Journal of Educational Sciences, XXV, 1(49) DOI: 10.35923/JES.2024.1.06

Received: 20.04.2024
Revised: 30.06.2024
Accepted: 17.07.2024
Published: 26.07.2024

Understanding North American curriculum reforms through theory of rationality

Dan-Laurențiu CARDAȘ-RĂDUȚA•

Abstract

The present study aims on the one hand to analyze North American curriculum reforms with a focus on the twentieth century, and on the other hand it aims to demonstrate the implications of Weberian rationality theory for century-specific curriculum theory and practice. At the theoretical level the study shows the implications of Weberian rationality in the work of Dewet, Weber and Tyler. At the practical level, the main findings of the study show that the progressive period was influenced by practical rationality or more specifically instrumental rationality through the social efficiency orientation promoted by Bobbitt and Tyler. Also, the need for post-Sputnik reform of the North American curriculum led to a hyper-rationalization of education towards the imposition of external standards on schools, this trend culminating in the report "A Nation at Risk" (1983) which led to an economic approach to education. The North American curriculum reforms that followed did not abandon this trend of hyper-rationalization and standardization of education.

Keywords: rationality, american, curriculum, reform, weberian

1. Introduction

The present study traces on the one hand North American curricular reforms, focusing on the twentieth century, and on the other hand the implications of the Weberian theory of rationality, both theoretically and practically, for North American curricular developments.

The reasons for choosing the twentieth century for this study are related on the one hand to the fact that it was the period in which the three great curriculum theorists John

• PhD student, Doctoral School of Philosophy, Sociology and Political Sciences - Philosophy, West University of Timisoara, Timisoara, Romania, dan.cardas@e-uvt.ro

Dewey, F. Bobbitt and Ralph Tyler carried out their work and we wanted an analysis of their theory in their specific context, and on the other hand as Mehta (2013a) points out, this period of educational reforms was the most strongly rationalized in a Weberian sense - that is, curricular reforms aimed at social organization and at adapting educables to the labor market.

On the other hand, the curriculum reforms of the 20th century in the North American educational space are still producing echoes in curriculum theory today, by introducing terms such as student-centered learning, standardization, educational goals, or social effectiveness. Because of these curricular conceptualizations, this paper is also addressed to those who are not directly interested in the North American reforms, since, as we know, these terms have also penetrated the European area.

The introduction of the Weberian theory of rationality is justified in this paper by its implications for the work of Dewey, Bobbitt, and Tyler, but also by the existence in the North American literature of the term "rationalization of education" in the Weberian sense which refers to a top-down organization of curricular reforms where policy makers set external goals and standards (see Wise, 1977).

Thus the research objectives are focused on: how rationalization of education has been understood and unfolded in the North American educational space and the implications of different types of Weberian rationality for North American curriculum theory and practice.

2. Theoretical background

2.1 Weberian theory of rationality

Identifying an exhaustive definition of the term rationality has been and remains a difficult challenge for sociologists and philosophers. This difficulty arises both from the complexity of Weberian terminology and its application in various fields of rationality theory (religion, sociology, politics, economy), as well as from the misinterpretation of Max Weber's text. Some authors have defined rationality by referring to the logical coherence of human ideas and behaviours. For example: "rationality refers to those ideas and behaviours which are logically coherent and consistent and amenable to empirical knowledge" (Mitchel, 1968, p. 142). Other authors refer to individuals' rational choices: "any action, belief, or desire, if it is rational we ought to choose it" (Audi, 1999, p. 772).

These definitions cannot be classified as incorrect but rather incomplete. Analysis of Weberian text over time has shown that rationality is a much broader concept. In relation to social actions, rationality is portrayed in several ways; concerning values or purposes, rationality takes on multiple forms. Another problem that constantly arises in the analysis of Weberian text is the confusion between rationality and rationalization.

Consequently, in the following paragraphs, we intend to describe the types of rationality Max Weber referred to, the types of social actions, and clarify the confusion between rationality and rationalization.

Stephen Kalberg argues that the ambiguities arising from the study and interpretation of Weberian text are caused by some authors not emphasizing the multiple meanings of rationality or limiting their research to specific spheres of life. Kalberg (1980) maintains that the term rationality is polymorphic and underscores this by identifying four types of rationality: theoretical, practical, substantive, and formal (pp. 1146 - 1152).

Theoretical rationality refers to: "conscious mastery of reality through the construction of increasingly precise abstract concepts rather than through action" (Kalberg, 1980, p. 1152). This type of rationality includes cognitive processes such as logical induction, logical deduction, or causal attribution (Ritzer, 2010, p. 137).

Practical rationality refers to identifying the most suitable means to achieve goals and address everyday problems (Kalberg, 1980, p. 1152). Max Weber explains, in this case, the difference from practical rationality: "the systematic thinker" rationalizes through "increasingly precise and abstract concepts," whereas "methodical attainment of a definitely given and practical end by means of an increasingly precise calculation of adequate means" means practical rationality (Weber, 1946, p. 293).

Substantive rationality resembles practical rationality because it involves identifying means to achieve goals, but in the case of this type of rationality, the identification of goals is done within a system of values (Ritzer, 2010).

Formal rationality also concerns the means-ends relationship, but unlike practical rationality, which pursues this relationship by referring to the pragmatic interests of individuals, formal rationality refers to "universally applicable rules, laws, and regulations" (Ritzer, 2010, p. 137).

Although they differ in content, all four types of rationality have the same goal: controlling reality by "dispelling particularized perceptions" (Kalberg, 1980, p. 1159).

These four types of rationality can be analyzed also in terms of their relationship with social actions. Max Weber defined social action as follows: "action is social insofar as its subjective meaning takes account of the behaviour of others" (Weber, 1978, p. 4).

Weber (1978) identifies four types of social action:

1. Instrumentally rational social action (*zweckrational*): "it is, determined by expectations as to the behaviour of objects in the environment and of other human beings; these expectations are used as conditions or means for the attainment of the actor's own rationally pursued and calculated ends " (Weber, 1978, p. 24).

2. Value-rational social action (*wertrational*): "it is determined by a conscious belief in the value." Belief in value can pertain, Weber says, to religion, ethics, aesthetics, or other reasons (Weber, 1978, p. 25).

The distinction between these two types of social action lies in how the individual is guided in their actions. Goal-rational action considers the consequences and their calculation, while value-rational action focuses on the "intrinsic properties of an act," towards values that lead to a certain action (Brubaker, 1984, p. 25).

3. Affectual social action: "it is determined by the actor's specific affects and feeling states" (Weber, 1978, p. 25).

4. Traditional social action: "it is determined by ingrained habituation " (Weber, 1978, p. 25).

This classification of social actions, determined by habit and feelings or by values and calculated goals, actually draws a line between "rational actions" and "irrational actions." Affective and traditional actions do not represent rational actions; they are guided by either habits or feelings, while actions in which the individual engages consciously and deliberately are considered rational (Brubaker, 1984, p. 50).

However, irrational actions can also be rationalized (Brubaker, 1984, p. 50). Weber considers that affective social action can be rationalized, can become rational when emotions or states of tension are consciously released: "it is a case of sublimation when affectually determined action occurs in the form of conscious release of emotional tension" (Weber, 1978, p. 25). Similarly, traditional social action can have rational grounds when "attachment to habitual forms can be upheld with varying degrees of self-consciousness and in a variety of senses" (Weber, 1978, p. 25).

Considering the typology of social actions, Weber considered practical rationality to be representative of modernity. This is portrayed as: rationality in relation to a goal and rationality in relation to a value (Clitan, 2002).

Rationality in relation to a goal (which is "based on estimation and critical deliberation") corresponds to instrumental rationality, while rationality in relation to a value (based on "choice and axiological decision") corresponds to normative rationality and the rationality of choice (Clitan, 2003, p. 14).

The distinction between the terms rationality and rationalization is as follows: rationality is "an attribute that actions and products of human activity can acquire either in relation to a goal or in relation to a value," while rationalization represents "the intelligible mastery of the world" (Clitan, 2003, pp. 11-12).

Mainly, Max Weber associated rationalization with the modernization of the West. This rationalization entails a systemic and calculative approach to thinking and behaviour (Henriks, 2016). Weber describes rationalization as follows: "there are no

mysterious incalculable forces that come into play, but rather than one can, in principle, master all things by calculation" (Weber, 1946, p. 139).

Freund (1968) draws attention to the danger of confusion between "the rationality of history" and "rationalization" and describes the latter as: "the product of scientific specialization and technical differentiation peculiar to Western culture" (p.18). In broad terms, if we were to identify a series of characteristics of rationalization, they would be "efficiency, predictability, calculability, and technologies that control people" (Ritzer, 2003, p. 34).

In addition to these elements related to modernization, rationalization, in Weber's view, leads to the "disenchantment of the world." Essentially, this "disenchantment" comes from technological and scientific progress; people move away from religious values, sacred accents, primordial beliefs in spirits, generally from the spiritual realm, and the world is guided by utilitarian concepts (Freund, 1968, p. 23-24).

Following the exposition of the central elements of Weber's theory of rationality, we can conclude that practical rationality is specific to the modern world, we can identify the distinction between rationality as an attribute of human actions and products of actions and rationalization as a process of mastering the surrounding world through precise means and calculation. Additionally, from the presentation of the rationalization process, we can conclude that it has both a positive side, linked to the progress of science and modernization, and a shaded side of the phenomenon of the "disenchantment of the world," moving away from sacred values.

2.2 The applicability of the theory of rationality in education

About the process of rationalization of education, Max Weber wrote with specialized exams in mind, primarily in European higher education, but mentioning that the rationalization of education also exists at the pre-university level. Weber sees these specialized exams as certifying that an individual can hold a position in a bureaucracy (Weber, 1949, p. 241).

Another important idea that Max Weber introduces here is that of the purpose of education. If in antiquity the main goal of education was the cultivation of the individual, with bureaucratization, the process of education aims more at creating a "specialist" rather than a "cultivated individual" (Weber, 1949).

Rationality is seen as a pillar of modernity. In fact, we are talking about a triumph of reason over all fundamental domains of society. Thus, a distinction is made between an objective and a subjective world/society. The objective world will always be based on rational practices. Modernity seeks to organize social and collective life based on the principle of rationalization. (Pourtois & Desmet, 1997)

Giroux (1988) observes in modern education the same process of rationalization described by Weber: a rationalization that aligns the purpose of schooling with the demands of industrialized society, criticizes this process, and emphasizes the importance of fostering critical thinking in students to lead them towards understanding the individual and collective struggle for social goals (Giroux, 1992).

Today, it is considered that the major implication of rationality in education lies in the transition to the "external efficiency" of the educational system, which involves its relationships with "all systems of society" (Dolska & Lobas, p. 74, 2021). These relationships, as we have observed with Max Weber, are determined by the needs of society, the need to educate individuals fit for the bureaucratic system, in Weberian terms or for the labor market, in contemporary language.

Although at first glance, Weberian rationality theory might seem isolated from curriculum theory, its implications for the twentieth-century progressive view of education are far-reaching. The importance of the Weberian theory of rationality in North American curriculum reform research, but also in curriculum reform in general, is represented by: the understanding in the English-language literature of the standardization of education as a phenomenon of 'rationalization' (see Mehta, 2013a), but also by the implications of rationality in the work of John Dewey, F. Bobbitt and Ralph Tyler.

For instance, at the theoretical level, Dewey's ideas resemble Weber's in terms of instrumental rationality. The relationship between means and ends described by Weber, appears identically in Dewey's works (see Dewey, 1938), also, Dewey promoted a type of education based on the intrinsic values of the educables, which for Weber means value rationality (Weber, 1978).

Bobbitt and Tyler represented the Social Efficiency movement within the 20th century reforms and both were influenced by Taylorism - a movement rooted in Weberian theory which like Weber, advocates social efficiency (Hatch & Cunliffe, 2013). We will detail the implications of rationality in the work of Dewey, Bobbitt and Tyler more in the next section, in which we discuss the three's conceptions of curriculum.

On a practical level, the phenomenon of rationalization of education described by Max Weber marked the North American curriculum reforms of the 20th century in different periods: the period influenced by Taylorism, in which the curriculum was constructed to meet the social purposes of education, in the sense of preparing students for future occupations (Kliebard, 2002) or the standards movement, which in the American literature has even been understood as hyper-rationality, due to the curriculum imposed from the top down by policymakers (Wise, 1977).

In the research section of this paper, we will trace all these implications of rationality in the evolution of North American curriculum, seeking to identify how the

rationalization of education has manifested itself in practice and in what form Weberian types of rationality are found in curricular reforms.

3.3 Dewey, Bobbit & Tyler: curriculum approaches and influence of rationality in their work

It is important to look at the contributions of these three reference figures in the field of curriculum, as their educational philosophies and curricular theories have influenced contemporary educational practice. Whether we are talking about Dewey's progressive education, Bobbitt's modern and socially-oriented concepts, or Tyler's post-modern objectives and assessment-oriented concepts, each of these represents the foundations of what we now call curriculum.

John Dewey laid the groundwork for what we now understand as student-centred learning. The main ideas underlying his educational philosophy and curriculum vision include progressive education, focusing on the educable, and experimental knowledge (Williams, 2017).

In Dewey's view, the principles of progressive education contradict those of traditional education. While traditional education focuses on the subject matter, with the teacher playing the main role, progressive education is based on principles such as "cultivation of individuality," "free activity," and "learning through experience" (Dewey, 1998, p. 5).

Experimental knowledge or experimental education, according to Dewey, aims to connect the study disciplines to students' daily lives: "anything which can be called study (...) must be derived from materials which at the outset fall within the scope of ordinary life-experience" (Dewey, 1998, p. 86). This aspect is also emphasized in *Child and Curriculum*: learning experience and study disciplines should not be viewed separately (Creţu, 2000, p. 15). "Abandon the notion of subject-matter as something fixed and ready-made in itself, outside the child's experience" (Dewey, 1902, p. 16).

To emphasize the importance of learning through relating to everyday life experiences, John Dewey (1902) presents and explains the problems that can arise in the educational process when the study material does not align with the student's experience:

"The lack of any organic connection with what the child has already seen and felt and loved makes the material purely formal and symbolic " (Dewey, 1902, p. 31). What the child "has seen, felt, and loved" refers to the experiences in the students' everyday lives, what we nowadays call informal education, and the mismatch of the "material" - the subject matter to these experiences renders the discipline meaningless for the student, as John Dewey complements: "a symbol which is induced from without, which has not

been led up to in preliminary activities, is, as we say, a bare or mere symbol" (Dewey, 1902, p. 31).

Lack of motivation: "an end which is the child's own carries him on to possess the means of its accomplishment" (Dewey, 1902, p. 33). In other words, considering the intrinsic motivation of the student and emphasizing it in the development of the content to be taught, motivation for learning will be stimulated.

Dewey thus proposes a student-centred learning model, so popular nowadays, but which is still distorted in pedagogical practice, as sometimes student-centred is understood to mean that the student must build their learning processes on their own, with the teacher merely observing. What Dewey actually wanted to emphasize was the idea of the teacher as a facilitator of learning who knows their student, understands their motivation, knows the student's life experiences, and aligns them with the material being taught.

John Dewey promoted mainly an instrumental rationality, which he portrayed, in a pedagogical context, by the term inquiry. The relationship between means and ends that Weber spoke of is portrayed in Dewey's terms by inquiry, i.e. the process by which thinking or logic is used to solve specific problems. The most relevant definition in which Dewey's and Weber's ideas meet is the following: ''rationality as an abstract conception is precisely the generalized idea of the means-consequence relation as such'' (Dewey, 1938).

As shown by Clitan (2002), practical rationality includes both instrumental rationality and value rationality for Max Weber. In Dewey, the idea of instrumental rationality comes from the influence that Pierce's philosophy had on him and represents the relationship between means and consequences (Garisson, 1999), whereas value rationality is potretized in Dewey in the form of the intrinsic and extrinsic values of the educables - he argues that the school must have both a social role but at the same time it must also adapt itself to the soul of the child (Dewey, 1915), but also through the theory that education is not something finite, but is a preparation for life. (Dewey, 1915).

Franklin Bobbitt developed his curriculum theory based on the following central idea: curriculum development should be based on the analysis of adult activities so that the curriculum can contribute to the development of society. This analysis is carried out in several steps: studying the effectiveness of workers in various fields, the stage of observations by curriculum specialists on the aspects that have led to the effectiveness of these individuals, identifying students based on the aptitudes they have for each social role (Null, 2011, p. 49).

Bobbitt defines curriculum using two directions, both oriented towards learning experiences. The first direction refers to the "the entire range, both undirected and directed experiences, concerned in unfolding the abilities of the individual" and the

second direction targets the "series of consciously directed training experiences that the schools use for completing and perfecting the unfolding" (Bobbitt, 1918, p. 43).

In Franklin Bobbitt's curriculum theory, we can identify four approaches to curriculum: the "psychologizing approach" - through consciously directed experiences, the "behaviorist approach" - where the curriculum is seen as a set of experiences, the "expanded approach" - in which the curriculum is seen as the totality of these experiences, and the "social approach" - in which the curriculum must prepare the learner for social life (Ilie et al., 2013, p. 14).

Another important idea of Bobbitt was building the curriculum based on educational objectives: "the first task is to discover the activities that should make up the lives of men and women and along with these, the abilities and personal qualities necessary for adequate performance. These are the educational objectives" (Bobbitt, 1924, p. 1).

Bobbitt, like Dewey, promotes instrumental rationality, but unlike Dewey, he is more focused on the efficiency of the educational process rather than on the instinctual values of the students. As a promoter of social efficiency, Bobbitt advocated Taylorism - which has been associated in the literature with Weberian instrumental rationality. Taylorism has its roots in Weberian rationality theory through its urge for organizational efficiency (Hatch & Cunliffe, 2013).

Kliebard (1979) dubs Bobbitt's conception of curriculum: ''means-end rationality'' and argues that the type of curriculum Bobbitt desired is important firstly because it sets precise goals to be pursued, and secondly because it transforms the subjects of study from being the central element of the curriculum into the means by which the goals are achieved.

Ralph Tyler developed his curriculum theory and educational philosophy based on a series of principles: selection of educational goals - considering students' prior knowledge and development, as well as their interests in relation to society; selection of educational experiences - those that are suitable for achieving the objectives; organization of educational experiences - by choosing the best teaching and learning methods; evaluation of outcomes - conducted at the beginning, during and at the end of activities (Tyler, 1949).

Like Bobbitt, Ralph Tyler emphasizes the importance of objectives in the curriculum development process. An important idea that Tyler advances is deriving objectives from three sources: "learners, society, and the discipline" so that curriculum development takes into account both the learner-centred approach - a progressive approach, and the subject-centred approach - an existentialist approach (Antonelli, 1972, p. 129).

At a theoretical level, considering Tyler's curriculum model, for instance, we can observe the relationship between instrumental rationality and knowledge. Autio (2003) sees a correlation between Tyler's idea and Habermas's opinion on the relationship

between rationality and knowledge (p. 306). Habermas (1984) believed that rationality relates more to how subjects utilize acquired knowledge than simply to the fact that they possess that kn Ralph Tyler's model of curriculum is one guided by instrumental rationality that separates means from ends, argue Laanemetes & Kalamees-Rubel (2013): 'Tyler's rationale is an appropriate example of this approach. Tyler views curriculum theory as technical. Predetermined behavioral objectives serve as a driving force that controls the pedagogical and evaluative efforts that follow" (p. 4).

Thus, the differences in approach between the three curriculum theorists lie both in the educational approach: learner-centered vs. goal-centered, but also in the rational approach: Dewey's rational-practical approach, where education is about the motivations and experience of learners, and Bobbitt and Tyler's rational-instrumental approach, where education is about efficiency and social goals. owledge.

4. Methodology

The research method utilized is a literature review to synthesize subsequent research in the field of North American curriculum reform. Considering that the current paper is an interdisciplinary approach between the philosophy of rationality and Curriculum Theory, this method brings together information from both curricular practice and the applicability of rationality theory in this practice. As Snyder (2019) states: "Building your research on and relating it to existing knowledge is the building block of all academic research activities, regardless of discipline" (p. 339).

As mentioned earlier in this paper, the research focuses on the 20th century for two reasons: to see how the ideas and rationality of Dewey, Bobbitt, and Tyler were implemented in their specific contexts, and because during this period, the rationalization of education produced terms that guide today's pedagogical language, such as: student-centered learning, educational standards, or educational objectives.

For the selection of research studies, we used several criteria to fit these studies within the field of the established research questions.

4.1 Data Selection Criteria

In addition to the foundational works of 20th-century North American curriculum theory by Dewey, Bobbitt, and Tyler, I have selected several books and articles from the specialized North American literature.

For the selection of articles, I accessed several databases including: ERIC, JSTOR, Science Direct (Elsevier), Central Eastern European Online Library (CEEOL), and Directory of Open Access Journal (DOAJ).

The data and information on which this research is based were selected according to the following criteria:

- The books and articles should focus on curriculum reforms specific to the Progressive Era (20th century).
- The books and articles should address the issue of the rationalization of education in the North American educational space.
- The books and articles should belong to the specialized North American literature.

4.2 Research Questions:

The research questions address the implications of Weber's theory of rationality in the context of 20th-century North American curriculum reforms. On one hand, I examined the practical aspect of this theory through the phenomenon of rationalization, and on the other hand, I explored the integration of Weberian types of rationality in curriculum reform movements:

- How is the term "rationalization of education" perceived in the North American specialized literature?
- How did the rationalization of education manifest in the context of 20th-century curriculum reforms?
- Which types of rationality articulated by Max Weber are found in the 20th-century curriculum reforms?

4.3 Literature review

Mehta (2013a) believes that the Progressive Era was the time when the American school was most strongly rationalized. This rationalization was justified in the 20th century by the creation of a rationally organized production system. This idea seems to be a perfect reflection of what Max Weber called the rationalization of education – that is, preparing students in a utilitarian sense, so that they are useful for working in a bureaucracy (Weber, 1949).

An important distinction that must be made in this study is between pedagogical progressives, represented by John Dewey, and administrative progressives, represented by Thorndike. In the first case, there was an orientation towards the needs of the students and naturalistic education, while in the second case, towards the rationalization of education in the Weberian sense, focused on standards and efficiency. The following sections will present both approaches and analyze their impact on the American curriculum and educational system.

In the 1920s, the idea of progressive education and implicitly of a progressive curriculum based on the needs and interests of students began to spread. The concept of progressive education materialized in the United States through the *Eight-Year Study* project, between 1932 and 1940. The project involved 30 American high schools that were to prepare students in the spirit of progressive education through new programs

that encouraged educational values and practices such as "problem-solving, creativity, self-directed study, and more extensive counseling and guidance for students" (Parkay, 1993, p. 319). The main problems of secondary education in the United States identified by the commission in charge of the project were related to the primary purpose of high schools, inadequate preparation of students for future social responsibilities, and the main disciplines included in the traditional curriculum were no longer relevant (Aikin, 1942).

During this period, the influence of John Dewey is observed through the propagation of instrumental rationality, or the term "inquiry" – which Dewey (1938) uses, meaning the use of thinking to solve encountered problems. Thus, the American curriculum moves away from the traditional vision, where the emphasis was on memorization, and shifts towards a modern vision where the focus is on the student. This idea is also found in Max Weber's work *Science as a Vocation* where the author states that the most challenging pedagogical task is to make the student think independently about scientific problems (Weber, 1946).

The main difference between Dewey's approach and the approaches in the movements we are about to discuss is as follows: besides the instrumental aspect of education, namely the relationship between means and ends as defined by Weber, Dewey also considered value rationality – the intrinsic motivations of students. In contrast, the social efficiency movement and the standards movement focused solely on the instrumental aspect – the relationship between methods and objectives in Bobbitt and Tyler's work.

This demonstrates what I presented earlier – Dewey promoted practical rationality (which includes instrumental rationality and value rationality), while Bobbitt and Tyler promoted instrumental rationality, oriented towards efficiency.

Simultaneously with progressive education, the movement called Social Efficiency emerged. This movement was based on Thorndike's idea that there are "scales for everything in human nature" (Thorndike, 1910, p. 4). Thus, by supporting these ideas, along with several curriculum theorists, including Bobbitt and Tyler, state control over education was intensified by establishing objectives that schools had to meet.

In the theory of social efficiency, both Bobbitt and Tyler, who adopted the idea of "scientific technique" from him, argue that educational objectives should be understood as the future social performances of the students. In this sense, the curriculum had to be developed considering the future roles that students would have as adults (Kliebard, 2002).

The influences of this movement can be observed in several legislative decisions and reports throughout the 20th century, such as the *Smith-Hughes Act* (1917) – which supported vocational education, and the *Cardinal Principles of Secondary Education*

(1918) – which supported the idea that students should know their role in society and choose the appropriate career (Raubinger, Rowe, Piper & West, 1969).

During this period, a rational-instrumental approach can be identified, which in the American specialized literature was called scientific instrumentalism – which implied developing the curriculum as a tool working towards its unrelated goals (Schiro, 2013).

In early 20th-century North American curriculum reforms, rationalization appears in the specialized literature in the form of the term Taylorism. "Applied to the school system, scientific management meant an increased focus on cost accounting, empowering superintendents to use their discretion to increase the productivity of teachers and the system as a whole, and using measurement and testing to compare, improve and standardize practice across districts" (Mehta, 2013b, p. 11).

Here, we observe a very important difference between pedagogical progressives (represented by Dewey) and administrative progressives (represented by Thorndike): in Dewey's progressivism, reforms were based on practical rationality, where the focus was on the needs of the students, while in administrative progressivism, promoted by Thorndike, the emphasis was on efficiency, thus on the process of rationalization. In Dewey's progressivism, the real impact in schools was very small, while Thorndike's progressivism or the rationalization of education had a large-scale impact (see Kliebard, 2002).

From 1930 to 1950, the social reconstruction movement emerged in North American education as a result of the Great Depression and World War II. This movement was supported by George Counts, a harsh critic of progressive education. The reconstructivist philosophy of education posited that students should be trained in civic spirit to become competent citizens and contribute to the welfare of society (Kliebard, 2002).

However, the impact of this movement was small in American schools, incomparable to the efficiency-based reforms rooted in Bobbitt and Tyler's theories (Kliebard, 2002).

The period from 1950 to 1960 represented a return to mental disciplines for North American education. During this period, a series of curricular and educational reforms took place. In the context of the Soviet Union launching the Sputnik satellite in 1957, North American curricular reforms needed to respond to the need for disciplines such as "mathematics, sciences, modern languages" (Parkay & Stanford, 1999, p. 362). Several studies published during that period, including one with a suggestive title "What Ivan Knows That Johnny Doesn't," showed that the North American student was less well-prepared than the student from the Soviet Union in terms of "reading, writing, and mathematics skills" (Urban & Wagoner Jr., 2009, p. 336).

Kliebard (2002) observes that in the 20th century, there was a tendency among Americans to believe that any social problem, including the aforementioned inferiority to

the achievements of the Soviet Union, could be attributed to schools and could be solved through a curriculum adapted to the situation.

In this sense, several curricular reforms took place in the following period. The most important document marking the post-Sputnik period is the *National Defense Education Act* (1958), which allocated funds for the development of STEM education (Science, Technology, Engineering, and Mathematics) (Wissehr, Concannon & Barrow, 2011).

The post-Sputnik period is also referred to in the specialized literature as *The Push for Excellence movement*, as the introduction of standards and rigorous disciplines sought excellence, promoting terms such as accountability and standards. In this context, the Rockefeller Report – officially titled *The Pursuit of Excellence* (1957) – created significant reactions, calling for prioritizing scientific education, more rigorous courses for gifted students, and the reorganization of teaching objectives and methods (Herold, 1974).

Wise (1977) observed during this period, with reference to Weberian theory, a "hyper-rationalization" of education. He argued that educational policies based on hyper-rationalization were not effective: school objectives were set politically and imposed on teachers, most teachers did not teach in a way that maximized test results, and they transformed general objectives into personalized ones.

In the traditional vision, the American political factor was limited to setting inputs (school budgets, teacher qualifications, etc.), while in the hyper-rationalized approach, politics also imposed school results, set literacy limits, and defined teaching processes (Wise, 1977).

North American education was thus under pressure to introduce more rigorous disciplines and precise standards and objectives in the curriculum. Following this conclusion, in the early 80s, William J. Bennett, the U.S. Secretary of Education at the time, introduced the idea of a "core curriculum," aimed at introducing "a rigorous academic core curriculum for all students" (Parkay & Stanford 1999, p. 363).

Under this imprint of rationalization or hyper-rationalization described by Wise (1977), the 1983 report *A Nation at Risk* emerged, which was essentially an expression of the introduction of standards in the North American curriculum. The report appeared in the context of the Cold War and, based on statistical analyses, such as those showing that SAT test scores were lower than in the 60s, found that the efficiency of American education was below that of many competing countries (U.S. National Commission on Excellence in Education, 1983).

The report was based on guidelines such as introducing rigorous and measurable standards, comparing school results in the U.S. with those of other countries, and once again, the issue of excellence was addressed in a curriculum reform movement (U.S. National Commission on Excellence in Education, 1983).

A Nation at Risk was essentially an expression of instrumental rationalism, as the report's objectives were primarily based on an economic conception – the school is responsible for the performance of society, and this performance "should be measured by external tests" (Mehta, 2015, p. 20).

Mehta (2015) shows that the hyper-rationalized approach mentioned by Wise (1977) was also present in this report and emphasizes that "policymakers must empower educators to learn and grow rather than seek to control them" (Mehta, 2015, p. 26).

However, American curriculum reforms have maintained this hyper-rationalized approach, based on standards and external objectives to schools, into the following century. Standards refer to both student performance and curriculum content. Several initiatives have been taken in this regard by various American administrations: *No Child Left Behind* (2001) - George W. Bush, *Race to the Top* (2015) - Barack Obama.

The guiding principles of the Bush administration through *No Child Left Behind* included: setting standards regarding what students should know and learn in each state; standardized testing of students; recording annual progress for each state, analyzing differentiated tests of students from disadvantaged groups (economically, racially, or with disabilities); publicly reporting individual school results; and sanctioning schools that fail to make annual progress (Parkay, Anctil & Hass, 2006, pp. 227-228).

Barack Obama's plan, *Race to the Top*, introduced new ideas such as: centralizing teaching through common national standards (including curriculum materials); annual standardized testing; privatizing education through charter schools (Onosko, 2011, p. 2).

All these approaches based on social efficiency, preparing students for future social roles, and standards leading to this efficiency are expressions of what Max Weber called the rationalization of education, meaning that the process of education aims more at creating a "specialist" rather than a "cultivated individual" (Weber, 1949). Thus, curriculum reforms in the second half of the 20th century and those that followed in the next century confirm what Dewey (2001) said: the curriculum model imposed from the top down on teachers is automatically replicated on pupils: "adaptation to external purposes becomes confused if intrinsic meaning is not recognized" (p. 114).

5. Results

Based on the research questions: "how is the term rationalization of education perceived in North American literature?", "how has the rationalization of education manifested in the context of curriculum reforms in the 20th century?", "which types of Weberian rationality are found in 20th-century curriculum reforms?", the literature review yielded the following results:

- Within the Social Efficiency movement, instrumental rationality appears in the form

of scientific instrumentalism or Taylorism.

- During the reforms prompted by the Sputnik moment and the Push for Excellence movement, there was observed a hyper-rationalization of education through the influence of politics on curriculum reforms.
- Within the Standards movement catalyzed by the *A Nation At Risk* report, there was noted the presence of instrumental rationality driven by school accountability aimed at economic development vis-à-vis competing nations.
- Considering Weberian types of rationality, the study of American curriculum reforms in the 20th century indicated a tendency toward practical rationality (which includes instrumental rationality and value rationality) in Deweyan approaches emphasizing efficiency on one hand and intrinsic student values on the other. Subsequently, there was a shift toward instrumental rationality oriented toward educational objectives, social efficiency, and eventually educational standards.

John Dewey's ideas, such as student-centered learning, problem-solving, and inquiry, were largely disregarded in 20th-century curriculum reforms. Instead, emphasis was placed on rationalizing education and the progressivism of Thorndike and Taylorism, which advocated for social efficiency principles.

The Weberian term rationalization of education could be found in the American context in the early 20th century under labels such as scientific instrumentalism or Taylorism. Social efficiency movements established the framework of educational rationalization by introducing external standards and educational objectives. Curriculum became a primary tool for preparing students for future social roles, aligning with ideas promoted by Bobbitt and Tyler. Thus, 20th-century curriculum reforms predominantly featured a top-down organizational approach.

The Sputnik moment sparked new curriculum reforms in North American education. The launch of the satellite by the Soviet Union in 1957 led to curriculum reforms aimed at achieving excellence and establishing rigorous disciplines and standards for American education.

Guided by the hyper-rationalization of education, the American state produced the *A Nation At Risk* report in 1983, which focused more on the social component of curriculum reform rather than on the educational needs of students in a Deweyan sense. The economic conception of schooling and the role assigned to schools to develop society economically are expressions of instrumental rationality and a utilitarian logic.

Reforms based on standards continued in the US into the following century, following the rationalized model from the 20th century.

6. Conclusions

Based on the established research questions, we find that the primary type of rationality guiding North American curriculum reforms during the 20th century and into the subsequent century has been practical rationality. This shift changed the traditional focus of education from rote memorization to education centered around objectives and standards.

Simultaneously, the rationalization and in some cases hyper-rationalization of education have shown that North American education policies have led to the creation of a top-down curriculum with imposed standards, which has not entirely generated the desired efficiency.

These effects of educational rationalization can be considered within any education system, not just the American one, given that current educational policies are based on standardization and the orientation that education must prepare students for the job market.

The differences in approach between Dewey's rationality and that of Bobbitt and Tyler show us that education should not be based solely on standards and the external efficiency of outcomes but should also consider students' motivations.

References

Aikin, W. M. (1942). *The Story of the Eight-Year Study with Conclusions and Recommendations*. New York: Harpers & Brothers.

Antonelli, G. A. (1972). Ralph W. Tyler: The Man and His Work. *Peabody Journal of Education*, *50*(1), 68-74.

Audi, R. (1999). *The Cambridge Dictionary of Philosophy*. Cambridge: Cambridge University Press.

Autio, T. (2003). Postmodern paradoxes in Finland: the confinements of rationality in curriculum studies. In W. F. Pinar (Ed.), *Handbook of curriculum research* (pp. 302-328). New Jersey: Lawrence Erlbaum Associates.

Bobbitt, F. (1918). *The curriculum*. Boston: Houghton Mifflin Company.

Bobbitt, F. (1924). *How to make a curriculum*. Cambridge, Massachusetts: Riverside Press.

Brubaker, R. (1984). *The limits of rationality. An essay on the social and moral thought of Max Weber*. London: George Allen & Unwinn.

Clitan, Gh. (2002). *Pragmatică și postmodernism. Despre jocul raționalității și presupozițiilor în abordarea metafilosofică a culturii* [Pragmatism and postmodernism: About the game of rationality and presuppositions in the meta-philosophical approach to culture]. Timișoara: Solness.

Clitan, Gh. (2003). Raționalitatea și cunoașterea pragmatică în viziunea lui Max Weber [Rationality and pragmatic knowledge in the vision of Max Weber]. *Revista Română de Semio-Logică (pe Internet)*, *2*, 7-30. Retrieved April 10, 2024, from http://www.goldenideashome.com/roslir/archiv/2003_3-4/11GhClitan2003.pdf.

Crețu, C. (2000). *Teoria curriculum-ului și conținuturile educației* [The theory of curriculum and the contents of education]. Iași: Editura Universității „Al. I. Cuza”.

Dewey (1938). *Logic: The Theory of Inquiry*. New York: Henry Holt and Co.

Dewey, J. (1902). *The child and curriculum*. Chicago: University of Chicago Press.
Dewey, J. (1998). *Experience and Education*, Illinois: Kappa Delta Pi.
Dewey, J. (2001). *Democracy and Education*. Pennsylvania: Pennsylvania State University
Dewey, J., & Dewey, E. (1915). *Schools Of To-morrow*. New York: E. P. Dutton & Company.
Dolska, O., & Lobas, V. (2021). Rationality in Education: to the question of the content component of an Academic discipline. *Science and Education a New Dimension. Humanities and Social Sciences*, *9*(45), 74-76.
Freund, J. (1968). *The Sociology of Max Weber*. New York: Vintage Books.
Garrison, J. (1999). John Dewey's Theory of Practical Reasoning. *Educational Philosophy and Theory*, *31*(3), 291–312. https://doi.org/10.1111/j.1469-5812.1999.tb0046.
Giroux, H. (1988). *Teachers as Intellectuals. Toward a Critical Pedagogy of Learning*, Bergin & Garvey Publishers.
Giroux, H. (1992). *Border crossings: Cultural workers and the politics of education*, New York: Routledge.
Habermas, J. (1984). *The theory of communicative action: Volume 1. Reason and the rationalization of the society*. Boston: Beacon.
Hatch, M. J., & Cunliffe, A. L. (2013). *Organization theory: modern, symbolic and postmodern perspectives*. Oxford: Oxford University Press
Henriks, T. S. (2016). Reason and Rationalization: A Theory of Modern Play. *American Journal of Play*, *8*(3), 287-324.
Herold, J. (1974). Sputnik ln American Education:A History And Reappraisal. *McGill Journal of Education, 9*(002), 143-164.
Ilie, M., Țîru, C., Petrescu M., Domilescu G., Harkai M. & Strungă C. (2013). *Teoria și metodologia curriculumului* [The theory and methodology of curriculum] (2nd ed.). Cluj: Eikon.
Kalberg, S. (1980). Max Weber's Types of Rationality: Cornerstones for the analysis of rationalization processes in history. *The American Journal of Sociology*, *85*(5), 1145-1179.
Kliebard, H. M. (1979) The drive for curriculum change in the United States, 1890–1920. Part I - the ideological roots of curriculum as a field of specialization. In J. R. Gress (Ed.), Curriculum: framework, criticism, and theory (pp. 67-81) Richmond, CA: McCutchan Publishing Corporation.
Kliebard, H. M. (2002). *Changing Course: American Curriculum Reform in the 20th Century*. New York: Teachers College Press.
Laanemetes, U., & Kalamees-Rubel, K. (2013). The Taba-Tyler Rationales. Journal of the American Association for the Advancement of Curriculum Studies, *9*, 1-12.
Mehta, J. (2013a). *The Allure of Order: High Hopes, Dashed Expectations, and the Troubled Quest to Remake American Schooling*. New York: Oxford University Press.
Mehta, J. (2015). Escaping the Shadow A Nation at Risk and Its Far-Reaching Influence. *American Educator*, *39*(2), 20-44.
Mehta, Jal. (2013b). The Penetration of Technocratic Logic into the Educational Field: Rationalizing Schooling from the Progressives to the Present. *Teachers College Record 113* (5), 1-40.
Mitchell, G.D. (1968). *A Dictionary of Sociology*. London: Routledge and Kegan Paul.
Null, W. (2011). *Curriculum: from theory to practice*. Maryland: Rowman & Littlefield Publishers.
Onosko, J. (2011). Race to the Top Leaves Children and Future Citizens Behind: The Devastating Effects of Centralization, Standardization, and High Stakes Accountability. *Democracy and Education*, *19*(2), 1-11.
Parkay, F. W. (1993). Curriculum Reform: Past and Present. In G. Hass & F. W. Parkay (Eds.), *Curriculum planning: A New Approach* (pp. 317-323). Boston: Allyn and Bacon.
Parkay, F. W., & Stanford B. H. (1999). *Becoming a teacher*. Boston: Allyn and Bacon.

Parkay, F. W., Anctil, E. J., & Hass, G. (2006). *Curriculum planning: A Contemporary Approach*, Boston: Pearson Education.

Pourtois, J. P., & Desmet, H. (1997). *L'education postmoderne* [Postmodern education]. Paris: Presses Universitaires de France.

Raubinger, F. M., Rowe, H. G., Piper, D. L., & West, C. K. (1969). *The development of secondary education*. New York: Macmillan Co.

Ritzer, G. (2003). *McDonaldizarea societăţii* [The McDonaldization of society]. Bucureşti: comunicare.ro.

Ritzer, G. (2010). *Sociological Theory*. New York: McGraw-Hill.

Schiro, M. (2013). *Curriculum Theory: Conflicting Visions and Enduring Concerns*. California: SAGE.

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines, *Journal of Business Research*, *104*, 333-339. https://doi.org/10.1016/j.jbusres.2019.07.039.

Thorndike, E. (1910). *Educational Psychology*. New York: Frank H. Evory & Co.

Tyler, R. (1949). *Basic principles of Curriculum and Instruction*. Chicago: University of Chicago Press.

United States. National Commission on Excellence in Education. (1983). *A nation at risk: the imperative for educational reform*. Washington, D.C.: The National Commission on Excellence in Education

Urban, W., & Wagoner, J. (2009). *American Education: a history*, New York: Routledge.

Weber, M. (1946). Science as a Vocation. In. In H. H. Gerth & C. Wright Mills (Eds.), From Max Weber: Essays in sociology (pp. 129-156). New York: Oxford University Press.

Weber, M. (1946). The social psychology of the world religions. In H. H. Gerth & C. Wright Mills (Eds.), *From Max Weber: Essays in sociology* (pp. 267-301). New York: Oxford University Press.

Weber, M. (1949). Rationalization of education and training. In H. H. Gerth & C. Wright Mills (Eds.), *From Max Weber: Essays in sociology* (pp. 240-244). New York: Oxford University Press.

Weber, M. (1978), *Economy and society. An outline of interpretive sociology*. Los Angeles: University of California Press.

Williams, M. K. (2017). John Dewey in the 21st Century. *Journal of Inquiry and Action in Education*, *9*(1), 91-100.

Wise, A. (1977). Why educational policies often fail: The hyperrationalization hypothesis. *Journal of Curriculum Studies*, *9(*1), 43-57.

Wissehr, C., Concannon, J., & Barrow L. H. (2011). Looking Back at the Sputnik Era and Its Impact on Science Education. *School Science and Mathematics*, *111*(7), p368-375. https://doi.org/10.1111/j.1949-8594.2011.00099.x