response pattern of learning and propagated organizing teaching along this logic. Since at least the 1960s, programmed instruction had become a worldwide phenomenon, which is documented in a two-volume bibliography holding over 1,000 entries of publications from Canada, the United States, Great Britain, France, East and West Germany, and other countries in Western and Eastern Europe, including the USSR (IPN, 1966). In this context, an international conference on programmed instruction and teaching machines was held in Berlin in 1963. It was organized by the *Pädagogische Arbeitsstelle Berlin*² and by the World Confederation of the Organizations of the Teaching Profession. Moreover, it was supported by several public bodies and private foundations from the US, Germany, Great Britain and France. It was by no means coincidental that Berlin had been chosen as the host city, as the schools senator for Berlin, Carl-Heinz Evers, stressed that this conference was also about showing that “by being cosmopolitan and open to innovations, free Berlin is striving to make the advantages of the democratic way of life visible.” The conference on programmed instruction was thus part of the political competition between

systems, even if all the participants were “inspired by the idea that the great task of our time to provide more and more people an ever better education” could only be fulfilled if “the latest findings in science and technology could be used to serve the learning process” (Evers, 1964, VII.). However, the reports of the individual workgroups³ illustrate that the countries implemented this claim quite differently and thus adapted it to the different national circumstances.

The workgroup which dealt with programmed instruction in industrialized countries stated that the development there was still in its infancy and that the organizations which were in charge of it differed widely (Schultze, 1964, p. 1). In Sweden and Great Britain, for instance, the promotion of programmed instruction was in the hands of a Royal Commission, whereas teachers’ associations were dealing with the issue on a rather experimental level. France on the other hand was not only discussing programmed instruction, but also questions of cybernetics, adapting both concrete programmes from the US and developing its own, new ones. Regardless of their respective thematic priorities and their supporting organizations for the promotion of programmed instruction, all the participating countries shared the conviction that “programmed instruction can help to solve certain problems which we encounter in industrialized countries” (*ibid.*, p. 2), first and foremost in adult education and professional training, and as a supplement to or preparation for “traditional” tuition. Moreover, programmed instruction was deemed to hold some potential for improving access to education in rural areas, as it could be very useful with “home-work” (*ibid.*).

Apart from stressing the advantages, this workgroup also discussed the problems and open issues connected with programmed instruction. One open question was whether the currently great motivation to work with the programmes would last once the novelty was worn off. Another question was whether the knowledge acquired through the programmes was applicable. It was also stated that the main objective of schools, namely “to educate the student to become as independent as possible in acquiring the necessary knowledge” (*ibid.*, p. 3), could not be attained solely by programmed instruction, especially in subjects like biology, art or citizenship education. The workgroup maintained that “programmed instruction is a method of rationalization,” and that it is neither possible to rationalize all educational goals of schools nor is it the intention or aim of schools to do so. “Not everything that *could* be learned by programmed instruction *should* be learned by programmed instruction. A careful evaluation of the whole curriculum seems to be necessary” (*ibid.*). Thus – and to eliminate pre-existing misunderstandings – it was necessary to introduce programmed instruction carefully and to inform teachers about the advantages and disadvantages of the new teaching method. Moreover, considering the scepticism among teachers, one had to be careful not to “advertise” programmed instruction too strongly with the method’s underlying behaviourism. “In some European countries at least this would upset psychologists and teachers from the very beginning” (*ibid.*, p. 5). Teachers’ (pedagogical) practices, which had been acquired based on other psychological theories, had to be considered when introducing programmed instruction.

The discussions in the workgroup dealing with programmed instruction and teaching machines in the schools of the developing countries took a slightly different course. Here, it was stressed that it was primarily the supervisory school authorities which had to be persuaded of the meaning and necessity of programmed instruction, an interest which was taken for granted in the industrialized countries. "Pilot projects, and model school situations" (Farrag, 1964, p. 7) were the main means to reach this goal. The aim was to make the advantages and chances of programmed instruction visible by concrete examples. The obstacles to block the introduction of programmed instruction were limited financial resources and deficits in teacher training, as well as the lack of specified targets in education and schools. In principle, efficiency was to be raised in all areas of school and tuition. Whereas the first workgroup had discussed the possibilities of rationalization as a potential problem, this group saw them as an opportunity or gain.

While the industrialized countries conveyed an image of cultural unity – or at least did not identify existing differences as problematic – cultural differences did arise as a subject of discussion in the workgroup of the developing countries. Not only did its members demand that the teaching materials yet to be developed should "meet the needs of the children," but they should also consider "cultural differences" (*ibid.*). This is why there could be, for example, no common teaching materials. The different languages also had to be considered, a claim which additionally accentuated the meaning of "effective techniques for teaching reading of local language and for teaching common language of the country or the region" (*ibid.*, p. 8). Moreover, the "problem of resistance to social change" was mentioned, i.e. the concrete question of "how to encourage the teacher to use new techniques, and how to convince the parents to accept those techniques" (*ibid.*).

Thus, the proposals for overcoming these challenges differed substantially from the considerations of the industrialized countries. However, both workgroups were consistent when it came to the fundamental limitations of the usage of programmed instruction. It was stated that programmed instruction and teaching machines could not fully convey skills like "problem solving, creativity or application of facts to life situations" (*ibid.*). The developing countries attached great importance to the dissemination and publication of these new pedagogical possibilities. They maintained that in order to gain broad acceptance of the innovations, it was necessary not only to inform teachers, but also to win over the public, by using the media or film. This workgroup also discussed the desire to include international organizations like UNESCO in the respective campaigns (*ibid.*, p. 9). Compared to the industrialized countries, experts were ascribed a much greater role, as professionals and international organizations had to bring the new knowledge to the individual countries "from the outside" and distribute it to the various stakeholders and interest groups.

Using Egypt as an example, the workgroup proposed a concrete plan for the implementation of programmed instruction. It illustrates that programmed instruction was not associated primarily with educational goals, but was seen as an opportunity to adjust schools to changing circumstances – a motive which would also emerge with new math and film education. It was said that there was an "increased

interest in education and a demand for the expansion of educational facilities and the application of new theories and the utilization of new educational methods and techniques.” Supposedly, this interest had become apparent because of generally tight finances, changing economic requirements and an increased awareness of pupils’ individual needs and characteristics. Therefore, there was an urgent need for the introduction of programmed instruction, especially in those areas in which teachers were less effective, concretely in the field of “conveying information, routine instruction, symbol manipulation, and the like” (*ibid.*, p. 11). When implementing this programme, which was described in detail and in the sense of a concrete instruction, one would have to not only create an understanding for the necessity of programmed instruction, but also to install a responsible commission which – consisting of the minister for education, representatives of the university and professionals – would organize the necessary steps for the implementation.

There was also mention of the benefits of programmed instruction for the former colonies, e.g. in a report from Central Africa (Malawi, Zimbabwe, Zambia), although the question was raised about whether – considering the low quotas of school attendance – it was sensible to introduce a relatively expensive technical method like programmed instruction (Hawkrige, 1966a). At the same time, it was stressed that programmed instruction was a good means to eradicate existing (knowledge) deficits in the training of pupils and teachers, as the use of teaching programs could boost self-instruction (Hawkrige, 1966b). Besides, programmed instruction was also said to be helpful in vocational training, which was explicitly welcomed with regard to the promotion of the domestic workforce, i.e. the “nationalization” of leading positions in politics and the economy (Hawkrige, 1966a).

To sum up, one may say that the debates and problems certainly differed, depending on the economic and political contexts in which programmed instruction was discussed. The different authors agreed both on the potentials and on the limitations of programmed instruction. The more “developed” a country was, the more pedagogical freedom it granted to individual teachers and the less importance it saw in the gain in efficiency and rationalization associated with programmed instruction. Programmed instruction was either considered a possible threat to pedagogical routines (industrialized nations) or as a gain in the quality of education (developing nations) or even as an opportunity to qualify domestic workers for leading positions and thus to support the administrative detachment of the colonies from their motherlands (Central Africa).

2 The aspirations of new math

Apart from programmed instruction, the 1960s also saw the discussion of new math,⁴ a curricular innovation which was – as opposed to programmed instruction – not motivated by considerations of learning psychology and was not a genuinely pedagogic reform. In fact, new math was based on fundamental discussions of mathematics, the consequences of which were to be incorporated in the curriculum (Moon, 1986, p. 5–6; Phillips, 2015, pp. 13–21). This claim was, however,

heavily criticized by some representatives of pedagogy (e.g. Karaschewski, 1966, pp. 18–23). The fundamental discussions of mathematics had been essentially initiated by a group of French mathematicians named Nicolas Bourbaki. On the basis of an axiomatic representation of set theory based on David Hilbert, these mathematicians wanted to bring the existing mathematical knowledge into a stringent context (see Aubin, 1997). All mathematical assertions were to follow a strict logic and had to be deduced from superordinate assertions. As a consequence, *Éléments de mathématique* (published by the group) included no references outside the group's own publications (Dieudonné, 1970, p. 138) and thus also stood for a context-free, “pure” representation of the fundamental mathematical principles, independent of space and time.

The tuition of math was to be reformed along these principles. It was not to focus solely on the acquisition of calculating skills, but to promote an understanding for abstract structures with the help of the axiomatic set theory. In doing so – according to the propagandists of new math – “the stultification by calculating” could be countered, and finally “rational thinking” would be taught (Wolfer, 1972, p. 682; Phillips, 2015, p. 13). Thus, new math, following the principles of the Bourbaki group, was not an “American” project located within the context of the Cold War and the question of the predominance of political systems, but first of all a project to present the “true” mathematics. In terms of the national location, it was a European/French project, which had its roots in the interwar period and which was picked up, discussed and propagated in the Cold War years by the OEEC (later OECD) and UNESCO as a global endeavour.

In 1959, on the initiative of the OEEC, an international conference on new math was held in Royaumont, a town north of Paris. The objective of the convening educationalists, mathematicians and education policy makers of the OEEC's member states (De Bock & Vanpaemel, 2019, p. 74) was to document the status quo of math tuition, clarify the purpose of it, pin down the necessary reforms and develop a schedule for its implementation (OECD, 1961, p. 12) – a programme which one of the protagonists of the Bourbaki group, Jean Dieudonné, summarized with the slogan “Euclid must go!” (ibid., p. 35). Two years later, the scholars gathered for another conference in Dubrovnik, and another two years later in Athens, in order to discuss “new methods for teaching the modern mathematics” (Fehr, 1964, p. 4). The main issue at the conference in Dubrovnik, which was in fact a four-week workshop in Yugoslavia (OEEC, 1961, p. 3), was to phrase a “synopsis, describing several possible ways of modernization” (OECD, 1961, p. 123), on the basis of which new teaching materials were to be developed. The central issue was a curricular reform on secondary school level, i.e. in gymnasiums, lycées and high schools, rather than a reform in elementary math tuition. It became equally clear that the programmes which had been developed within the framework of this conference had “to be adapted to the traditions and the needs of the different countries in which the modernization of mathematics curricula is undertaken” (OEEC, 1961, p. 5). New math was decidedly not considered a reform programme to be integrated in different school contexts, but a foundation for the reform of math tuition.

As in the case of programmed instruction, the Royaumont conference's suggestions for reform and the resolve for reforming math tuition along the principles of new math stated there initially fell on sympathetic ears with stakeholders of education policy both in Europe and in the US, although interest slackened again in the 1970s. In the US, the introduction of new math was not only one of the few national curricula reforms (Phillips, 2015, p. 96) but also an expression of a fundamental hope for reforms in the context of the Cold War. This hope was neither restricted to math tuition nor did it merely aim at improving the quality of tuition or increasing learning success, but it held the promise of "a new form of mental discipline" which "was required for US citizens facing an assortment of political, social, technical and moral quandaries in the 1960s" (ibid., p. 97). Thus, this curriculum reform became a clearly non-pedagogical one, but it was justified with the general educational mandate of schools, which were said to be more successful in reaching their goals by using new math, as it went beyond mere math tuition.

In the Netherlands, a country with equally decentralized organization, the reform of the mathematics curriculum was also initiated by the ministry of education. In 1961, it installed the *Commissie Modernizing Leerplan Wiskunde*, a commission for the modernization of mathematics education (Moon, 1986, p. 72) which based its objectives on the action programme of the Royaumont conference. Similar developments appeared in France (ibid., p. 102), although – unlike the Netherlands and the US – France has a centralist system, also in matters of school and education.

Information on the implementation of new math in various countries is also provided by the reports of a commission appointed by the International Commission on Mathematical Instruction (ICMI)⁵ to advise UNESCO on mathematics education, which were published in two issues of *Educational Studies in Mathematics* in 1978.⁶ The responding countries had to comment on the changes in "subject matter, teaching method, attitude towards mathematics" and "relations between mathematics and other subjects." Meanwhile, the person responsible for this survey, Hans Freudenthal – a critic of new math (Wardekker, Volman, & Terwel, 2014, p. 347) – stated that, on the basis of the received answers, "if there is one common lesson learned by all concerned in the process of innovations, then it is: better understanding of the part played by the teacher in the course of change" (Freudenthal, 1978, p. 145).

Mathematics professor Larry Blakers, for example, pointed to the fact that the reforms in Australia were "overseas-inspired, but not blindly copied" and that "the process of adaptation" differed from state to state (Blakers, 1978, p. 152). The various reforms, which were supported by the conviction of being part of a "historically significant educational process" (ibid., p. 153), had been prompted by individuals and then adopted by the different authorities. The reforms in Great Britain had avoided "the 'New math' excesses of overabstraction to be observed in the United States and on the continent," as they had been built upon the English tradition of applied mathematics (Howson, 1978, p. 188). Of the numerous reform projects which were documented in the report from Great Britain, only the Swansea scheme – the point of which was "that pupils can be given a better

understanding of the nature of mathematics than has hitherto been possible” – was associated with being an actual new math reform project (*ibid.*). However, this reform project supposedly did not last long, because the text book, i.e. its content, was rather addressed to a university audience and had thus aimed beyond targeted secondary level.

In contrast, the report from Bangladesh describes the reform of math tuition predominantly as an expansion of mathematics education and a standardization, which guaranteed a certain quality level. In Bangladesh, the support of the “average pupil” and the association of math tuition to “everyday life” were considered central (Sharfuddin, 1978, p. 163). The author of the country’s report, also a mathematics professor, went on to stress the limitations of the reform: “The development of an integrated syllabus on modern lines was not undertaken by the committee because such a syllabus could only be interpreted by teachers trained in such methods and we did not have such teachers in the required numbers” (*ibid.*). He mentioned that nevertheless, the perception of school, including math education, had changed since Bangladesh had become independent (1971): “For the first time, men from outside the education system have seen it as a form of national investment and as related closely to the economic and political growth of the country” (*ibid.*, p. 167). To this, Sharfuddin attached the hope of a general improvement of the quality of schools and tuition. It can be said that for Bangladesh, new math was not only a curricular reform project, but it coincided with an increased visibility and importance of schools. In fact, new math was being used to carry out school reforms.

This illustrates that the global debates on new math triggered some of the curriculum reform processes in the 1960s and 1970s. These reforms were, however, not only about replacing traditional math education by new math. In fact, their goal was to supplement math education or to adapt it to changed circumstances. Each country defined this in its own way, and the developing countries attached different goals to it than countries in the Global North. The debates on new math were therefore primarily an impulse to implement existing or new reform ideas which concentrated not only on the inner logic of mathematics, but they also included educational and structural aspects – questions which went far beyond the “actual” concern of new math.

3 The case of film and media education

Developments similar to those in the cases of programmed instruction and new math took place in the handling of film and television at school. In fact, the use of films and television had been a postulation of the Royaumont-conference for improving math instruction (OECD, 1961, pp. 27–28). The starting point of schools cooperating with film and television can be located in the America of the 1920s (Orgeron, Orgeron, & Streible, 2012). A major reason for the successful introduction of the new medium into schools was the possibility to at least partially compensate for a lack of teachers and bring “the world” into the classroom (Cuban, 1986, pp. 9–26; Smoodin, 2011, p. 21). Educational television could

ensure instruction even in remote regions – an argument which had also been important in the context of programmed instruction, and a possibility which was used especially in Australia and Japan (Beneke, Wagner, & Wiczerkowski, 1981, p. 25; Meyer, 1994, p. 357). After World War II, educational television spread to large parts of the world. In Italy, for example, the *telescuola* was established in 1958 to redress the high number of illiterates, especially in the south of the country (Hollmann, 1996, p. 11). However, it also offered secondary school degrees. Educational television also established itself in the USSR and Eastern Europe, in France, Great Britain, Germany and Switzerland. Last but not least, worldwide conferences made the new medium better known to the various countries and offered opportunities to exchange experiences (*ibid.*, p. 12).

Once more, Berlin and its *Pädagogisches Zentrum* turned out to be an active intermediary, organizing an international congress on educational television in September 1966. Whereas the conference on programmed instruction had in fact been an international convention, in which not only the welcoming speech had stressed the international relevance and emanation of Berlin as its venue, but which had also mirrored this internationality in the constitution of the participants, the conference on educational television was a predominantly “German” gathering with international participation, as the distribution of the contributions illustrates. Of a total of 23 contributions only three dealt with the situation of educational television outside Germany, namely in France, Great Britain and the USSR.⁷

The contribution from France was basically a sort of account on French educational radio and television between 1963 and 1967, as well as an outlook on the planned activities until 1970 on primary and secondary level and in the field of extracurricular activities. Primarily, the latter dealt with supporting and consolidating the transfer of school knowledge (e.g. during school holidays), but it also included questions of transferring knowledge on the professional world and issues of adult education (Brunswic, 1967, pp. 274–275). The contribution from Great Britain presented a more fundamental discussion of the subject of educational television on the background of a largely decentralized organization of schools and broadcasting organizations. Its first part featured the situation and financing of the Independent Television System (the alternative to the BBC) and pointed to the fact that although the statutory basis included a mandate for “information, education and entertainment,” there was no mandate for “educational programmes” (Weltman, 1967, p. 280). The second part discussed the purpose and mandate of educational programmes. Here, the question was raised as to whether educational broadcasting was “merely” yet another medium in the sense of a “completely neutral instrument of communication, a servant and a reflection of the educational system as it is” or “a novel and independent educational institution with a unique contribution of its own to make” (*ibid.*, p. 284). Not only was it the financial difficulties of British schools in connection with increasing demands and numbers of pupils which brought forward the report’s argument in favour of educational television as a new player in the educational system; it was also claimed that television was to bring about a fundamental change with regard to the contents and

methods of education, and that it could introduce the world into schools, thus contributing to make “education . . . relevant” (*ibid.*, p. 285).

The report on the USSR, authored by Marburg-based Hartmut Vogt, pointed out that in comparison to Western Europe or the US, the meaning of “educational television” in the USSR was different, because the medium of television in itself was intended to be more educational than entertaining (Vogt, 1967b, p. 296). But even there, one could distinguish between “general educational television” and “specific educational and instructional television” (*ibid.*, p. 297). However, in contrast to the remarks from Great Britain, educational television in the USSR was certainly “only” one of many teaching aids, a supplement to existent tuition and established pedagogical tools, and it was seen rather as a sort of second or additional teacher who was to be embedded into “normal” teaching by the actual teacher (*ibid.*, p. 305).

Even more pointedly than in the debates about new math, the discussions on film and television in school education showed that they did not simply deal with the use of a new medium in class, but that this new medium also included the expectancy of possibilities to reform school education fundamentally and, most of all, to adapt it to the requirements of the present day or even to prepare it for the future, i.e. to make schools and tuition “relevant” – as the British contribution had phrased it – or to democratize it (Chresta, 1963, p. 13). This claim soon turned educational television into media education, a development which shall be illustrated more concisely using the example of Switzerland.

In 1968, the Swiss ‘national’ broadcasting company aired its first programmes of educational television, and shortly thereafter, it was stressed that “film education is an urgent necessity” (Frehner, 1968, p. 1). The focus of such education was not placed on the technical aspects of films, but rather on the pedagogical treatment of the new medium, whereby the term ‘film education’ subsumed all aspects dealing with “moving pictures.” It was mentioned that film had become an “environmental factor to be interpreted” instead of being neglected in school, because “a large number of boys and girls have access to films via television and forbidden cinema” (*ibid.*, p. 2). Therefore, guidance by teachers was all the more necessary. The aim of such educational activities was not so much to avoid contact with “bad films,” but rather to awaken an understanding of “film as a work of art” and to confront the children “with its message” (*ibid.*, p. 3). In addition, “in the conscious confrontation with films” pupils were to learn that a film is “a means, a possibility to represent things of life or life itself in one way or another” (*ibid.*). Therefore, films had to be made “comprehensible as an experience” and were seen as a possibility “to bring up a certain problem and to process it in conversation” (*ibid.*, p. 2). Thus, film education meant primarily transferring knowledge about the production of films, which was in turn important to counter the seductive power of moving pictures. This also points to the fact that the use of film and television in the classroom very soon developed from a pedagogical tool to a fundamental pedagogical issue, a fact which was expressed when the term *film education* turned into *media education*.

The educational demands associated with media education became clear at a conference in 1978. At this conference, a variety of projects were presented,

including an empirical study on the impact of the mass media on the lives of school children (Saxer, Bonfadelli, & Hättenschwiler, 1979), an explanation on the basic features of “action-oriented media education” (Baacke, 1978, p. 14) and a report by representatives of the Catholic film office, the Protestant film service and the trade unions which pointed out in what ways these organizations were specifically involved in media education. The Swiss Youth and Mass Media Working Group suggested the establishment of a “general, supra-regional and supra-confessional coordination office for documentation and information” (Meier, 1978, p. 3). A lecturer working at the local teachers’ college made a case for media education as being practical communication training. His argument in favour of media education almost took on world-saving traits, as it was claimed to help “reduce alienated learning and stress at school,” grasp the “student in his or her entirety” and make “lively learning” possible “by causing personal dismay and leaving the constitution of meaning to the learner” by conveying “insights into social, political and economic contexts” and by initiating “the development of individual and collective strategies for coping with the damaged life in a damaged world” (Ramseier, 1978, pp. 9–10). Thus, this conference assembled very different ideas on the content and the function of the media, some of which also contradicted each other. It also became clear that media education and its starting point, film education, was in fact a teaching or even a life principle almost paradigmatically promising to redeem the contemporary pedagogical demand for a curriculum oriented to the world in which we live.

This comprehensive claim also explains why – not only in Switzerland (Brown, 1991, pp. 224–272) – discussions on film and television education so quickly turned into the much broader issue of media education. If film education was to be part of the orientation of the curriculum towards the surrounding, modern world, it also had to turn to other media, whereby the practical implementation did not question the instructional dimension and thus the normative side. Although, at its beginning, the aim of film education in Switzerland had been to understand the history of the production and the staging of a film, this enlightening intention was soon associated with a normative dimension, since the aim was to learn to distinguish reality from fiction, to read medial staging and acquire additional knowledge in order to protect oneself from the danger of indoctrination. Especially in film education, normative convictions could be supported by aesthetic arguments which could easily give the impression of being “non-normative” – a conviction readily embraced by media education.

4 Global or national pedagogy?

These insights into various curriculum reform debates and school reform projects illustrate that despite all the common interests, the headwords of programmed instruction, new math and film education embraced quite a number of different concerns and reform projects. The reason for this was that debates with global perspectives had to be implemented into national settings, a process in which adaptations were imperative. However, these examples also show that they are to

be understood as part of a globally shared conviction to make teaching more effective and better through a new or at least improved pedagogy and at the same time to bring it “closer to life.” Thus, pedagogy holds the promise to provide answers to societal, social or economic problems, however these problems were formulated nationally. These three examples are therefore not to be understood as three independent reform projects having emerged more or less simultaneously. They are, in fact, three different expressions of the same idea, i.e. the belief in social and cultural improvement through education, which had become globally predominant in the 1950s and 1960s.

It has also become clear that the various reform debates quickly started to focus on pedagogical questions and questions of teaching practice, for example in Czechoslovakia, where discussions led from behaviourism as “a base too narrow for programmed instruction” on Jean Piaget and Gestalt psychology to Jerome Bruner’s *Process of Education* (Lindner, 1966, p. 19). The publication which was both a summary of and an elaboration on the discussions from a conference in Woods Hole (USA)⁸ dealt with the questions of “What shall be taught, when, and how? What kinds of research and inquiry might further the growing effort in the design of curricula?” (Bruner, 1960, pp. 2–3).⁹ The attendees of the conference had discussed the new technical possibilities of film and television, of learning machines and of further pedagogical tools, without reaching a “consensus on the subject” (ibid., p. 15). The only issue which the attendees agreed upon was the assessment that “not teaching devices but teachers were the principal agents of instruction” (ibid.), although the question of how to support teachers best and most effectively remained unanswered.

Thus, the conference attendees had discussed the same pedagogical question which also crystallized in the aforementioned case examples as the question to be answered when the first euphoria about pedagogical innovations has evaporated and possible structural obstacles have been removed. This question can only ever be answered on a national level, because not only schools but also teacher training are organized nationally and because schools as places of “educating the future citizen” are always related to a national context into which and for which education and training are provided. Therefore, pedagogical reform movements may well enter the stage with a global perspective and expand to different national contexts. But the concrete implementations are always moulded by the individual countries and must therefore be discussed and reconstructed on a national level, without, however, turning a blind eye to the global interlacement of national developments.

Notes

- 1 This hope has accompanied pedagogy since its beginnings and intensified around 1800 in the context of the “educationalization of social problems” and the promises of concepts like “method,” developed and propagated by Johann Heinrich Pestalozzi (1746–1827) (Tröhler, 2013b).

- 2 The *Pädagogische Arbeitsstelle*, which was superseded by the *Pädagogische Zentrum*, was a model institution for interlinking theory and practice in education and school. In 1994, it was superseded by the *Berliner Institut für Lehrerfort- und -weiterbildung und Schulentwicklung BIL* (Berlin institute for continued teacher training and school development) (Furck, 2003, p. 269).
- 3 The conference proceedings include the speeches held in Berlin and the protocols of a total of five workgroups and two commissions. The workgroups dealt with programmed instruction and teaching machines in schools in industrial and developing countries (groups 1 and 2), questions of the psychology of learning and pedagogy (groups 3 and 4) as well as with programmed instruction in industrial training courses (group 5). The two commissions developed a plan of action and addressed the terminology of programmed instruction.
- 4 In this chapter the keyword *new math* refers solely to the reform projects of math tuition which can be traced back directly to the debates of the Bourbaki group. The curriculum reform debates in the US with regard to the STEM fields since the 1950s, which first of all advocated for a “scientific” curriculum and a general rejection of the life-adjustment movement, will not be considered here (see Phillips, 2015, chapter 2).
- 5 The ICMI was founded in 1908 by a group of mathematicians. It promotes international programmes with activities and publications which improve the collaboration, exchange and dissemination of ideas and information on the theory and practice of contemporary mathematical education (see Lehto, 1998).
- 6 There was a total of 16 published national reports (Australia, Bangladesh, France, Great Britain, Hungary, India, Iran, the Netherlands, Nigeria, Poland, Sierra Leone, Sri Lanka, Sudan, Thailand, U.S.A., West Indies). It is not clear whether all of the submitted contributions were published, as it was stated that “a large number of countries” had answered the call (Freudenthal, 1978, p. 145).
- 7 This imbalance in contributions might be related to the fact that the respective national broadcasting organizations played an important role as providers of teaching materials for educational television and that – for financial and regulatory reasons – these broadcasting organizations focused on national audiences.
- 8 The conference in September 1959 was conducted by Bruner. It included 34 American and European scholars and was one of the educational answers to the competition between systems during the Cold War (see Tröhler, 2014, p. 751; Pinar, Reynolds, Slatery, & Taubman, 1995).
- 9 This publication is therefore considered to be the “fundamental text” on curriculum studies.

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