Education Under the Islamic State of Iraq and Syria: A Content Analysis of the Physical Education Curriculum

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This study focused on lessons learned from the Physical Education Curriculum under the reign of Islamic State of Iraq and Syria (ISIS). We conducted an unprecedented analysis of ISIS primary school physical education curriculum. The research objective focused on describing and analyzing the context and intentions of the document as well as its content (didactic, pedagogy, learning assessment, among others). We also analyzed the general scientific quality of the curriculum of physical education targeting fitness preparation by the instructor in charge of the education of the youth. In addition, our analysis focused on the philosophical and contextual issues of the manual. Findings revealed an incomplete and a rapidly developed textbook where several essential elements related to pedagogy, didactics, learning, and assessment were missing or inconsistent. The logic of military preparation under the guise of preparing the student's physical condition was an important finding without being explicitly mentioned. Integration of religious content was present without being affirmed in the content of the lessons. We argue that the ISIS physical education curriculum appears to be committed to an absolutist/theocratic ideological or propaganda program that, among other things, promotes the preparation of the future soldiers of the ISIS army. Recommendations about secularization and the reconstruction of post-ISIS education systems are formulated.

Keywords: education in conflict, curriculum, physical education, sport, Islamic state, physical fitness, content

INTRODUCTION

Between 2014 and 2017, the Islamic State of Iraq and Syria (ISIS) has taken possession of several territories and regions in Iraq and Syria. It has implemented its ideas and ways of functioning. Furthermore, it has even proposed an educational corpus for the use of school teachers. In collaboration with humanitarian actors on the ground, we had access to several educational materials that have been put in place by the Islamic group. We conducted a series of analysis

about the documents to better understand the group's intentions through education (Arvisais and Guidère, 2020a), but also, to propose alternatives and recommendations to humanitarian workers and actors who are currently working in the field since the withdrawal of the armed group.

This specific study focused on the lessons learned from the Physical Education Curriculum under ISIS? We conducted an unprecedented analysis of ISIS primary school physical education curriculum focusing on the content analysis of the curriculum. Based on a, so called, teacher's manual, the research objectives focus on describing and analyzing the general quality of the document, in particular: (1) intentions of the manual and (2) content analysis on didactic, pedagogy, and learning, in order to understand ISIS intentions in this war-torn context. A complementary study from the same project looked more specifically at the illustrations and calligraphy inside the manual (Gadais et al., 2021).

Using Sport and Physical Education to Serve Politics or Military Purposes

Reviewing literature about the subject shows that little research on the topic has been done. Therefore, in the contemporary context of fight against terrorism, it seems relevant to consider two fields of scientific literature related to sport or physical education: (a) sport and physical education under totalitarian regimes and (b) recruiting child soldiers.

Sport and Physical Education Under Totalitarian Regimes

Previous studies on history of sport or physical education have presented hypotheses and arguments about how and why ISIS could decide to use the education of the bodies. Indeed throughout history, several regimes or even totalitarian regimes have sometimes tried to use sports (in various forms such as competitions, training, Olympic games), and physical education (the academic discipline) as an instrument for nation-building (Ljunggren, 1996), to control and dominate but also to train and discipline subjects according to their ambitions of power (Ljunggren, 1996; Guttmann, 2003). For example, in Germany, Italy, and Spain, the political leaders namely Hitler, Mussolini, and Franco, first had to be convinced of the power of sport to boost their international prestige (Guttmann, 2003). As noted by Bolz (2017), fascist movements were obsessed with changing the habits of the population and with training of athletes who would be loyal to the fascist cause. In their totalitarian system, education was the key to the implementation of the Revolution and the New Man was the result of fascist education, which laid as much emphasis on physical as on intellectual development. Changing minds and bodies for building a New Man were the main strategy used by the regimes (Bolz, 2008). Then, sport or physical education was used to share a theological vision of history, insofar as they conceived the history of mankind as a succession of phases, the aim of which was the holiest organization of society according to fascist principles (Gentile, 2013).

Gentile (2013) also noted that the conception of history and the use of the past were central to fascist ideologies, as in the end all the efforts served to establish these new

"ideal" societies with unlimited ambitions regarding nations, race and international domination (Krüger and Murray, 2010; Bolz, 2017). The alliance between totalitarianism and sport was not immediate and came gradually, as best illustrated by the 1934 football World Cup in Italy and the 1936 Berlin Olympics (Grix, 2013). The relationship between totalitarianism and sport emphasizing mass participation and preparing top-level athletes had a twofold aim. The propaganda and mega-events gave the people a sense of belonging to the community and convinced them of the validity of the fascist ideology. Also, impressive displays and successful sports results were presented to foreign observers as achievements of the fascist regimes and helped them to strengthen their diplomatic ideas. It is undeniable that fascism promoted sport and used it for its own political and ideological purposes. Sport was of interest to fascist movements because it gave their ideologies a forum where they could visibly concretize their social and possibly racial plans. In return, the sports movement benefited from it to some extent and some sports leaders saw the new regimes as opportunities for sport (Houlihan and White, 2002).

Complementary, authors also demonstrated how physical education was instrumented to serve military ideas and soldiers training in France (Arnaud, 1991; Sarremejane, 2006) or in Sweden (Ljunggren, 1996). In a pre-World War I context and in between the two World Wars, physical education was placed under the control of the Ministry of the Army with the vocation of future soldiers' recruitment, preparation, and training. This was possible because of a special context where conflict between nations in Europe was imminent (Saint-Martin, 2006). Now, it seems interesting to see how ISIS decided to organize its physical education curriculum, given the context in which it was implemented in Iraq and Syria. It also seems relevant to understand whether their intentions and operating structures were similar or different from previous totalitarian regimes in history. Finally, another hypothesis to explore is the possible use of a physical education curriculum for recruiting and training child soldiers.

Let's recall that despite the potential benefits of sport, these positive impacts do not accrue automatically. Indeed, studies also revealed negative impacts related to the practice of sport (Newman et al., 2021). Studies have shown that participation in sport can reinforce feelings of incompetence (Erickson and Côté, 2016; Leblanc, 2016), create dependence on the coach (Lévêque, 2015), or induce depression in the event of overtraining (Flore and Juvin, 2005). In addition, previous research has documented external pressure from parents, coaches, and teammates that can be detrimental to psychological development and self-esteem (Tofler and Butterbaugh, 2005; Gerbelli-Gauthier, 2019). Those elements can lead to the cessation of sports practice, described as sport drop-out by Leblanc (2016), or some forms of violence against the athlete (Parent and Fortier, 2018; Ohlert et al., 2021). Additionally, other research reported increased rates of delinquency and aggression (Faulkner et al., 2007; Gardner et al., 2009), as well as behavioral and functional problems (Endresen and Olweus, 2005). Socially

inappropriate attitudes reinforced by an authoritarian context (Wright, 2006) or even using sport as a recruitment tool by extremist groups have also been observed (Jordan et al., 2007; Zane et al., 2016).

Recruiting Child Soldiers

Around the world, UNICEF (2018) estimates that nearly 250 million children are growing up in torn regions and countries affected by conflict. Nearly 125 million of them are directly affected by violence (Charland et al., 2017). Sadly, Iraq (since 2003) and Syria (since 2011) have ranked high on torn and violent regions. In Iraq as well as in Syria, children have been bearing witness to the horrors of civil war mass terrorism, the death of loved ones, injury and amputation for many years. They also experience all sorts of violence: displacement, kidnapping, human trafficking, and sexual mutilation. Given their surroundings, children in such places often find their education interrupted whether by bombings that destroy schools or by unexploded ordnance and mines. Girls' education is also frequently halted by child marriage, while boys are forced to enlist in armed groups (UNHCR, 2018). Those elements make children vulnerable and easy targets for armed groups' recruitment as ISIS.

Over the last three decades, studies had well documented the child soldiers' recruitment process (Jézéquel, 2006; Betancourt et al., 2013; Daxhelet and Brunet, 2013). Child soldiers are people under the age of 18 who are associated with military organizations. Children may be trained and used for combat, assigned to support roles such as porters or messengers, or used for tactical advantage as human shields or for political gain in propaganda (Jeannet and Mermet, 1998; Daxhelet and Brunet, 2013). Children are easy targets for military recruitment due to their greater susceptibility to influence compared to adults (Le Quellec and Cottier, 2012; Daxhelet and Brunet, 2013). Some are recruited by force while others choose to join up, often to escape poverty or because they expect military life to offer a rite of passage to maturity (Arzoumanian and Pizzutelli, 2003). Child recruits who survive armed conflict frequently suffer of mental illness, poor literacy and numeracy, and behavioral problems such as heightened aggression, leading to a high risk of poverty and unemployment in adulthood (Mubiri-Pondard, 2008; Betancourt et al., 2013). Complementary, research has also found that the enlistment of adolescent children, even when they are not sent to war, is accompanied by a higher risk of attempted suicide (Ursano et al., 2016) stress-related mental disorders (Goodwin et al., 2015), alcohol abuse (Head et al., 2016) and violent behavior (Bouffard, 2005; Merrill et al., 2005; MacManus et al., 2013).

In 2015, in Iraq and Syria, about 30,000 armed individuals, originating from more than 100 countries were fighting under ISIS flag (Xingang et al., 2017b), including children. In those regions of the Middle East, the use of younger children in armed conflict has increased in recent years as militant Islamist movements and the groups fighting them recruited children aged 16 and 17 in large numbers (United Nations Secretary-General, 2017). More especially, in Iraq, Human Rights Watch has documented the recruitment or use of children by Sunni and Shia Arab armed groups fighting in Iraq, including militias in the battle to retake Mosul. Armed groups in Iraq affiliated to the Kurdistan Workers' Party have recruited boys and girls in December 2015. About 29 cases have been documented in northern Iraq in which Kurdish and Yezidi children were recruited by two armed groups, the People's Defense Forces (Hêzên Parastina Gel, or HPG) and the Shingal Resistance Units (Yekîneyên Berxwedana Şingal, or YBŞ). The same tendency is happening in Syria since 2014, in which army groups have been recruited children as young as seven years old. More than half of the children recruited in cases verified by UNICEF in 2015 were under 15. Children have been filmed executing prisoners in grisly propaganda videos by the Islamic State group. In 2015 the UN said: "A total of 362 cases of recruitment and use of children were verified and attributed to ISIL (274), the Free Syrian Army and affiliated groups (62), Liwa' al-Tawhid (11), popular committees (5), Kurdish People's Protection Units (4), Ahrar al-Sham (3), the Nusrah Front (2) and the Army of Islam (1). Of the verified cases, 56% involved children under 15 years of age, a significant increase compared to 2014." Knowing the objective of ISIS to restore the Islamic territory of the Caliphate Empire, as it existed in the medieval period, by using military forces to tear apart the Middle East and retrieve lands in Europe, Asia and Africa (Xingang et al., 2017b), one may argue that all those elements put together let us think that ISIS potentially used its Physical Education under its education system to recruit and train future soldiers.

ISIS Education System

Islamic State of Iraq and Syria took hold in Syria and Iraq between 2014 and 2017 and its domination was followed by an elaborate educational system. The terrorist organization's "state program" is a unique case in recent history. Indeed, not only did it overturn the existing formal education system in Syria and Iraq, resulting in a hiatus in the schooling of children and teens, the organization went a step further by creating its own alternative educational system in its stronghold regions. More than 30 textbooks are forming a singular corpus of study never seen before and became the central element in the "jihadist resistance" against American occupation and the new Shia government installed by the Americans in Iraq (Guidère, 2017).

Several studies were conducted on this series of educational materials to better understand how ISIS had implemented its education system. More specifically, a first study focused on the integration of religious elements in the corpus of texts (Arvisais and Guidère, 2020b). Another study presented the educational intentions targeted by ISIS through its textbooks (Arvisais et al., 2021), while another one focused on how ISIS established its curriculum in the context (Arvisais and Guidère, 2020a), and finally, the analysis of science textbooks also revealed an absolutist/theocratic ideological program that promotes a very inadequate concept of scientific activity and content (Potvin et al., 2019). However, the physical education curriculum recovered was not yet analyzed. Considering the context and objectives of the ISIS's armed domination in the region, it seems relevant to analyze the physical education curriculum to better understand how the group attempted to use the discipline of the bodies to serve its interests.

Objectives of the Study

This paper aims to describe and analyze the physical education curriculum implemented by ISIS in primary schools. Pedagogical and didactic perspectives (Lahire and Johsua, 1999; Lahire, 2007) were used to help us understand the physical education teaching system in the context of ISIS, attempting to answer fundamental questions such as: what is being taught? In what ways? What are the relationships between school goals and practices and the real goals of ISIS group?

Consequently, the research question focused on describing the document, its contents (didactic, pedagogy aspects among others) and analyzing the general scientific quality of the curriculum of physical education that was addressed to the instructor in charge of the education of children. This study aims to:

1. Describe and analyze context and intentions of the manual.
2. Describe and analyze content of the manual.
3. Propose recommendations for the humanitarian workers on the field.

FIGURE 1 | Front page of the PE manual.

MATERIALS AND METHODS

Research Design

We conduct an explorative case study of the physical education curriculum implemented by ISIS for the primary school level. Exploratory research was chosen to determine research priorities, collecting data and focusing in on certain subjects, which may be difficult to take note of without prior exploratory research. Exploratory research allows the researcher to be creative in order to gain the most amount of insight on a subject (Creswell, 2014).

Complementarily, a case study methodology was applied for this research (one document analyzed) as case studies are highly suitable for exploring the complex social, cultural, historical, managerial, and procedural phenomena when the situation includes many interesting variables, multiple sources of evidence, and broad theoretical propositions that guide the collection and analysis of data (Yin, 2014). The analysis of this special temporal curriculum is to the best of our knowledge, unique and has never been done before. Yin's three prerequisites, that justify using a case study method, are present in this project, notably that: (a) the main research questions are either how or why; (b) there is little or no control over behavioural events; and (c) the focus of study is a contemporary phenomenon. This study remains descriptive, exploratory research and, as such, will focus on describing, in detail, the data collated from the document analyzed in relation with its context in which the curriculum has been implemented. For all those reasons, various sources of information's and analysis were used.

Document Analyzed

Our research team got access to various curricula and education documents written, published and distributed by ISIS in northern Iraq between 2014 and 2017 (Arvisais and Guidère, 2020a). All the material was posted online by ISIS itself and printed copies were also found in several schools around Kirkuk after its liberat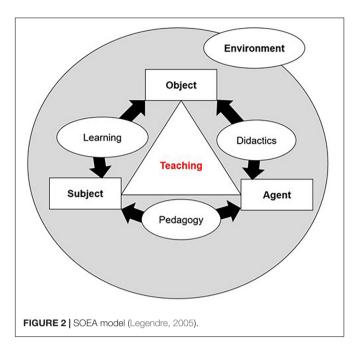ion. The corpus of documents forms a set of teaching materials that can be divided into two categories: subjects of a purely religious nature (textbooks on Doctrine, the Qur'an, Tradition, the Life of the Prophet, and Islamic Education) and traditional subjects (textbooks on science, mathematics, history, geography, physics, etc.). The document analyzed in this study corresponds to the second category (traditional subjects) for the five years of primary school as proposed by the reform of the school pathway by ISIS.

This research focuses on the physical education curriculum implemented by ISIS. At this time, attempts to retrieve and analyze the other parts of the physical education program were unsuccessful. The manual was 26 pages long and composed of three sections. On the front page is a large image (**Figure 1**) with dark colors, mentioning, "teacher's manual," "physical training" for the "first level at the primary school," for the "first semester." In the first section, page 3 of the manual is a general introduction used in every ISIS curriculum documents that pays tribute to the God/Allah and the prophet. It explains the reasons and the context for the implementation of this curriculum by ISIS. Islam religion plays an important part at the beginning of this text. Also, page 4 is an introduction to the importance of a good physical condition for practising the religion and being a good Muslim. In the second section, the manual begins with a warm-up and stretching routines, which is repeated for each lesson, then 17 lessons are followed lasting each for about 45 minutes. The last page of the manual is dedicated once again to a tribute to the prophet. Because only four authors were Arabic speakers in the present study, the manual was translated[1] from Arab into French for conducting data analyses. Then, to make it as accessible as possible, the manuscript was written in English.

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[1] Translation process was made by two different Arabic-French speakers, revealed modulations, and rearrangements in-between the two versions. Then, the manuscript was written in English and other arrangements were made (e.g., in French "nombre" and "numéro" became only "number" in English).

FIGURE 2 | SOEA model (Legendre, 2005).

Data Analysis

Due to the special context, we conducted a qualitative data analysis, which was built using a step-by-step descriptive process. More specifically, we used an inductive analysis of the PE manual (form and content) throughout two dimensions. First, we analyzed the manual intentions in order to connect the main objectives with the context of the implementation. Second, we performed a content analysis of the manual's full textbook with pedagogical, didactic, learning and assessment perspectives.

Intentions and Context of the Manual

In order to perform the analysis of the intentions of the PE manual, we conducted a documentary analysis, by trying to connect and understand the document with the context of its implementation. Therefore, we took into consideration (a) the scientific literature available in Arabic, French and English on this topic, which included previous studies on this corpus of ISIS educational materials and (b) semiology analysis with denoted and connoted principles. We performed a descriptive and inductive qualitative analysis with back and forth between manual, literature, and analysis from semiotics.

Curriculum Content

First, the content analysis was carried out using the text of the manual. We grouped the textbook content by using the SOEA (Subject-Object-Environment-Agent) model (Legendre, 2005) into several fundamental thematic in education such as Subject, Object, Environment, Agent, and their corresponding relations: pedagogy (subject-agent), didactics (object-agent), learning (object-subject) or assessment (**Figure 2**). We also used Bloom's Taxonomy (Forehand, 2010) to code the intentions and objectives of the lessons. The content was grouped into five categories: general introduction, manual introduction, material, games, content of lessons, and objectives. A word

cloud was generated for each category using NVivo12 software. Similar singular-plural terms were grouped, with or without capitalization. We eliminated all three letters, connection words and articles. The format, color, font, and orientation of the words in the cloud were not manipulated by the researchers and were generated automatically by the software. To analyze the word clouds, a semiotic analysis focusing on the denoted and the connoted (Saouter, 2000; Saint-Martin, 2011) was performed by the three coders. This was accompanied by a frequency analysis inspired by lexicometry analysis (Magariños de Morentin, 2007) in order to analyze the occurrences of the words in the texts translated into French from the Arabic version. This allowed to give more meaning to the text, to better understand it and to ease the interpretation of the different keywords highlighted by Nvivo12. The word clouds allowed us to visually represent the preponderance of certain words in the texts on the different pages of the manual.

Trustworthiness in Empirical Data Analysis

In the context of this study, and to ensure methodological rigor, all team members interacted with each other during the different phases of the data analysis (Elo et al., 2014). This co-construction made each researcher a critical partner to the other (Smith and McGannon, 2018). Thus, the three main authors were regularly questioned on the issues relating to the research, data, and results. To reach an intercoder agreement, the interrater reliability technique was used to triangulate data and ensure that results are reliable, reproducible, and consistent (Smith and McGannon, 2018). In concrete terms, the coders, along with other team members, would meet throughout the analysis process to compare and discuss the discrepancies between their analyses to refine the coding so they could proceed with more precise coded data. The goal was not to reach a statistical standard but rather to improve the quality of the coding process.

FINDINGS

Intentions and Context of the PE Manual

Findings regarding the philosophy of the PE manual can be summarized into four points: (a) form and content of the manual, (b) construction of a specific religious doctrine to serve the interests of the group, (c) physical preparation of the future soldier, and (d) vision of child development.

Regarding the Manual (Form and Content)

This short document (26 p.) is especially designed for the use of the instructor or, so called, teacher (*Agent*) in charge of education, in contrast to the other curriculum documents made directly for students (Arvisais and Guidère, 2020a). Thus, following the title of the manual, it focuses more on physical fitness preparation or training, than a physical education and sports, as announced, or even health curriculum. In addition, this manual clearly seeks to convey the values and ideas of ISIS, as it includes illustrations of ISIS in several places (p. 1, 4–7, 14) as well as a Anthem to the glory of the group's leader the Baghdadi (p. 14). However, it is interesting to note that this book is the least religious document

in the corpus compared to the contents of the other manuals, with less religious occurrences (Arvisais and Guidère, 2020a). Analysis also reveals the poor quality of the Arabic writing. Several mistakes were identified in the textbook. Many illustrations used were not relevant to the content of the activities and were not helping to better understand the content or the intention of the curriculum (e.g., see lesson 9, p. 16 or lesson 16, p. 23). Finally, it was announced in the introduction that the document was created using scientific and pedagogical references, but no mentions were available.
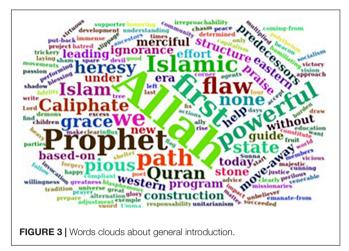
Construction of a Specific Religion
The reading and analysis of the manual reveals that the ISIS group relies on the Islamic religion to serve its interests and by manipulating its contents. The Islamic religion is therefore used but above all transformed to hide the real purpose of the manual, which seems to be to recruit new members of the ISIS group. Hidden behind the Islamic religion and numerous references to the God Allah (e.g., general introduction, p. 2), the emphasis is put on the leader of the group (Baghdadi) as soon as the opportunity arises (e.g., in lesson 7, p. 14, the learning objective is to learn the Baghdadi Anthem). This seems to be a subtle adaptation of the Islamic religion to serve the interests of their particular group, considered to be the best.

Physical Preparation of the Future Soldier
The analysis of the manual reveals that the ISIS group does not perceive the discipline of physical education as envisaged globally by UNESCO (2015). The main objective seems to be the preparation of a future soldier for combat or war by improving his general physical condition (title of the manual). There is therefore a strong emphasis on physical fitness to train the soldier to be ready to go into battle (*Object*). There also seems to be a focus on the rapid integration of civilians (children) into the army to fight enemies quickly. In many ways, the manual refers to organization, discipline, order, the non-commissioned soldier, and good behavior in line with its purposes (*Didactics*).

Vision of Child Development
Interestingly, there is no mention of student (*Subject*) characteristics (e.g., gender, age, needs) in the manual. For example, it is not clear whether the manual is equally applicable to girls and boys, what the age of the children in primary school is and what the learning expectations are for them. However, several avenues allow us to identify a certain vision of child development. First, we noted that repetition is essential since each lesson must be repeated three times according to the instructions in the manual. The warm-up and cool-down routines are repeated in each lesson, but with no connection to the rest of the lesson content while it should be the case. As well, six objectives out of 17 are formulated as "the student must recall," meaning first step of Bloom's Taxonomy associated with an order. Second, we believe that the group hopes to use this brainwashing strategy in the same way it did for child soldiers (Daxhelet and Brunet, 2013). Lesson 7 is particularly interesting since the students must line up to learn and sing a hymn to the Baghdadi leader. In this sense, students are made to

FIGURE 3 | Words clouds about general introduction.

believe that things are done in the name of religion, but this is a manipulation as mentioned above. Children are not developing critical thinking but are only repeating orders and rules.

Curriculum Content
Findings about the curriculum content are presented via six-word clouds, generated by the software Nvivo12 (see figures of **Supplementary Material**). The first two-word clouds correspond to the manual general introduction (**Supplementary Figure 3**) and the manual introduction (**Supplementary Figure 4**). The next four-word clouds correspond to the four main sections of the 17 lessons and are presented in the same order as they appear in the manual, namely, the equipment (**Supplementary Figure 5**), the objective (**Supplementary Figure 6**), the general content of the lessons (**Supplementary Figure 7**), and the game (**Supplementary Figure 8**). Whilst analyzing the curriculum content, one lesson, number 7, appeared to the research team as very different from all the others. A comparison of this specific lesson is made with a more representative lesson found in the manual, namely, lesson 6. Each section presents the denoted part followed by the connoted part of each word cloud.

Manual Sections
General Introduction
In page 3 of the Arabic manual translated into French, the general introduction occupies the entire page (**Figure 3**).

(D) The text is written with an Arabic typography different from the style used in the rest of the textbook and takes the classical form of a speech that can be delivered orally. It begins with the *Basmala*: "In the name of Allah, Most Gracious, Most Merciful." The most used word is Allah (8). Many references are made to Allah: His grace (3), His help (2) and His blessing (1). The highlighted words are: first (5), prophet (5), Islamic (4), we (4), powerful (4). A second group of words, quoted three times, stand out: caliphate, Coran, faults, grace, heresy, Islam, the state, pious. In a third group of words, there are references to the enemy: cited twice: ignorance, western, eastern. Cited once: blasphemous, capitalism, devil, defect, demons, slip-ups, falsification, hatred, humiliating, imposture, irreproachable,

FIGURE 4 | Words clouds about objectives.

justice, unbelievers, polytheism, cunning, socialism, trickery, vicious, victory, swords.

(C) The general introduction of the manual is written as a forward/preamble and is quite unusual for a teaching manual. Indeed, we find the typical ISIS group discourse tinged with hatred, on a salient background of religion, as defined by the ISIS group: "Islamic education; a new curriculum." Religion is omnipresent to guide the education. Everything is done in the name of Allah, but with a "clear vision" (p. 3) that defines the identity and purpose of ISIS: "neither eastern nor western, but prophetic Koranic which distances itself from the passions, heresies and impostures emanating from the missionaries of Eastern socialism, Western capitalism or agents of vicious parties and movements around the world" (p. 3). This introduction presents as well a lexical field defining the ISIS group: State of the Caliphate or Caliphate Edifice. At the end of the general introduction, the efforts made to write this manual are acknowledged and an openness or predisposition to criticism, advice and modification from "any supporter (ally/friend)" is suggested. This last clarification therefore indicates that not all criticism is welcome despite a so-called openness.

Objectives and Intentions

On each page, from page 8 to page 24 of the manual, there is a boxed text presenting the objective of each lesson (**Figure 4**).

(D) The group of words that comes up most often is "the student must" (16 out of 17 objectives). This group of words is followed by an action verb: recall (6), execute (3), do (3), practice (2), run (1), squat/crouch (1). The next most used word is "exercise" (10). The word "Swedish" (6) is always associated with it, to form "The Swedish Exercise," listed in 6 objectives out of 17. A second group of words stands out: correct (4), manner (4), execute (3), do (3), part (3). The group of words "in a correct manner" is used 4 times out of 17 objectives. In a third group, particular words are mentioned once: deployment, Anthem gathering.
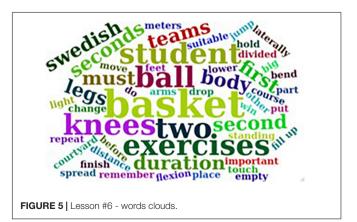
(C) In the manual, no mention or distinction is made between general and specific objectives. The objectives are formulated as "the student should" + action verb. These verbs have been organized according to Bloom's taxonomy (Forehand, 2010). According to Bloom, objectives should cover different cognitive levels. These levels are ranked in ascending order of cognitive difficulty: knowledge, understanding, application, analysis, synthesis and evaluation. The verb "to recall" relates to the level of knowledge and is the most used of all. The verb "to do"

relates to the level of understanding, and the verbs "to execute" and "to practice" relate to the level of application. Two objectives concern only the psychomotor domain (to run and to squat). The objectives are aimed at cognitive operations of low difficulty that do not require much autonomy from students.

Also, the objectives are not SMART. As a matter of fact, the objectives are not clear as to the what, where, when and how (Specificity, e.g., lesson 3's objective: "The student must perform the main part of the lesson *as required*"). The use of the word "correct" is unclear (Measurability) as there are no success or achievement criteria to define what is "correct" or not (e.g., lesson 1's objective: "The student should stand in a crouched position in a *correct* manner"; lesson 10's objective: "The student should practice the Swedish exercises *correctly*." The assessment seems to be left to the teacher without any other form of measurement. The objectives are not motivating, do not represent an ambitious and attainable challenge (Acceptability and Realism). Finally, the objectives are not defined temporally (Temporality). No distinction is made based on the age and the objectives are not evolutionary. There is no gradation in learning.

On the other hand, several words are taken from the military terminology as in lesson 2's objective "The student should practice the *deployment* and *gathering* according to *precise modalities*. " In lesson 2, it reads: "... so that the students learn the discipline." Discipline is omnipresent in the manual as the last sentence of each lesson exemplifies: "back in line regularly." Also, the objectives of lessons 5, 7, and 11 are not related to the main part but to the "game" part of the lesson. However, the games are presented as modular unlike the main parts. Logic would dictate that the objective should be directly related to the main lesson and not to the game. This structure is incoherent. In addition, the objective of Lesson 7 has nothing to do with physical preparation (see analysis L6 versus L7). Finally, the continued reference to Swedish, and therefore Western, exercises contradict the desire, expressed in the introduction of the manual, to move away from the Eastern and Western world to be inspired only by Allah and Islam.

Lesson 6 Versus Lesson 7

Finally, we did compare two lessons in terms of content. **Figures 5**, **6** that present a comparison of word clouds from two lessons from the textbook, lesson 6 and lesson 7. Lesson 6 is

FIGURE 5 | Lesson #6 - words clouds.

FIGURE 6 | Lesson #7 - words clouds.

typical and representative of the lessons proposed in the manual and has the following objective: "The student should remember the importance of Swedish exercises for the lower body." This objective is clearly aimed at physical preparation. Lesson 7 has a unique and very different objective from the other lessons: "The pupil shall learn the Anthem mentioned below." Indeed, this objective is not aimed at physical fitness but rather a recitation of an allegiance Anthem.

(D) In the lesson 6, three groups of words are identified. A first group consists of the most used words: baskets (4), balls (3), two (3), exercises (3), knees (3) and student (3). A second group of words, cited twice, stands out: body, second, must, duration, legs, first, seconds, Swedish, teams. A third group is composed of words that are used only once. The verb "must" is used twice. A group of verbs, used once, consists of recall, spread, hold, do, lower, bend, touch, change, repeat, divide, put, move, finish, win. The required equipment comprises balls (3), baskets (4) and a courtyard (1).

(D) In lesson 7, three groups of words are identified. A first group consists of the most used words: exercise (5), arm (4), elbow (3), all (3). A second group of words, cited twice, stands out: act, go, amir, must, right, allegiance, do, keep, left, groups, Anthem, hand, walk, small, posture, prince, repeat, seconds, hold, pull. A third group is composed of words that are used only once. In this group of 40 words, eight particular words stand out: Baghdadi, country, flags, fatimide, hachimiste, ISIS, master, villages. Several verbs are used twice: must, pull, hold, keep, repeat, walk, go, do. Other verbs are used once: learn, chose, change, stretch, bend, designate, move forward. The required equipment comprises flags (1) and a courtyard.

(C) The key words stemmed from the analysis of lesson 6 are consistent with words that would be found in a physical education lesson. The main part of the lesson consists, as in 15 out of 17 lessons, of making body movements, called "Swedish exercises." The exercises are individual, there is no interaction or cooperation between students, and the game part is a competition. The required equipment is rudimentary. On the other hand, the objective of Lesson 7 has nothing to do with physical preparation. The key words stemmed from the analysis

of lesson 7 are indicative of its unspoken goal of indoctrinating and training the future ISIS soldiers. In this lesson, students do "a regular walk with the same organized rhythm," they stop and resume following the teacher's instructions whilst singing an Anthem. This exercise strongly resembles a military walk or even, a parade in a dictatorial regime. As a matter of fact, the anthem pays tribute to the Baghdadi, head of the Islamic State. It sounds like a propaganda urging young people to swear allegiance to him. Contrary to the introduction which put Allah and the Prophet in the central position, there's a shift toward the head of state in this lesson. There is also a reference to the word "Amir" used to refer to the leader or commander. The group chooses its own "Amir." Once again, the military organization is suggested and supported by an illustration on the same page of the manual.

SOEA Model

Table 1 presents findings on the SOEA model applied to the ISIS manuscript. Regarding the *subject*, few information is available about students' characteristics. Indeed, no precision is made about gender, age, size, weight, morphology, etc., but also needs and autonomy, freedom, critical thinking or creativity. But it is assumed that they are boys according to the clothing they are wearing, haircuts (no veil or burka) and the proposed illustrations.

For the *object*, the presence of the ISIS flag underscores the presence of the state in education. The presence of the *Basmala* emphasizes the presence of religion in education. In other states, one would have to deal with both public (state) education and private education (borrowing of religion). There is no choice: religion is imposed in the education offered by the state. Interestingly, those elements are mostly present inside the general introduction and manual introduction, not later.

The E*nvironment* is where the teaching is taking place and only few references are mentioned. The "suitable court" is the only place, mentioned in each lesson (*n* = 17) (pp. 8–24), which offers few information about the context and the area for implementing the physical education lessons.

Regarding the *Agent*, this manual seems to be a seemingly guide for the teacher to interpret it as he or she wishes. However, no information is given as to who will implement this manual. We do not know anything about this teacher, instructor or other. We know nothing about his or her training, skills or profile. Some passages suggest that the teacher would just be there to read the instructions. He is told what to do and, in this sense, he has little room for maneuver in terms of autonomy in his pedagogy and in the autonomy left to the students. But sometimes it is also indicated that he or she can add activities related to what is proposed. He must sometimes be master of discipline, sometimes give rules, sometimes divide the students.

Pedagogy is the relation in between the teacher (*Agent*) and the student (*Subject*). In this manual, three elements bring information about pedagogy: material used, games-activities and illustrations. It is interesting to note that the proposed illustrations do not always correspond to the exercises indicated in the manual. Thus, they do not support the teaching in any way. The general aim of the manual is clear, although it is not explicitly stated, that young children must be physically

TABLE 1 | Synthesis of the SOEA for the Physical education curriculum of ISIS.

	Present	Missing
Subject	– Illustration of kids, probably boys	– Gender, age, size, weight, morphology, ability, or disability – Needs of kids
Object	– The State – Islamic religion revisited by ISIS – Physical preparation/physical strength or fitness	– Child's development – Child's physical and psychological well-being
Environment	– Suitable courtyard – Rudimentary equipment – Missing/inappropriate or unsuitable equipment	– Location and state of the infrastructure – Criteria of a "suitable" courtyard – Modern equipment – Appropriate or suitable objects or equipment to handle
Agent	– Teacher	– Information on who is the teacher/instructor – Qualification or training of the teacher/instructor – Teacher education, experience, and background
Pedagogy	NA	Teaching and learning processes of physical activity
Didactics	– Swedish gymnastic	– Achievement criteria – Success criteria
Learning and Assessment	– The pupil must/has to + active verb (order) – Teachers could suggest other games activities in each lesson – 17 lessons in the manual – 3 Repetitive sessions for each lesson. Time allowed: 45min – No physical activity or preparation in the lesson No.7	– SMART objectives – Program focus on increasing physical competence, health-related fitness, self-responsibility, and enjoyment of physical activity for all children – Lesson planification – Children's participation, enjoyment, and learning Evolutive lessons – Assessment – Activities aiming children's development

prepared to be ready to fight in the ISIS army. For example, "the student must practice the deployment and assembly exercise in the precise manner" (p. 8) or "the student must learn the Anthem quoted below" (p. 13). They must be in good general physical condition to be ready for war. We therefore speak of physical fitness even though no scientific references or standards are named in connection with the development of physical fitness in young people.

Didactics is the relation between the teacher (*Agent*) and knowledge (*Object*). The general content of lessons and the compared contents of lessons 6 and 7 are two very interesting parts regarding didactics. What is clear is the logic of preparation and method to prepare student fitness. Swedish gymnastic is mentioned several times as a model to follow. However, the manual does not make any reference in this sense, and only proposes a rejection of any Western culture (p. 3), which is contradictory. Moreover, no criteria for achievement (how to make the movement) or success (how to make sure I have succeeded in the movement) is mentioned.

Finally, *learning and assessment,* the intentions are very unclear and poorly formulated. For example: "The pupil must recall the objective of the game of tug-of-war" (p. 11) or "The pupil must recall the main objective of Swedish sports exercises" (p. 10). There is no expectation of the end of the educational cycle for students. It is not known what targets are to be achieved, either in terms of learning, or in terms of fitness or skill development. Nothing is mentioned about assessment. To achieve the overall goal, it is proposed to simply repeat the 17 lessons 3 times, but no progress is targeted in development. There is therefore no planning over several levels of mastery or between lessons. Moreover, the games proposed seem to us inadequate

for the age group of primary school children, 1st cycle. Nothing about children's participation, enjoyment, and learning. While attention should be focused on the development of basic motor skills, the manual proposes, push-up (p. 18), abdominals (p. 18), and stretching exercises (p. 6).

DISCUSSION

The exercise of analyzing the ISIS physical education curriculum is, to our knowledge, a first in research. It is therefore important and relevant to draw lessons and insights from this particular and challenging investigative work.

Key Findings

In the present study, we observed two main findings: the logic of military use of physical education by ISIS and a teaching manual in which the content lacks reflection, criticism but above all refinement.

First, this study revealed a highly militarized logic of the curriculum proposed by ISIS. Since most of the training focuses on physical preparation and fitness, it is likely that the logic of militarization and preparation of future soldiers is behind the implementation of this curriculum. This logic included the appointment of physical preparation as a major focus of the textbook, the lack of freedom or creativity of the pupil, the directive role of the teacher, the use of Swedish gymnastics and highly aligned, etc. In addition, controlled and disciplined forms of teaching and grouping bears no resemblance to current international recommendations on textbook writing in physical education. According to our analysis, this textbook seems to

coincide very strongly with the aims of totalitarian regimes as discussed in the introduction (Guttmann, 2003; Bolz, 2017). The soldier preparation suggested in the manual matches the ISIS needs of massive military forces to attain its objectives (Xingang et al., 2017b). State control is also marked by the imposition of religion and political ideologies within the textbook itself. Finally, the teachers in this textbook look like military soldiers instead of pedagogues, which was supported by several passages in the document (**Figure 2**).

Second, our analysis also revealed irregularities and gaps in the content of the PE manual proposed by ISIS. Several elements related to pedagogy, didactics, learning and assessment is missing. For example, no information was given on student characteristics (e.g., age, gender, needs, enjoyment, and participation), no expectations are set in terms of learning targets to be achieved, and no form of assessment is proposed at all. Similarly, the learning objectives and content do not, in their current form of writing, provide a clear idea of the targets to be achieved or the content to be provided to students. Our analysis also shows a marked willingness to repeat the lessons with little room left for the teacher to adapt the material to the needs of his students or to the reality of his environment. All of these elements lead us to believe that the content of the textbook was hastily constructed without a rigorous revision process, despite the fact that a writing group has been vaguely identified in previous studies (Arvisais and Guidère, 2020a,b). However, and unlike the textbooks analyzed in science (Potvin et al., 2019), we did not identify any content that would have been copied from other documents and pasted quickly into this manual.

Meanings of Findings—What Can Be Understood and Learned?

This study has provided us with lessons learned about the use that ISIS has made of its physical education curriculum. The results of this study seem to point to two main perspectives: the creation by ISIS of its own education system and the use of religion for its own purposes.

On one side, ISIS has set up its own education system. This manual reflects different aspects of ISIS realities and objectives, to have the complete power on all the region in a reign of terror. In detail, the analysis of the manual revealed many inaccuracies in its content, several spelling mistakes and inappropriate use or misplacement of several illustrations. This overall lack of coherence leads us to believe the wish to rapidly establish a state by setting up, among other things, an education system to enforce its ideas and actions. This idea lines up with the conclusions of a previous study on the implementation and use of the education system by ISIS (Arvisais and Guidère, 2020a). There is also a willingness to use physical education as a means of rapidly imposing and enforcing ideas, which align with several distinctive features of totalitarian regimes (Sugden and Tomlinson, 1998; Guttmann, 2003). As noted by Sugden and Tomlinson (1998), sport or physical education have been used to train and represent a model or the identity that the political group wants to achieve. Guttmann (2003) also mentioned several totalitarian regimes that tried, throughout history, to use sometimes sports

and physical education as an instrument to control, dominate but also to train and discipline subjects according to their ambitions of power. It also seems relevant to mention that their intentions were similar but operating structures were different from previous totalitarian regimes in history. As such, the terrorist organization's "education state program," is a unique case in recent history.

On the other side, Islamic religion revisited by ISIS is, by far, one of the most prominent aspects of this manual. The terrorist group has gone so far as to create its own educational system by mixing religion and politics to serve its own interests. For example, there are misleading statements about the Prophet and inappropriate uses of passages from the Qur'an to convey their ideas of the world. The general introduction, where everything is made in the name of Allah and the Prophet, or in lesson 7, in which the pupils are to line up and sing the Anthem of allegiance to the Baghdadi, are perfect examples of contradiction and misuse of religion to reach political goals. Another element that coincides perfectly with the logic of totalitarian regimes is the suppression of part of the population, in this case women. Indeed, any attempt to denunciate violence against women would be perceived as a support for the occidental imperialism (Boudjak, 2007). Bolz (2017) observed that fascist movements were obsessed with changing the habits of the population and with the training of athletes who would be loyal to the fascist cause. In their totalitarian system, education was the key to the implementation of the Revolution and the New Man was the result of fascist education, which laid as much emphasis on physical as on intellectual development. Changing minds and bodies for building a New Man were the main strategy used by the regimes (Bolz, 2008).

Some studies showed that about 30,000 armed individuals, originating from more than 100 countries were fighting under the ISIS flag in Iraq and Syria in 2015 (Xingang et al., 2017a), including children. In those regions of the Middle East, the use of younger children in armed conflict has increased in recent years as militant Islamist movements and the groups fighting them recruited children aged 16 and 17 in large numbers (United Nations Secretary-General, 2017). These contextual elements lead us to believe that ISIS potentially used its physical education program to recruit and train future military soldiers. All those elements together let us think that ISIS potentially used its physical education under its education system to recruit and train future military soldiers. Children are easy targets for military recruitment due to their greater susceptibility to influence compared to adults (Le Quellec and Cottier, 2012; Daxhelet and Brunet, 2013). Child recruits who survive armed conflict frequently suffer from psychiatric mental illness, poor literacy and numeracy, and behavioral problems such as heightened aggression, leading to a high risk of poverty and unemployment in adulthood (Mubiri-Pondard, 2008; Betancourt et al., 2013). Psychosocial intervention by local or humanitarian workers with the youth on the field is, therefore, crucial.

While international organizations such as UNESCO intentionally give priority to effective personal development, aim to ensure peace and are designed to be inclusive, the ISIS physical education curriculum exploits this to recruit students, youths

and men to join them. Behind the good intentions of sports presented in the manual's introduction, the group insidiously distorts physical education to attain less noble goals of military preparation, as represented through action-oriented scenes of military exercises, fighting and celebrating fight victories, repeating exercises over and over and repeating the Anthem of Baghdadi their leader. Extremist ideologies are founded on misunderstandings of Islamic manuscripts and the Qur'an (al-Qaeda's manipulation and imprecise interpretation) and reverberate among young people and new recruits (children) who have a lack of knowledge, and limited understanding, critical thinking and comprehension of their religion. In this case, sport is only used to build a novel Islamic state and military troops of new recruits.

These elements lead us to question how and to what extent the curriculum in place potentially erased children's identities. These young people thus became unwilling child soldiers who were recruited and indoctrinated to serve the ISIS cause. In this sense, it is important to understand that they are not criminals but children. And therefore, they have rights that must be respected in line with the 1989 UNICEF International Convention on the Rights of the Child. The question arises of respecting this convention and possibly restoring justice for them in the future. Also, this research leads us to explore the impact that this traumatic experience has potentially had on the youths. That is, how the training carried out within the curriculum framework has influenced the children and what the potential consequences are in the medium or long term.

Recommendations

Based on our analyses, our experiences as researchers but also as humanitarian workers, we would now like to propose several recommendations to help the work in the field. These elements can constitute tracks of reflections and solutions to help local workers to better adapt their work with the affected population:

- Ensure respect for the international law of all children and adolescents, including the right to equal education and to have an inclusive education that respects the developmental needs of the child.
- Ensure that the overall development of children, including physical and mental health (i.e., enjoyment), is promoted and not only certain aspects (e.g., physical fitness).
- Verify the learning environment to promote quality education.
- Carry out psychological and social follow-up in relation to potential trauma, brainwashing and forms of indoctrination of children and adolescents and promote their harmonious reintegration into society, potential gaps with families and communities.
- Be attentive to the lack of autonomy, creativity, participation and critical thinking skills of children who have been affected by armed conflict.
- Address the lack of fulfillment of basic physical as well as basic psychological needs of the youth.

- Verify the teaching conditions and accompany the teachers in training and pedagogical monitoring in order to provide quality education for all.

Today, in addition to remaining an educational tool, sport or physical education can be used as an instrument of psychosocial intervention with vulnerable youth. Researchers investigating SDP programs have described various benefits of sports participation, including individual development, health promotion and disease prevention, gender equality, social integration, peace-building or conflict prevention/resolution, and post-disaster/trauma assistance (Kidd, 2008; Chawansky and Holmes, 2015). According to Lyras and Peachey (2011), sport-based projects use sport as a medium "to exert a positive influence on public health, the socialization of children, youths and adults, the social inclusion of disadvantaged, the economic development of regions and states, and fostering intercultural exchange and conflict resolution". More specifically, from a psychological standpoint, participation in sport is a protective or even preventive factor (Pascoe and Parker, 2019). Some sports programs help develop self-confidence and self-esteem, as well as combat depressive disorders and suicidal ideation (Babiss and Gangwisch, 2009; Jerstad et al., 2010). On a social level, the practice of sport can provide safe spaces and reduce antisocial behavior among children belonging to minority groups (Stodolska et al., 2014). It can also develop citizenship, cooperation, leadership skills, mobility, social cohesion, community integration, and positive peer relationships (Edwards, 2015). In addition, it may encourage pro-social behavior (Carreres Ponsoda et al., 2012) and broaden social horizons by linking participants with various institutional actors (Spaaij, 2012).

Limitations

Conducting this study was very challenging for our research team. Two limitations could be clearly identified. A first limitation comes back to the question of the translation and interpretation of this manual. First, the original manual was translated from Arabic into French by two people using a round-trip process. In fact, many words and expressions were not clear or easy to translate from Arabic into French and therefore subject to interpretation (e.g., group vs. team, competition vs. competitor, teacher vs. instructor vs monitor). Despite the precautions taken by our research team to ensure quality translation (Four Arabic-speaking authors, three authors from the Middle East), it is therefore possible that some words or expressions were misinterpreted depending on the context in which this manual was implemented. Moreover, by switching from Arabic (original document) to French (data analysis) to English (writing), and despite the research team efforts, some interpretations or explanations may have been lost or impoverished in terms of meaning (see footnote #1).

A second limitation of this study refers to the lack of access to the field and the possibility of validating some information with quality sources. Working on a theme that includes a war context as well as an extremist group necessarily implies shortcomings in the possibility of verifying the sources of information for

our analyses. In this sense, many questions remain unanswered after this analysis and several of the hypotheses we have put forward could not be verified. For example, the secondary school physical education manual was found by sources in the field but has not yet reached us for logistical reasons. Similarly, several interviewees from an ongoing study to collect testimonies on this lived reality became very silent when discussing some of the reflections on physical education and its organization by ISIS. Nevertheless, we hope that this ongoing study will help validate some of the hypotheses put forward by our analyses.

CONCLUSION

The present study conducted an unprecedented analysis of the ISIS primary school physical education curriculum describing and analyzing the context and philosophy of the document as well as its contents (didactic, pedagogy, learning assessment, among others). Our work reveals an incomplete and a rapidly developed textbook where several essential elements related to pedagogy, didactics, learning and assessment are missing or inconsistent. The logic of military preparation under the guise of preparing the student's physical condition is a major finding, which was developed based on religious pretexts, hijacked for political purposes. The ISIS physical education curriculum appears to be committed to an absolutist/theocratic ideological or propaganda program that, among other things, promotes the preparation of future soldiers, used in the accomplishment of the ISIS goals of dominance.

Yet, and as mentioned in the limitation section, several aspects need to be completed in future studies. Hypotheses and conclusions need to be validated with original sources using a more comprehensive investigation in the field. Finally, recommendations about secularization and the reconstruction of post-ISIS education systems are formulated but should be discussed with local partners to go further and meet their needs and those of the affected population.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author.

AUTHOR CONTRIBUTIONS

TG, GT, LD, AD, CC, and OA were involved in the design of the study and contributed to the review of literature. TG, GT, LD, and MA-K conducted analyses and wrote results section. TG wrote the first draft of the manuscript, after which GT, LD, MA-K, AD, CC, and OA read and contributed to the revision of the manuscript. All authors have made a substantial, direct, and intellectual contribution to the work, and approved it for publication.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/feduc.2022.854413/full#supplementary-material

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