Correct characteristics of the newly involved artificial intelligence methods in science and technology using statistical data sets

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Abstract

Thus, the study of motor actions requires the analysis of motor behaviors, that is to say “the significant organization of motor behavior” of the subject and the various relationships that the subject has with time, space, material and others. All of these relationships reveal the elements of uncertainty that will characterize the motor situation studied. Figure 1

Objects of study of motor action

Parlebas distinguishes two major forms of uncertainty: those related to the physical environment and those related to the behavior of others. The physical environment as well as the behavior of others offer a multitude of stimuli to a practitioner during a motor task. This creates unpredictability as to the actions to be performed and requires the practitioner to process information from the physical environment and the behavior of others to adapt his actions. Parlebas addresses this informational dimension of motor action and the participant’s need to adapt to a predefined environment, also qualified as “domestic”, as in a large number of sports disciplines. Adaptation to the physical environment is found in motor situations that we qualify as psychomotor.

I. Background

This adaptation to the behavior of another person, singular or plural, requires adjusting as much to partners as to potential adversaries. For this, we must decode and understand their intentions, while concealing his own intentions in order to deceive the opponent. These communication and counter-communication actions are characteristic of socio-motor situations. Famose differentiates between the uncertainties of an event nature, of a temporal nature and of a spatial nature. These three forms of uncertainty relate to the dimension of the physical arrangement of the motor task of bioinformational nature. For Terrisse, knowledge in judo fight is positioned to the articulation of knowledge already there, elements of decisions born from the relationship between teacher and learner before combat and undecidable elements that result from the unpredictability of combat and adaptation from learner to adverse behavior. Clment proposed to study combat activities based on guard distances, using the association made by Parlebas between the degree of violence in activities and the guard distance. On this basis, wrestling and judo activities, which have a closer guard distance, would be activities that allow a higher degree of violence than combat activities with longer guard distances, such as boxing, aikido or even fencing. Clment goes further by associating the on-call distance with a process of euphemization of violence and aestheticization of the activities that we observe between wrestling, judo and aikido. Parlebas classified combat sports in the category of activities with a defined environment, without partner and with adversary, which does not reflect the diversity of motor situations that are currently found.

To meet the need to offer beacons in order to design a combat driving situation in accordance with the Training program of the Quebec school, it is necessary, on the one hand, to list the reference practices of combat activities as combat driving situations and characterize them and, on the other hand, to identify elements necessary to characterize the motor combat situations usable with the physical education and health program. Theoretical approach for the characterization of reference practices in a motor combat situation As demonstrated above, combat activities do not constitute a uniform category of activities. They rather designate several reference practices which take the form of different motor situations. The presentation of these different motor situations is made below to complete the classification initially carried out by Parlebas.
II. INTRODUCTION

To make recommendations regarding the use of combat activities in physical education and health valid in the Quebec curriculum context, guidelines are determined as to the constituent elements of a combat driving situation: a) definition of internal logic specific to combat situations and possibilities, b) definition of the relationship to space, c) definition of the relation to time, d) definition of the relation to the material, e) definition of the relation to others and f) definition of the relation to the standards. This last element is added to the classification of Parlebas to better describe the framework of values and norms which regulates the combat situation. The importance of the framework of values and norms in combat activities will be explained below as a founding element for ”martiality” and bringing added value to these activities.

All these elements make it possible to characterize and differentiate the combat situations between them. This last element is added to the classification of Parlebas to better describe the framework of values and norms which regulates the combat situation. The importance of the framework of values and norms in combat activities will be explained below as a founding element for ”martiality” and bringing added value to these activities. All these elements make it possible to characterize and differentiate the combat situations between them. This last element is added to the classification of Parlebas to better describe the framework of values and norms which regulates the combat situation. The importance of the framework of values and norms in combat activities will be explained below as a founding element for ”martiality” and bringing added value to these activities. All these elements make it possible to characterize and differentiate the combat situations between them.

The diversity of driving situations that are combat activities in the early 21 th centuryIn the 20 th century, a large number of combat activities, from traditional practices or not, have been codified in various bases. Since the 2000s, with competitions like the Ultimate Fighting Championship in the United States or Pride in Japan, there has been a hybridization of combat techniques and the development of a new form of spectacularization which led to the creation of mixed martial arts or mixed martial arts. Combat activities can no longer be reduced to the individual sports represented at the Olympic Games or in large international federations. Indeed, combat activities do not form a homogeneous whole of activities. Theeboom and De Knopp, for example, propose a conceptualization of the various Asian martial arts.

They distinguish them according to whether they are part of a traditional approach of unification and coordination of body and mind, in an efficiency approach with the aim of defending oneself and surviving an aggression or in a sports approach with the intention of seeking efficiency and improving performance in the context of competition. This conceptualization overlaps in some respects those offered by Johnson and Ha as well as by Nakiri. For Johnson and Ha, combat systems have been developed to allow categories of specialized practitioners such as police, military, members of the security services, etc. ensure their defense and, ultimately, their survival or that of third parties by reacting effectively to attacks in so-called ”wild” environments, that is to say in unmanaged situations, such as areas of everyday life.

A typical environment for self-defense does not exist, because any place can become the scene of aggression. Relying on unarmed combat techniques or with weapons, martial arts would rather seek, according to Nakiri to participate in the personal and global development of the participants, while combat sports would consist of competitive activities based on codified combat techniques, applied in regulated and standardized sports settings. The arts of combat would include the notions of martial arts, combat sports and even that of A typical environment for self-defense does not exist, because any place can become the scene of aggression. Relying on unarmed combat techniques or with weapons, martial arts would rather seek, according to Nakiri to participate in the personal and global development of the participants, while combat sports would consist of competitive activities based on codified combat techniques, applied in regulated and standardized sports settings.

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Thus, combat sports activities can give rise to psychomotor or sociomotor situations which sometimes include a opponent or opponents. The study of the characteristics of the relationships between weapons and targets of the subjects can supplement the eventual uncertainties linked to the adversary. Thus, some disciplines use percussion, grasping or projections with natural or artificial weapons, in different ways. Motor situations of a sporting nature have an internal logic to establish the domination of a subject over his adversary through combat. The internal logics of self-defense activities, in which the purpose is to preserve one’s integrity in the face of aggression, are different, because they seek emancipation rather than a form of domination. In the more traditional perspective of combat activities and practices of codified sequences, the internal logic is centered on the motor expression of combat. Elements constituting motor combat situations in a Quebec context. We propose to define in general terms the general internal logic of any combat driving situation as.

The connection of a subject’s physical or artificial weapons with targets of another fictitious, symbolic or real subject, either to establish a relationship of domination, or to establish a relationship of emancipation of a subject from to another subject, or to favor the fighting motor expression of the subject vis–vis a symbolic, fictitious or real subject. This conceptualization of the internal logic of combat situations is intentionally general. It is up to the teacher to specify it to adapt it to the motor situation he wants to create. Here, a weapon designates any part of the body or artifact extension of the subject’s body which will be used to act on the targets of its opponent. We can distinguish different types of artificial weapons, natural or mixed. Natural and artificial weapons are extensions of the body; shooting weapons are not retained here, which excludes paintball, archery dodgeball practices or competitions, etc.

Thus, a weapon can be the propelled fist, the hand which grasps, the leg which blocks, the arm which strangles, the point or the edge of the blade of the saber which strikes a target, etc. The target, which is targeted by an action of the subject using a weapon, will correspond to any part or artifact extension of the opponent’s body or to the object symbolizing an opponent. It can be, for example, the face that we are trying to strike, the part of the judogi that we are trying to grasp, the elbow joint that we are trying to constrain, the blade of the saber that is struck in order to then access the opponent or the bag of strikes that is struck. Targets are constrained when they are regulated, and free when all parts of the body can be affected. There can be different degrees of freedom of action on targets, but for the sake of simplicity, we will limit ourselves to the typology of constrained or free targets. The logic of domination supposes the establishment of a balance of power from one subject to another. Emancipation supposes the suppression or the reversal of a balance of power exerted by one subject on another.

The relationships of domination and emancipation are part of socio-motor situations where communication and counter-communication between subjects achieves the objective. Situations with a logic of domination and emancipation can be classified as means of action within disciplinary competence 2. The logic of fighting motor expression, through the realization of more or less codified gestures or sequences vis–vis a subject, fits into psychomotor or sociomotor situations depending on the nature individual or collective achievement. In the context of an individual achievement such as a coded sequence or work in a punching bag or a projection mannequin, the psychomotor situation offers a relationship with the material. This situation meets the specific objectives of disciplinary competence 1 of the Quebec School Training Program. In the context of a motor situation involving a collective production such as a codified sequence in a team or a theatrical simulacrum of combat as in professional struggle, the situation is sociomotor, because its realization supposes communication between partners. It will be considered as a cooperative activity within disciplinary competence 2. Once the internal logic has been defined, it is important to determine the different relationships that practitioners can have with the elements of the combat situation.
Indeed, the subject’s relationships to the normative framework, to the environment, to time, to space and to others make it possible to define the forms of uncertainty that characterize this situation. To do this, several benchmarks must be determined. Clarifying the uncertainty linked to space requires differentiating domestic environments from so-called wild environments. The first type of environment includes all practices comparable to sports. There is a space which is defined, arranged and delimited spatially according to the standards of the institution which governs the combat activity. In the second type of environment, we find martial or self-defense activities. As we have already mentioned, in the context of these, any environment can be a theater of aggression, so that it cannot be predefined. To clarify the uncertainty related to time, it is necessary to determine whether the combat driving situation has a defined or indefinite time. In the case of a situation whose time is defined, a distinction must be made whether it is continuous or discontinuous. To clarify the relationship to the material, it is necessary to establish which artefacts will be used to be targets protecting or representing the opposing subject.

There are artificial body targets, such as protective breastplates, helmets, etc. These are devices in contact with bodily targets that are there to protect them in the event of an attack. There are also artificial non-bodily targets which are devices representing targets on which to act. We can think of the bag of strikes, in particular, or the projection mannequin. To clarify the relationship with others, we must distinguish the relationship with partners and the relationship with the adversary or adversaries, as in the case of a randori in aikido or in that of a self-defense situation involving several attackers. To clarify the uncertainty linked to partners, it is necessary to determine whether there is a relationship with a partner or not. In the context of a relationship with a partner, the partnership temporality can be concomitant or successive. To clarify the uncertainty of a report to one or more adversaries, it is necessary to define the characteristics of the weapons and bodily targets. We must distinguish the type of weapon-target relationship as being symbolic or effective.

The weapon-target relationship is considered effective when it is possible to undermine the integrity of one’s adversary. This is the case with the search for knockout or painful hitting in boxing and strangulation or joint dislocation in judo or aikido. The relationship is considered symbolic when the weapon hits the target or not without seeking to undermine the opponent’s integrity. These are touch practices, like in Shotokan karate, fixed assets, as in wrestling and judo as well as seizures and projections in aikido of demonstration, which seek only to get the pinfall of the opponent. The last element proposed is the form of weapon-target relationship. This relation can consist in a percussion, that is to say in the transmission of a shock wave by a more or less intense and brief pressure of the weapon on the target according to the requirements of the situation. It can consist of a grip when the weapon grabs one of the targets of the opponent or exerts a long pressure of the push type on one of them. Finally, it can consist of a projection when the acting subject uses the grip and takes advantage of the energy deployed by the opponent in his engagement towards her to destabilize her and send her to the ground.

Certain combat activities make it possible to combine percussion, gripping and projection actions; that is why they will be considered mixed. The report on standards asks to identify the framework of values and standards that governs combat activity. It includes elements such as values, which define what is right or wrong, and objects and subjects of authority, which define what is authorized and prohibited. The values transmitted can be respect for others, the quest for non-violence, as in aikido, or the Olympic spirit. The objects of authority may be, for example, the regulatory system of a sports federation; the civil or criminal code during a confrontation on the street; martial law in the case of a military operation; the house rules put in place by a physical educator. This relationship to standards can take different forms: undefined, DiscussionBased on the considerations presented, it is now possible to formulate guidelines and make recommendations regarding the use of combat activities during physical education and health classes in a Quebec context.

The definition of internal logic operated by the teacher requires choosing between a logic of domination, emancipation or motor expression. The logic of domination is specific to opposition activities which seek victory. The logic of emancipation, which seeks to break or reverse a relationship of domination, is more specific to activities such as self-defense. The logic of motor expression, on the other hand, is specific to more choreographic activities or physical fitness training. The teacher could use a normative system defined explicitly and formalized in writing, and should not be content with an oral, non-contractual system. She or he can take over the sporting regulations for an activity, but will have to adapt it. One of the added values of combat activities is the use of a framework of values and standards. Raising awareness of values about what is right and wrong and what to do and what not to do with violence, bullying, use of physical force is particularly important in these activities. The teaching of these norms and values is the founding stone of the martiality of combat activities and of the educational character of these motor situations. To build a relationship with space, the environment needs to be domesticated, adapted and arranged in such a way as to locate and protect the student. In the construction of the relation to time, it does not seem interesting to resort to discontinuous situations with rest periods of fixed and fixed duration.
These characteristics are elements intended to prolong the duration of combat situations during boxing matches or in other sports contexts. In the case of the report to the material, it seems interesting to use artificial non-bodily targets with a logic of production of driving behaviors. The use of artificial bodily targets will be indicated in the case of situations carried out according to the logic of domination or emancipation. Artifacts that provide an extension of bodily targets are relevant for not directly engaging bodily targets. As for them, artificial body protection targets are to be avoided, especially with beginners, except for fencing type helmets. If they participate in the protection of the protagonists during a situation with an adversary, they also contribute to creating an impression of security which can allow the lack of control of actions or the carrying out of actions with high levels of commitment, which may cause accidents. In building relationships with others, it seems important not to use situations that lead to a relationship with a partner who is part of the logic of domination and emancipation. For the report to the adversary, it is essential to force the weapons to use.

The use of physical or artificial weapons is not a problem as long as they are safe. You must glove your fists, check the tips of the foils or the foam protections of the sticks. However, the number of weapons that can be used should be limited to reduce the information and technical complexity of combat situations. Each target can also be constrained by specifying which weapon can hit it. For example, you touch your stomach with your fist, but not your head; the feet can touch the legs, but not the rest of the body; you can grab the opponent’s belt, but not grab the legs.

### III. Characteristics of data sets

As for the types of weapon-target relationships, we recommend using either percussion or gripping. The use of mixed practices could only be reserved for expert teachers in situations that put forward a logic of emancipation. Finally, the form of weapon-target relationship must always be symbolic. No practice aimed at efficiency should be recommended for physical education and health in a situation of domination over bodily targets. Table 2 All the elements which make it possible to define a combat driving situation in a school context according to the level of mastery of the teacher. All the elements which make it possible to define a combat driving situation in a school context according to the level of mastery of the teacher X: achievable by the teacher as part of physical education and school health; -: not achievable by the teacher e as part of physical education and school health; See the list of tables All of these recommendations lead us to propose five options for combat situations. Options 1 and 2 are intended for teachers who do not master combat activities. The first option offers work on non-physical artifact targets. In this context, these are classic training situations for physical education and health in a situation of domination over bodily targets. The second option authorizes combat situations with target bodily artifacts of extension which only allow percussion or symbolic grasping. This situation meets the objective of disciplinary competence 2 by acting on bodily artifacts or bodily targets. It will be possible to offer a set of wrestling or touchdown games on different targets. The other three options are reserved for teachers who have mastered combat activities. The third is part of a logic of motor expression using non-bodily targets mixing percussion, grip and projection. The fourth option is a situation with a logic of emancipation typical of self-defense, which allows the use of percussion, grips and projections in a combined way. The last option consists in a situation of domination which allows use of both percussion or of grasping / projection, by touching bodily targets symbolically. The debate surrounding the teaching of history in Secondary 3 and 4 has recently died down with the publication of a new program, entitled Histoire du Quebec et du Canada. This new program was developed in accordance with the curriculum recommendations issued by an advisory committee chaired by the sociologist Jacques Beauchemin and the historian Nadia Fahmy-Eid, whom we will refer to as the Beauchemin report.

These recommendations are based on a consultation process started in 2013 to revise the History and education for citizenship program, while respecting the recommendations of the Lacoursire report for an improved and open history. Gaps are identified with regard to its directive civic orientation, the evacuation of Quebec’s historical experience and a detachment from the narrative frameworks national intelligibility framework. In this spirit, Vaugeois considers that this program of studies, by adopting a moralizing tone in matters of citizenship, would have moved away from the curricular recommendations put forward by the Working Group on the teaching of history, in what it is agreed to call the Lacoursire report. In the same vein, Sarra-Bournet notes that "he real problem is the subjugation of history to education for citizenship", which would compromise the defined role of cultural transmission by the recommendations of the Task Force on Curriculum Reform, commonly referred to as the Inchausp report. According to this author, the curriculum recommendations formulated by the Beauchemin report would thus have corrected "with intelligence" the shortcomings of the previous program.

Following this same concern for continuity, we wonder about these new curricular orientations announced by the
The competency-based approach, second, opposes humanism, aimed at integrating a cultural heritage, to utilitarianism which specifies intentions in terms of education, training and learning. They are formulated according to what poses a problem for researchers, professional associations or commissions mandated in this regard. In addition, they describe an ideal for learning and education, based on a system of theoretical values, standards and principles. Unlike the study programs which are written by a more or less hermetic circle of education specialists, the curriculum recommendations correspond to a discussion interface between the different groups outside the school system.

To do this, we will first situate the theoretical context of this content analysis, so as to secondly justify our methodological choices. The results of the analyzes will be presented and discussed in a third and fourth step. Theoretical context: curriculum recommendationsDefinitions of the curriculum construct vary according to research and intervention uses. In the context of this analysis, we will target curriculum recommendations, paving the way for the production of the official curriculum, which specifies intentions in terms of education, training and learning. They are formulated according to what poses a problem for researchers, professional associations or commissions mandated in this regard. In addition, they describe an ideal for learning and education, based on a system of theoretical values, standards and principles. Unlike the study programs which are written by a more or less hermetic circle of education specialists, the curriculum recommendations correspond to a discussion interface between the different groups outside the school system.

From this point of view, they are the expression of the voices of actors, pressure groups, professional associations and opinion leaders seeking to be heard in the media to guide public policies. These recommendations are generally - but not necessarily - supported by curriculum and teaching practice research. The curriculum recommendations correspond to a discussion interface between the different groups outside the school system. From this point of view, they are the expression of the voices of actors, pressure groups, professional associations and opinion leaders seeking to be heard in the media to guide public policies. These recommendations are generally - but not necessarily - supported by curriculum and teaching practice research. The debates on the teaching of history are all examples of the political stake of its curricular recommendations for the groups interested in orienting them. This is the case of History Wars in the United States described by Wineburg, in reaction to the recommendations of the Bradley commission. Groups have campaigned for state legislation in favor of knowable, teachable, and testable content. These authors, referring to the model of Seixas, associate the political action of these groups and leaders with the preservation of the collective memory. This system of values and principles is distinguished from those based on the methodological norms of the historical discipline, promoted by a large part of the historical community and by the teaching community, or the rejection of discourses established from a philosophical perspective of deconstruction. Lemieux offers a model directly developed from the Quebec situation.

Better suited to our purpose, it discerns relatively stable systems of standards and principles based on five fundamental issues, defining as many axes of opposition. The first axis concerns identity referents, who put nationalism and multiculturalism in tension, between the expression of a national feeling and the political recognition of different cultural communities. The competency-based approach, second, opposes humanism, aimed at integrating a cultural heritage, to utilitarianism geared towards acquiring the means to meet social and economic needs. Thirdly, the question of change oscillates between the wisdom of tradition recognized by conservatism and the ideal of progress and individual freedom promoted by liberalism. Fourth, the content opposes that of a national history, describing the web of events attesting to the permanence of the
national fact, and a social history analyzing the structure of social phenomena. Fifth, pedagogy expresses a theoretical tension between magistrocentrism and pedocentrism, attributing learning respectively to the memorization of knowledge by lectures and to the pupil’s independent activity mobilizing his cognitive and motivational resources.

IV. Data sets used in this research

These systems of values and principles will be explained in the next subsections to contextualize the curricular recommendations analyzed according to these criteria defined by Glatthorn, Boschee, Whitehead and Boschee, namely: a) an analysis of the situation; b) theoretical elements; c) training aims; d) content and the teaching-learning process. 2.1 An analysis of the situation

Curriculum recommendations are based on the description of a problematic situation. In this regard, the pedagogical renewal is characterized by public consultations and educational reforms for better enrollment of students at all levels of education, in a referendum context on Quebec sovereignty and upheavals marked by globalization. Curriculum reform guidelines are formulated with the report of the Task Force on Elementary and Secondary Education Profiles - or Corbo report. The latter introduces the idea of “learning areas” to organize the academic knowledge to be acquired at the end of primary and secondary education. The same year, the Parti Quebecois was elected and, in accordance with its commitments, set up the Estates General on Education. Its recommendations lay the foundations for pedagogical renewal, which would be tinged with those of the Delors report campaigning for teaching based more on the learning of learning strategies. The description of the situation by the Inchausp report builds on these premises to document the curriculum reforms carried out in Quebec and abroad. In this regard, without overshadowing cognitive and cultural purposes, its recommendations will defend a primarily utilitarian purpose by opting for a skills-based approach. They will set the benchmarks for the development of programs, including that of History and education for citizenship. At the same time, the Working Group on History Teaching chaired by Jacques Lacoursire was set up.

This initiative would firstly be due to the political will of the PQ government. According to actors in this group interviewed by Lemieux, the reading of the situation would have been less nationalist than liberal, multicultural and pedocentric. A reform of the teaching of history is justified by the diversification of Quebec society and globalization. This requires preparing students to use social history to understand social change and participate in deliberations in a democratic spirit. The debate on the teaching of history that raged between 2006 and 2013 will set the tone for the analysis of the situation in the Beauchemin report. The latter will deplore "obliteration of the national fabric and of the memory role of history", as well as the utilitarianism of the approach by skills, qualified as "Radical". This description then appears consistent with the reading of the Coalition for History created in 2008 supported by opinion leaders such as Mathieu Bock-Ct and by various organizations, this coalition will focus its political action on investigations and persuasion campaigns aimed at promoting national history and questioning the utilitarianism and pedocentrism attributed to the program. This review of the situation analyzes invites us to focus on the curriculum recommendations put forward by the Lacoursire, Inchausp and Beauchemin reports. Those of the first two reports were the most proximal in the production of the History and Education for Citizenship program.

The Inchausp report does not relate to the teaching of history, but certain parts, invoked in the debate on the teaching of history, relate specifically to national history. Furthermore, our methodological approach, presented in the next section, commands choices with regard to the corpus. It may be tempting to aggregate all of the available documentary masses, but it is first of all language usage that must preside over its constitution. This is the reason why neither the report of the Estates General - which does not present curriculum recommendations, but lays the foundations for pedagogical renewal, nor the report Corbo - who made such recommendations, but prior to this renewal, were not retained for the purposes of this analysis. 2.2 Theoretical elements drawn from curriculum research

Curriculum recommendations can be supported by research knowledge in curriculum and teaching practice. The authors of the Inschausp report make abundant reference to this knowledge. In addition to the work of the Commission for the Estates General and the guidelines of the Orange Book, they obtained an opinion from the Higher Council for Education and an analysis of the Organization for Economic Cooperation and Development. The Lacoursire report proposes a similar approach, taking stock of the teaching of history both in Quebec, since the Quiet Revolution, and abroad. The Beauchemin report calls upon scientific writings mainly to deal with the historical discipline and the skills approach. The scientific literature does not express a consensus on the link between history and education for citizenship, and it does not demonstrate the superiority of the skills approach or of constructivism. 2.3 Training aims

The Inchausp report proposes to refocus teaching on the development of intellectual skills and mastery of knowledge. Intellectual training must be based less on the transmission of disciplinary knowledge than on the development of transversal skills of an intellectual, methodological and communicational nature. Socialization must be part of a process of identity development, aimed at promoting social cohesion in a pluralistic context. It is in this spirit
that it is agreed to associate the teaching of national history with the project of wanting to live in democracy.

This defines the unifying foundation that the school must offer and is linked to that of the memory of history, which allows the social integration and emancipation from this past. The report Lacoursiere also aims at cultural, social and intellectual training. History contributes to cultural enrichment in that it promotes social literacy through the acquisition of shared historical references. History is a social formation, because it teaches the composition of Quebec society and the relationships running through it, as well as the principles and Institutions on which democratic participation is founded. In this, history is a formation that promotes openness to the diversity characterizing Quebec society, and the construction of identities that flows from it. It is ultimately an intellectual training by understanding the mechanisms of change and continuity, pertaining to disciplinary knowledge. The report Beauchemin insists rather on learning a national fabric. The issue of citizenship education is an idea "defensible only if it is understood in its most restricted sense, as an introduction to critical thinking". 2.4 Training content and indications relating to the teaching-learning process The Inchausp report does not base its choices on a disciplinary logic, but on areas of learning. History, which is part of the social universe, must allow the student to understand the "meaning of his national history" and the "functioning of society in the economic, geographic, social and political fields", in particular that of "political institutions. As for the teaching-learning process, it is recommended that teachers be given more autonomy. The Lacoursiere and Beauchemin reports deal more specifically with history teaching as a teaching discipline. The Lacoursiere report recommends multicultural education, integrating the history of non-Western societies and providing an equitable place for indigenous populations, cultural communities and English speakers. In a pedocentric spirit, the teaching-learning process should not be based on the memorization of knowledge, but aim at the development "of the intellectual and emotional capacities" of the pupil, who must "understand by himself".

V. Historical facts

The Beauchemin report rather proposes to refocus the contents around a narrative whose intelligibility is given by the national framework and the contributions of political history. It is proposed an education based on the transmission of knowledge, highlighting the "national duality" presented "as a judicious theme for the exercise of 'historical thought', insofar as it is offered as an open question to critical interrogation and plural interpretations.". This examination of the curriculum recommendations put forward by the Inchausp, Lacoursiere and Beauchemin reports made it possible to identify the main lines of our content analysis. It allows us to formulate two hypotheses. The first is that such an analysis should reveal little in common. The situations described by them are not only variable in duration, but also variable in terms of their concerns.

Our second hypothesis is that the main elements of convergence are likely to be identified for the Lacoursiere and Inchausp reports, dealing exclusively with history teaching and the authors of which are specialists in this disciplinary field. These hypotheses will be validated by a lexicometric content analysis, the nature and methods of which will be presented in the next part. A multidimensional lexical analysis consists in subjecting a textual corpus to statistical operations to generate a representation of its elements in the form of a point cloud. This type of analysis is appropriate to our objectives, as it allows us to identify both invariant and normally distributed concepts in a corpus of discourse, expressing a common representation or attitude, and concepts specific to individual, associated contributions to as many specific speeches.

The invariant concepts associated with a common representation make it possible to describe the characteristics of a specific social group for a teaching discipline. Otherwise, certain concepts, which are the fact of one or the other of these authors, will have a contribution to this cloud of points higher and will make it possible to characterize distinct positions, even opposite. This method of analysis will allow us to validate our hypotheses by identifying common elements and specific contributions. We subjected the data to a factorial analysis of correspondences, calculating the algebraic distances between all the lexical forms of a corpus and the subjects constituting it. It thus makes it possible to identify variations and to define proximity between them. The concentration of words in the point cloud makes it possible to describe a group discourse. If necessary, it will be possible to confirm or reject our first hypothesis that there are few common elements.

The details relating to the interpretation of the group discourse and the specifics will be explained in the next subsections, after having specified the nature of the corpus and the instrumentation. 3.1 Constitution of the corpus The corpus was developed by carrying out two operations. The first operation consisted in transcribing the content of the Lacoursiere, Inchausp and Beauchemin reports, the transcribed pages of which are presented in Table V. In the case of the Lacoursiere and Beauchemin reports, the full content of the texts and tables subject of this transcription, with the exception of the tables of contents. In the case of the Inchausp report, however, it was necessary to make a selection, because large portions
deal with objects distinct from the teaching of history or the social universe. To do this, we used the criteria proposed by Glatthorn, Boschee, Whitehead and Boschee as a reading grid. In addition to the table of contents, the pages dealing with the qualification mission, other learning areas and the management of study programs have been excluded from the corpus.

Table 1: Pages selected and discarded in the transcript of the Lacoursire, Inchausp and Beauchemin reports

| Pages selected and discarded in the transcript of the Lacoursire, Inchausp and Beauchemin reports | See the list of tables |

The second operation carried out for the constitution of the corpus consisted in regrouping the lexemes by appending them a hash.

This grouping was carried out according to a lemmatization standard, to preserve the unity of meaning of the words, which was intended to be little interventionist to guarantee the richness of the data, by recourse, as much as possible, disambiguation. Disambiguation consists in separating the homograph forms coming from different terms or from the same etymological origin. For example, the formation form has been joined by a sharp, depending on the context of its use in speech, to distinguish the educational training carried out by teaching the history of the formation of a committee or other process. Certain important forms, but always a little ambiguous, such as the history or past lexemes, were voluntarily removed from this disambiguation insofar as their meaning was sufficiently illuminated by their context of actualization in the discourse. The irreducible equivocity of the terms, linked to their various contexts of actualization, is the very reason for lexicometric analysis, because it is the cause of the variability and invariability sought within discourse.

3.2 Instrumentation

We used DTM-Vic software to process the transcribed data, suitable for an exploratory lexicometric approach. There are other software authorizing the use of these, but the main argument in favor of it lies in the possibility of subjecting the data to a validation process by resampling, attesting to their stability. This software carried out a segmentation operation, prior to the factorial analysis of the correspondences, to index the whole vocabulary of lexical forms of the speeches of the corpus.

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This is necessary, because the methods of lexical statistics can only be applied to general forms of the same type. This processing is automated, to preserve the database of the researcher’s arbitrariness, which is always likely to intervene when the meaning of the words appears to him equivocal or questionable.

3.3 Data analysis

A portion of the vocabulary of the corpus was subjected to a factorial analysis of correspondences according to a frequency threshold. This was stopped at

This interpretation was then completed by subjecting the most structuring forms to a validation procedure by resampling. This consists of disturbing the data by adding these lexical forms to the database, as additional variables, through the performance of 25 draws with discount. In principle, if the structuring lexical forms are stable, they will appear fairly in the same place as at the origin in the factorial plane. If not, the software will draw a projection area. This, depending on its size, will then make it possible to make a qualitative judgment on their level of stability. The software will plot a projection area. This, depending on its size, will then make it possible to make a qualitative judgment on their level of stability. The software will plot a projection area.

This, depending on its size, will then make it possible to make a qualitative judgment on their level of stability. Before presenting the results, it is important to understand that this approach to content analysis allows a preliminary description of the constituted corpus. We stress that it cannot be considered as an in-depth analysis of it. Thus, it could happen, because of the reduction of data implied by this approach, that certain elements cannot be identified. This does not mean that they are absent or sassy, it is just that the words describing them are less frequent.

The factorial analysis of the correspondences represented by figure 1, generated two axes, explaining respectively 53.16% and 46.84% of the inertia. A first look at the factorial plane reveals the presence of a relative concentration of lexical forms at the center of the point cloud, which invalidates our first hypothesis, at least partially, because there seems to be a group discourse. Figure 1: First and second axes. First and second axes. To describe this group discourse, we have identified the forms gravitating very close to the center and we have categorized them according to the criteria of analysis of curriculum recommendations. Table
VII. Results

Also less important, the question of graduation criteria draws attention to the place of history teaching in the recognition of pupils’ education. Other lexical forms pertaining to this group discourse have been identified, but they have not been categorized because of their syntactic function, distinct from lexical analysis. Finally, we note the absence of reference to theoretical elements drawn from research on the curriculum. Examination of the factorial plan effectively allows us to glimpse specificities, which seem to characterize the contributions of the Lacoursire report, but especially those of the Beauchemin report, as evidenced by the two concentrations of lexical forms located at the end of the negative portion of the abscissa and in the upper right corner of the factorial plane. Each of the two axes will be described in the next two subsections.

4.1 Axis 1: the specificity of the Beauchemin report
A first glance at axis 1, on the abscissa, illustrated by Fig. 2, reveals an opposition relationship between the contribution of the Beauchemin report and the contributions of the Lacoursire and Inchausp reports. Figure 2 Validation of lexical forms contributing to the inertia of the first axis. The most structuring forms, presented in Table 3, have been validated to test their stability. As this table reveals, the specific discourse of the Beauchemin report contributes the most strongly to the inertia of this axis, at the level of 74.2% and, moreover, it is the most distant lexical forms in the factorial plane which affect its inertia. The structuring forms located in the positive portion of this axis are mainly due to the individual contribution of the Inchausp report and, to a lesser extent, the Lacoursire report. Table 4 Contributions to axis 1, representing 53.16% of the total variance. See the list of tables. The consultation of the concordances describes two registers of speeches, distinguished by the designation of the speaker. The Beauchemin report is written in the third person, hence the importance of the committee and stakeholder forms, while the Inchausp and Lacoursire reports adopt the first person of the plural. The analysis of the situation also diverges. In the case of the Beauchemin report, it appears problematic because of the program of study, its approach by skills and the question of “citizenship” that it raises. Here we find the criticism addressed by opponents of the History and Education for Citizenship program for its utilitarian and multiculturalist approach.

In the other two reports, this situation is rather analyzed in the more global context of study programs or history and school courses, its current situation, the teaching practices that prevail there and missions that fall to him. The other forms, expressing the specificity of the Beauchemin report, relate to the training content and the teaching-learning process recommended for the overhaul of the study program: “programmeHQC”, “filsconducteurs”, “Story” and “plot”. We consider the latter to conform to a nationalist approach. Farther from the center of the point cloud, they seem to be the cause of the equally marked detachment from the discourse of this report, stretched like an arc. The validation of these forms relating to training content has not given rise to perceptible projection areas, which allows us to consider them as very stable. That of the other forms generated ellipses of confidence of limited scope.

4.2 Axis 2: Lacoursire and Inchausp reports, two reports to knowledge?
The analysis of axis 2, on the ordinate, accounting for 46.84% of the inertia, reveals an opposition relationship between the contributions of the Inchausp and Lacoursire reports. Figure 3 Validation of lexical forms contributing to the inertia of the second axis. The most structuring forms, presented in Table 4, have been validated to test their stability. Table 4 Contributions to axis 2, representing 46.84% of the total variance.
Forms validated in the first axis, which will not be validated again. Unlike the first axis, it illustrates fairly comparable contributions from the Lacoursire and Inchauspé reports. A glance at the factorial plane makes it possible to identify a concentration of structuring forms in its upper portion, expressing the specific contribution of this last report. Their validation makes it possible to assess their stability, while the projection zones express a tendency towards stability, with the possible exception of the forms "skills", "members" and "knowledge" which appear relatively stable. Their contexts of use make it possible to associate these structuring forms with the disciplinary / adisciplinary anchoring of the recommendations. The significant contribution of the history and course forms, regularly mentioned in the Lacoursire report, designates both the nature of the social and cultural training targeted and the training content.

VIII. Conclusion

The forms histoireduquebec etducanada and pcent are used to carry out an analysis of the current situation of history teaching by the working group on history teaching. This latter form also reflects the concern of this working group to base its analysis and recommendations on quantifiable facts. Forms expressing the specific contribution of the Inchauspé reports express comments of the same nature, oriented towards an analysis of the situation, and the definition of training aims and content. However, they differ from each other because of the theoretical elements drawn from research on the curriculum construct. This construct is used to take stock of current curricula, but above all to rethink the question of knowledge, which should no longer be apprehended according to disciplinary boundaries, but "major fields of knowledge". This is a fundamental principle, the importance of which is emphasized by the authors of this report: Determining the main areas of learning for a curriculum is a political act. This is where the fundamental choices that a society considers necessary for the education of students translate. The adoption of a skills-based approach, combined with a utilitarian orientation, prescribed the withdrawal of a disciplinary logic: The only disciplinary logic that existed up to now to determine the study programs imposed, in fact, choices which nobody had wanted the overall result.

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