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Title: Reading Iraq, Italy, Lebanon and English Cases of Education Curriculum policy through Mayssa's Framework of Four Competences of Critical Thinking Reveals a Gap in Scripting Competences for Critical Thinking

Mayssa Haidar-Baldwin, Daniela Canfarotta, Mayamin Altae and Alison Taysum

Abstract

Students gaining competences for critical thinking as part of a formal curriculum facilitates them to develop more equal relationships of power between themselves and others without fear of repercussions from those in authority. Mayssa's Framework of Four Competences for Critical Thinking drawing on John Dewey is presented: 1. can ask good questions; 2. can problem solve; 3. can collaborate; 4. can communicate. Curriculum polices as text from Italy, Iraq, Lebanon and England are read through this framework by operationalising Taysum and Iqbal (2012) analysis of policy as text. Evidence reveals none of the four nation states' curriculum policies as text have the four competences for critical thinking from Mayssa's Framework. This aligns with the curriculum policy as text analysis of 23 Nation states across the world (Taysum et al, 2012; 2014; 2017; 2020). Our new contribution to knowledge is state school students do not have access to these competences for critical thinking ompetences through pedagogies and elite networks. Recommendations are 1) Mayssa's Framework of Four Competences for Critical Thinking be formally included in policy curriculums to allow pattern matching between state school and private school exam success mapped to curriculum outcomes and pedagogies, without unnaturally biasing the exam system in favour of private schools, and 2) if Mayssa's Framework of Four Competences for Critical Thinking is resisted by an elite government, a clear explanation, line by line, of what is wrong with the policy is presented by the government to the teaching profession as part of a democratic dialogue.

Stage A Introduction, professional challenge, contexts and questions

Students gaining competences for critical thinking as part of a formal curriculum facilitates them to develop more equal relationships of power between themselves and others without fear of repercussions from those in authority (Hecht et al, 2020). Competences for critical thinking empower citizens to effectively apply pressure on those with power to secure advantages for themselves both at school, university and in the quadruple helix (Hecht et al, 2020). The professional challenge this paper addresses is that the competences for critical thinking i) are found in private school classroom processes and practices of assessment for learning as a thinking tool of an identity in becoming, that can access pathways to elite networks and entitlement inspite of not being scripted in state examination curriculums as policy as text (Hecht et al, 2020), but ii) are not found in state school classroom processes and practices of assessment for learning which denies access to a thinking tool of an identity in becoming that can access pathways to elite networks and entitlement because it is not scripted in state examination curriculums as policy as text (Taysum, 2019a). The lack of competences for critical thinking found in state curriculums is supported by Taysum et al's (2012; 2014; 2017; 2020) education socio-political analyses of 22 nation across five continents.

Private school processes and practices for assessment for learning include competences for critical thinking (Hecht et al, 2020). These competences are part of an elite dominant culture that is stable, unchanging over time and shared within elite networks of private schools, in what McCulloch (2007) calls a two-tier education system.

The argument made in this paper is that the competences for critical thinking are not found in state school processes and practices because they are not in the curriculum. State schools do not know to teach these competences because they are not part of state school networks or state school infrastructures. These state school infrastructures are subject to a bombardment of rapid reforms that are not evidence based (Taysum, 2019a). Further state school head teachers and teachers are distracted from challenging policy with a) not benefiting from an education system that taught them the competences for critical thinking required to challenge those in authority by asking good questions which creates this deficit in policy making, b) navigating deficit budgets and redundancies post the financial crash of 2008 which is physically and emotionally exhausting and prevents educational leaders and teacher leaders focusing energies on optimising critical thinking about different teacher leader empirical models for and of assessment for learning, c) navigating rapidly changing infrastructures with a neo-liberalist approach which is the rapid removal of laws to free economies from regulations that protect citizens and consumers which benefit the elite with methods that are behaviourist (Taysum, 2019, EU Policy Unit, 2015; Murrel-Abery, 2017; Taysum, 2019b, Taysum and Collins Ayanlaja, 2021), and d) being subject to harsh regulatory regimes that judge state schools and taxpayers as massive failures (Taysum, 2012), which, this paper argues, is a perverted view of the voters and their children (Taysum, 2019a).

The failing voters and taxpayers as head teachers, teacher leaders, parents of students and students have to comply with the judgements of the 'strangers' who arrive at the border of the school to regulate the head teachers, teacher leaders, parents of students and students. This is done to safeguard the standards in the best interests of the failures whose failure is compounded by, and arguably contributes to high levels of mental health problems which are growing globally (World Health Organisation, 2021). Having identified the need to put competences for critical thinking back into a) formal examinations in the application of disciplinary subjects to real life problem solving, mapped to b) policy curriculums as text, it is necessary to define critical thinking and break down critical thinking into competences that are curriculum ready. The paper makes a new contribution to knowledge by presenting Mayssa's Framework; Four Competences for Critical thinking, curriculum ready, which emerged from Mayssa's critical, systematic, and rigorous review of the literature.

Mayssa's Framework of Four Competences for Critical Thinking, as a theory of change to curriculums' education policy as text and assessment for learning is tested by reading four curriculum policies as text through it. The four curriculums are high school focused with high stakes examinations required for being college eligible include 'A' levels and GCSEs and are from Lebanon, Iraq, Italy and England.

To do this we operationalise Taysum and Iqbal (2012) policy analysis to address the professional challenge guided with the following research questions.

1. How and in what ways can a framework allow the breakdown of critical thinking into competences empirically, logically and ethically drawing on the thinking of John Dewey?

2. How and in what ways do curriculum education policies have Intended Learning Outcomes to meet these competences of critical thinking in Iraq, Lebanon, Italy, and England.

3. How and in what ways can an international comparative analysis of these four cases be theorised?

4. What knowledge to action strategies emerge from these groundwork cases to mobilise curriculum education policies to optimise students' critical thinking and faculty of judgement?

Stage B Critical Literature Review that informs the constructs of Mayssa's Framework of Four Competences for Critical Thinking

There have been numerous attempts to define critical thinking, as there are competing definitions for critical thinking. Qian (2019, pp.1-2 identifies:

In 1906 the American sociologist and humanist William Sumner indicated that both individuals and schools have a sociocentric view and tend not to challenge this view. :'The popular opinions always contain broad fallacies, half-truths, and generalizations; (Sumner, 1906, p.630). Citicism is the examination and test of propositions of any kind which are offered for acceptance, in order to find out where they correspond to reality or not (Sumner, 1906, p.362)...John Dewey believes that education should encourage people to have active, substantive, and careful thinking about beliefs and knowledge (Dewey, 1910) and that 'learning to think' is a primary purpose of education.

This examines and tests Mayssa's Framework of Critical Thinking that draws on Dewey's definition of critical thinking, which he also refers to as reflective thinking. The paper presents Mayssa's Framework of Critical Thinking is presented, and draws from its four constructs of critical thinking that emerged from a critical reading of the scientific literature; 'good questioning skills', 'problem solving skills', 'communication skills' and 'collaborating skills'. Dewey defines critical thinking as an:

active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends. (Dewey 1910, p.6)

Critical thinking is discussed in the following section in terms of the four competences¹: good questioning skills, problem solving skills, communication skills and collaborating skills mentioned above.

¹ There is not scope to discuss what competences are and the reader is invited to explore a critical analysis of competences in Taysum, A. (2012) "Standards as rules for compliance or as guidelines for critical, reflective and reflexive engagement in educational contexts" European Studies in Educational Management. 1 (1) pp.78-96.

B1 Good Questioning Skill

Dewey relates questioning to critical thinking and states 'thinking is inquiry, investigation, turning over, probing or delving into, so as to find something new or to see what is already known in a different light. In short, it is questioning' (Dewey 1910, p.330). The literature does not suggest anywhere that asking questions is not part of critical thinking, rather the literature affirms this position. For Paul and Elder (2013) questioning is the impetus of critical thinking. Therefore, questioning is a powerful tool that may be used in the initial stages of promoting critical thinking. In addition, Dewey argues that the purpose of questioning is to bring about an answer to a problem. A problem can be 'a state of doubt, hesitation, perplexity, mental difficulty' (Dewey 1910, p.15). Dewey (1938, p.105) equates questioning with inquiring and asserts that 'we inquire when we question; and we inquire when we seek for whatever will provide an answer to a question asked'. This shows that questioning is the driving force of critical thinking and there is a need to understand what makes a question a 'good question'. Dewey (1910, p.94) states that 'a question well put is half answered' meaning that a clearly formed question is more likely to suggest its own solution or solutions and a good question is a question that provokes one's thinking. (Ibid, p.44). Poor questioning, on the other hand, mainly the ones that require 'recitation' or 'a display of memorised information' as an answer might impede the process of training the mind to think critically (Dewey, 1910).

The realisation of ensuring that individuals know how to think is pivotal to develop critical thinking and formulate good questions. This is not only limited to the individual level but also extends to the wider context of society. Dewey (1910) emphasises the social context as being vital for the development of critical thinking from a skill level to a higher level of criticality because questioning takes place when individuals want to make sense of their experience and solve problems together in their social environment. Furthermore, higher stage of curiosity develops under the influence of the social context where one starts asking other people questions. (Dewey, 1938).

B2 Problem Solving Skills

Dewey's formal structure of problem solving uses critical thought to develop solutions to problems. Dewey provides five distinct steps to solve problems '(i) a felt difficulty; (ii) its location and definition; (iii) suggestion of possible solution; (iv) development by reasoning of the bearings of the suggestion; (v) further observation and experiment leading to its acceptance or rejection; that is, the conclusion of belief or disbelief.' (Dewey, 1910, p.72). In Dewey's formal structure of solving problems which contributes to the development of critical thinking.

In regard to the first and second steps (i & ii), they have been already conjunctly discussed in the previous part (Good questioning skills), which could be related to the arising of questions in the individual when there's a shortage of information in the conditions and perception of a perplexing or problematic situation (Dewey, 1910). The third step (suggesting a possible solution) mainly relates to a tentatively suggested solution, which involves an idea that includes 'the selection and arrangement of particular facts upon perception of which suggestion issues' (Dewey, 1910, p.75). Suggestions become ideas that might be conjectures when they are tested in relation to their meaning in resolving the problem. As a result, Dewey (1910, p.75) states the 'cultivation of a variety of alternative suggestions is an important factor in good thinking'.

The fourth step (development by reasoning of the bearings of the suggestion) is closely linked to the reasoning thinking process where implications of an idea with respect to the problem can be developed (Dewey 1910, p.75). Therefore, solutions are evaluated by reasoning of implications and consequences of the solutions (Dewey, 1910). The final step (further observation and experiment leading to its acceptance or rejection) includes 'some kind of experimental corroboration or verification of the conjectural idea' (Dewey 1910, p.77). After developing possible solutions, it is important to 'observe and experiment' the selected solution because observing and experimenting may carry out new facts (Dewey, 1958). The new facts need to be compared and contrasted to previous facts or dismissed facts in order to check whether the ideas work well. If the experimental results of the new facts corroborate with the conjectural idea then the confirmation is so strong as to assume a conclusion is accurate until contrary facts emerge that suggest its revision (Dewey, 1910). The aim of this process is to train the mind to be able and skilled to make judgements by chronological steps in a reflective manner to carry out solutions of a particular situation (Dewey, 1910). No literature suggests problem solving is a barrier

B3 Communication Skills

The use of language is an integral part of the communication skills because critical thinking entails communication and especially when collecting information and seeking others points of views. For Dewey (1910), language is a means of expressing or communicating information. Dewey argues that communication plays an important part in the individual's attempt to think to become a better human (Dewey, 1910). Dewey believes that language is necessary for the communication of thought (Dewey, 1910). Similarly, vocabulary is also an important part of the communication skills because it supports the conveying of meaningful information. Dewey (1910) argues that an individual's oral and written speech can be a tool of conveying information that assists the thought development process since thoughts deal with meanings and their suggestions. Furthermore, Dewey (1910) argues that language does not only include written and oral words but also signs such as gestures. Dewey emphasises that there is an intimate connection between words and signs and meanings and how they are precisely used. He states that the failure of using meanings when choosing words indicates mental laziness, which results in unproductive thinking. Dewey believes that vocabulary can be more accurate 'by making vocabulary more precise' (Dewey 1910, p.180). Precision of words reduces ambiguities in the use of language which may cause confusion or may lead to over generalisations (Dewey, 1910). This implies that individuals need to refine their ideas and learn the importance of precision in language to support their thinking with clarity.

Dewey places a great emphasis on the organisation of words that have specific meanings because when words combine, they 'form sentences in which meanings are organised in relation to one another' (Dewey 1910, p.185). So, communication requires what Dewey calls 'consecutive discourse' which highlights the importance of ordering of meanings which affects how individuals express and communicate their thoughts in verbal and written modes. For Dewey (1910), communication is an active reflective process that develops with intellectual standards. Passive communication including reading and listening means obeying and accepting the thoughts and ideas of others without questioning (Dewey, 1909). Instead of reading and listening to obey, individuals read and listen to information with the desire to learn in order to seek answers to questions (Dewey, 2004). As Dewey (1959) points out, it is only through participation in the world and communicating with others that individuals find out what is difficult or challenging for them personally to develop their thoughts critically.

B4 Collaborative Skills

Collaboration is a process of working together to achieve a common goal. Dewey (1958) refers to the importance of working towards a common goal. Dewey believes that individuals are part of a community, not outside of it, who interact with their environment in order to learn how to think (Dewey, 1958). He emphasises that collaborative learning is constructed within the social context (Dewey, 1958). Dewey believes that individuals learn from experience (Dewey, 1958) and emphasises the importance of one individual helping the other in a collaborative atmosphere. In Dewey's view, a collaborative environment includes 'the spirit of free communication', 'interchange of ideas, suggestions, results' for individuals to do things in a social and cooperative way within educational contexts (Dewey, 1958, p.29). Dewey believes that solving problems can be achieved by working cooperatively together to achieve common educational goals. Therefore, for Dewey, collaboration is an activity where individuals have the ability to work together empathetically to reach a common goal by communicating freely, thinking together, exchanging ideas, solving problems cooperatively within a moral and ethical dimension.

B5 Teacher Leadership in Literature

There is great interest in educational teacher leadership in the 21st century, as researchers have acknowledged the beneficial effects teacher leadership can have on school aspects that contribute to what students learn at school. In the past few years an important feature has been highlighted in literature related to teacher leadership due to teachers' unique position in promoting change within schools and communities. Teachers are well experienced in the difficulties involved in making a significant chance to school and students' outcomes. Hence, scholars have stated that teacher leaders have the capacity to lead the school through encouraging outstanding teaching practice, the use of teacher collaboration, the ongoing teacher professional development, assisting colleagues with class differentiation, and focusing on content-specific issues (Muijs & Harris,2006). In addition, the concept of teacher leadership has not been identified in some schools and often teacher leaders do not hold the same titles across schools these are under titles such as mentor, coach, subject specialist (York-Barr & Duke, 2004, Neumerski, 2012). The lack of an empirical teacher leadership model prevents teacher leaders from examining and implementing the model to optimise students' wellbeing and learning and to challenge policy if it does not script Intended Learning Outcome to meet the competences of critical thinking as identified in Mayssa's Framework above. To understand how to develop policy it is important to do a policy analysis using systematic, robust and trustworthy methods.

Stage C Methods

This education policy analysis methodology draws on Taysum and Iqbal (2012) 'What Counts as meaningful and worthwhile policy analysis'. Education policy is arguably a future roadmap of a nation for provision of resources in an education sector. However, where an education state is going and where it is now, is informed by where it has come from. Therefore mapping shifts in educational policy has the potential to reveal economic policies and how these were coupled to the social and moral values according to the cultural aspirations of the region at the time. Stasz and Wright (2007) make a case that policies are designed in a political environment, and shaped by ideology, interests of particular groups, constituent pressures and a variety of fiscal and institutional constraints. Decisions in policy making may be reached through compromises that ensure legislative commitments are met, whilst meeting the demands of other policy areas because resources, and funding in these matters are finite.

Policies can be encoded in complex ways. Codd (1998) argues that policy is perpetually in a state of becoming and is therefore difficult to capture and analyse. Policies may be in states of 'was', 'never was' and 'not quite', and for any text a plurality of readers must necessarily produce a plurality of readings. Moreover, policies shift and change their meaning in the arenas of politics where representations change and key interpreters such as secretaries of state, ministers and chairs of councils change. It is also possible that key actors change as a deliberate tactic for changing the meaning of policy. Bangs et al. (2011) address this issue when they cite Conor Ryan:

The big problem you've got is the lack of continuity...there's a curious thing that happens with all the policy people of the department...the ones who are really good quickly get moved on...so you lose that memory, so you get someone else who's on a learning curve and may or may not be any good at it...the ones who are plodding stay there (p. 154).

The impact of memory loss on the coherence of policy development is significant because policies structure ways in which a community goes about its busy-ness. Hodgson and Spours (2006) argue that policy is not grounded on what has gone before and 'policy amnesia' exists. Critical reflection may reveal policy strengths and areas for development which may at the same time affirm and subvert policy in a constructive way to bring about coherence and improvement in delivery or provision. However, governments made up of agents from elite networks may develop policy to ensure they keep their elite extra entitlement and may even be able to package this as attractive to the people they are exploiting. In this way voters vote for them like turkeys vote for Christmas, without realising that the elites' policies ensure examinations' success mapped to curriculums is biased in favour of the elite, whilst regulatory systems ensure citizens recognise they are failures which fills them with fear and adds to mental health illness which assures their access to the elites' networks is prevented. Ball (2006) suggests the advocates and technicians of policy change may find themselves the beneficiaries of new power relations.

Stasz and Wright (2007) argue that policies fail for three reasons. First, they are not evidence informed. Second, they are shaped by deeply held beliefs or ideologies of, for example, the elite that wish to perpetuate their elite status by creating examinations and curriculums to ensure the elite have smooth passage to elite Higher Education Institutions. Third, there is poor alignment between the policy problem and a particular policy instrument.

With a change in Government may come a change in education policies underpinned by different ideologies. The strengths of education policies from previous governments may be abandoned and forgotten leaving the educational professionals to make sense of how their professional practice aligns with what they have done before and what they are required to do now.

The argument is therefore presented that unless education policy is discursive, the possibilities for thinking 'otherwise' with an enquiring mind are limited. This affirms Hong Qian's (2019) insightful statement that populist opinions always contain broad fallacies, half-truths, and generalizations. Without critique of policy in transparent ways reported to voters, policy can smuggle through populism and fake news with biased strategies that perpetuate the status of the elite. Further the chances for building coherent education policies that build on what worked before and transparently challenge what did not work are limited, if not totally removed. Populism therefore perpetuates the government's scientific denialism to promote strategies of the elite for the elite². The only way to address this is to take a credible evidence based, logical and ethical policy for curriculums, examinations and Assessment for Learning that professional educators agree, and ask the government to explain why they disagree with the evidence informed, logical and evidence based policy changed line by line. Thus, educational policy and its implications need to be understood by all affected by it, in a language that is understood by all with terms defined and progressed in forums that are committed to facilitating civic engagement where participation is facilitated (Shields, 2007). Conceptualising policy in this way means it is necessary to think through issues of power, and the balance of power in terms of making sense of policy 'from above' and 'below' (Taysum and Gunter, 2008). Dowding (1996) suggests: "power to"

² Taysum (2019; 2017a; 2017b) explains in detail how this strategy of the elites perpetuating the strategies of the 'dark Satanic mills' (Blake, 2804) of colonialism throughout ages is perpetuated more recently by neo-liberalism.

can be described as outcome power which "is the ability of an actor to bring about or help to bring about outcomes" (1996, p. 5). Power to may involve cooperation and power over seems to involve conflict (Dowding, 1996). Change has the potential to undermine existing practices and common sense views. Values may be challenged and this is not neutral since there will be winners and losers. The notion of power balance and the underlying ideological position of the political arena at any given time needs to be unravelled when trying to understand the production of policy text and its subsequent interpretation through practice.

When reading the four curriculum policies as text from Iraq, Italy, Lebanon and England through Mayssa's Framework of Four Competences for Critical Thinking drawing on John Dewey, the issues of of policy analysis are considered by operationalising documentary analysis on the primary sources of the curriculums. The language of the four competences in the policy curriculums were highlighted and transferred to a table of analysis. The approach adapted Taysum (2019) Table 10.1 p. 234 Mapping Data in the form of quotes from policy as text to Key Constructs from Mayssa's 4 Competences of Critical Thinking to the research questions.

Due to this research being cutting edge, and because curriculum documents are not always available in a state in crisis such as Lebanon with no government, it is challenging to find resources to draw on. Therefore, drawing on Simon (1991) documentary analysis includes i) primary sources, government documents, researches, and media releases and ii) secondary sources such as academic literature and newspaper articles may also be drawn upon.

Stage D Findings and discussion Lebanon, Iraq, Italy and England; Middle East Meets West

Italian Policy Analysis read through Mayssa's Framework of Four Competences for Critical Thinking drawing on John Dewey

In the last years every government has introduced changes in the Italian education policy. The latest change is the Law n. 107 of 2015, which however does not the curriculum of 2012 and the certification of competences described in the Ministerial Decree n. 139 of 2007 modify (https://archivio.pubblica.istruzione.it/normativa/2007/allegati/all2_dm139new.pdf). In 2017 a document was prepared by the National Scientific Committee (2017) for the implementation of national guidelines and the continuous improvement of teaching (https://www.miur.gov.it/documents/20182/0/Indicazioni+nazionali+e+nuovi+scenari/) that underlines the effort of guiding teaching towards proposals, organizations, learning environments that enhance the autonomy and responsibility of students and are capable of developing significant knowledge and skills and lasting competences (p. 3). This document does not modify the curriculum of 2012, but underlines citizenship and sustainable education.

Therefore, in the following tables we can see a comparison between the Italian educational documents and the Mayssa framework. We report the exact words of the documents and definitions given by Mayssa in the literature review of this paper. Then in the next two columns we highlight the similar and different words between the two for each skill.

B1. Good Questioning Skill

Italian document	Similarities with Mayssa Framework	Differences with Mayssa Framework
Ministerial Decree n. 254 of 2012:	"Questioning is a powerful tool that may be	"The purpose of questioning is to bring about
"Listening and speaking:	used in the initial stages of promoting critical	an answer to a problem ".
- Interacting collaboratively in a conversation,	thinking"	
in a discussion, in a dialogue on topics of	-	"Questioning is the driving force of critical
direct experience, asking questions, giving		thinking and there is a need to understand
answers and providing explanations and		what makes a question a 'good question'"
examples.		
- Formulate precise and pertinent questions	"A clearly formed question is more likely to	"Higher stage of curiosity develops under the
for explanation and in-depth analysis during or	suggest its own solution"	influence of the social context where one
after listening" (p. 41)		starts asking other people questions

B2. Problem Solving Skills

Italian document	Similarities with Mayssa Framework	Differences with Mayssa Framework
Ministerial Decree n. 139 of 2007, Annex 2:	Dewey provides five distinct steps to solve	(ii) its location and definition ; () (iv)
"Address problematic situations by	problems '(i) a felt difficulty ; ()	development by reasoning of the bearings of
constructing and verifying hypotheses,	(iii) suggestion of possible solution	the suggestion; (v) further observation and
identifying sources and adequate resources,		experiment leading to its acceptance or
collecting and evaluating data, proposing		rejection
solutions using, according to the type of		

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problem, the contents and methods of the various disciplines"		

B3. Communication skills

Italian document	Similarities with Mayssa Framework	Differences with Mayssa Framework
Ministerial Decree n. 254 of 2012: " Listening and speaking: - Understand the theme and essential information of an exhibition (direct or broadcast); understand the purpose and subject of messages broadcast by the media. - To grasp the positions expressed by comrades in a discussion and express their opinion on a topic in a clear and relevant way" (p. 41)		Dewey places a great emphasis on the organisation of words that have specific meanings because when words combine, they 'form sentences in which meanings are organised in relation to one another' (Dewey 1910, p.185) "Passive communication including reading and listening means obeying and accepting the thoughts and ideas of others without questioning (Dewey, 1909)"
 Ministerial Decree n. 254 of 2012: "Acquisition and expansion of the receptive and productive lexicon: Understand and use the basic vocabulary appropriately (words of the basic vocabulary and those of high use). Enriching the lexical heritage through oral communication activities, reading and writing and activating the knowledge of the main meaning relationships between words (similarities, differences, belonging to a semantic field). Understand that words have different meanings and identify the specific meaning of a word in a text" (p. 42) And Ministerial Decree n. 139 of 2007, annex 2: "Understand messages of different kinds (daily, literary, technical, scientific) and of different languages (verbal, mathematical, scientific, symbolic, etc.) through different media (paper, computer and multimedia) represent events, phenomena, principles, concepts, rules, procedures, attitudes, moods, emotions, etc. using different languages (verbal, mathematical, scientific, symbolic, etc.) and different disciplinary knowledge, through different media (paper, computer and multimedia)" 	"The use of language is an integral part of the communication skills" "Dewey (1910) argues that an individual's oral and written speech can be a tool of conveying information that assists the thought development process since thoughts deal with meanings and their suggestions" "Dewey believes that vocabulary can be more accurate 'by making vocabulary more precise' (Dewey 1910, p.180)"	"Dewey (1910) argues that language does not only include written and oral words but also signs such as gestures"

B4. Collaborative skills

Italian document	Similarities with Mayssa Framework	Differences with Mayssa Framework
Ministerial Decree n. 254 of 2012:	"Collaborative learning is constructed within	"For Dewey, collaboration is an activity where
"- Understand the topic and main information	the social context (Dewey, 1959)"	individuals have the ability to work together
of speeches addressed in class " (p. 41)		empathetically to reach a common goal by communicating freely, thinking together,
"Milestones for the development of skills at the end of lower secondary school: The student uses oral communication to collaborate with others, for example in the creation of games or products , in the development of projects and in the formulation	Dewey believes that individuals learn from experience (Dewey, 2007) and emphasises the importance of one individual helping the other in a collaborative atmosphere.	exchanging ideas, solving problems cooperatively within a moral and ethical dimension"

of jud	Igments (on prob	lems	concerni	ng va	rious
cultur	ral and so	ocial are	eas" (p. 43)		

Summary

Good Questioning Skills. Despite some apparent similarities to the importance of clear and precise questions, there is no clear criterion for understanding what makes a question a "good" question in the Policy. It is not just a question of interacting, but of knowing how to respond to a problem, driven by curiosity. Therefore, we reject the hypothesis that in the Italian curriculum this competence has the same meaning with respect to the Mayssa framework.

Problem Solving Skills. Three important stages of critical thinking are missing, such as being able to define the problem, reason, develop further observations and experiments. Therefore, we reject the hypothesis that in the Italian curriculum this competence has the same meaning with respect to the Mayssa framework.

Communication skills. Although there are similarities with respect to the importance of a precise use of written and oral language, there is a lack of references to the organization of words and gestures, elements that often change the same meanings. Therefore, we reject the hypothesis that in the Italian curriculum this competence has the same meaning with respect to the Mayssa framework.

Collaborative skills. Despite similarities with respect to the importance of the social context and the collaborative experience, references to the empathic, moral and ethical dimensions are lacking. Therefore, we reject the hypothesis that in the Italian curriculum this competence has the same meaning with respect to the Mayssa framework.

Lebanon policy analysis read through Mayssa's Framework of Four Competences for Critical Thinking drawing on John Dewey

The Lebanese Education System is discussed in detail in this Open Access journal, and readers are encouraged to read the detailed analysis of the policy analysis.

Education in Lebanon is regulated by the Minister of Education and Higher Education (MEHE). The education system is divided into two sectors: private schools (high tuition fees) and public schools (free of charge). It is worth noting that there have long been enormous disparities in the quality of education between Lebanon's public and private schools Education is compulsory from age 6 to 14. The challenges of reading the education policies through Mayssa's Framework of Competences for Critical Thinking is that no education policy currently exists. Exploring the sociohistoriography of education in Lebanon from World War II provides a critical analysis of the wars, conflicts, and corruption that has created barriers for policy makers to deliver a Lebanese education system to empowered immature citizens to mobilise their education careers to transition to mature autonomous critical thinking identities Lebanese people.

Corruption is deeply seeded in the Lebanese government due to aging authoritarianism, ongoing violence in the region, lack of dynamic engines for economic growth, lack of political freedom, lack of employment, and lack of state legitimacy (Adwan, 2004; Leenders, 2012). Abdelnour (2001) compares corruption to cancer that infects the entire government hierarchy. For example, Wasta, a structural problem, is the most prevalent form of corruption in Lebanon that undermined trust in the government. Wasta is an Arabic word that loosely translates into nepotism, 'clout' or 'who you know' which involves the use of personal connections (or za'im connections) that favors some individuals to get access to services they need or schools, universities, jobs, promotions, etc (Egan and Tabar, 2016). while other citizens are denied access to opportunities and basic needs. Students sitting for official exams who have Wasta are given opportunities to cheat during tests. People who have Wasta are assigned to leadership and managerial positions in schools (Makhoul and Harrison, 2004). This form of corruption is a serious threat to social and economic equality in the education sector that impacted other citizens' lives putting their education, future, health and security at risk.

The corruption caused by the Lebanese authorities has brought the economy to its knees and along with the political class impoverished the local Lebanese and expats who invested in Lebanon. Lebanese politicians partner directly or indirectly with militias for personal and sectarian gains (Baumann, 2016). These gains such as stocking weapons and ammunition including some 2750 tons of ammonium nitrate explosives left for six years in a hangar at the port of Beirut in the heart of the city. On the 4th of August 2020, the 2750 tons of ammonium nitrate at the port of Beirut exploded, killing 220 innocent people, with 100 people unaccounted for, injuring thousands, and making 300,000 homeless (BBC News, 2020). The Lebanese people who did not sustain physical injury are at risk for long-term effects including post-traumatic stress disorder (PTSD) which can lead to chronic conditions including addiction, depression, anxiety, negative coping mechanisms

and seriously limit a person's potential and quality of life (Giovetti, 2020). The Lebanese government knew about the dangerous ammonium nitrate explosives at the port of Beirut and does not take the necessary emergency security measures to protect the Lebanese people (CNN, 2020). The explosion gave a message to the world that the corrupted political government is a serious threat to the Lebanese people and humanity since warnings from law firms and Port Officials of the enormous risk were ignored (New Hubbard et al., 2020). The Lebanese Government, after 30 years of continuing rule, holds the responsibility for governance, policy formation, and curriculum development and planning for the education sector and delivery of educational services in Lebanon.

Prior to the explosion, in an unprecedented event, on the 17th of October 2019, Lebanon 'rises' where widespread protests engulf in the country in response to endemic corruption, poor governance and austerity (The Guardian, 2020). Lebanese revolted against the 'entire' corrupt and criminal political class comprised of incapable and corrupt politicians. On the 22nd of November 2019, Teachers, students and their families protested against an outdated curriculum and burned textbooks outside the Education Ministry (The Daily Star, 2019). The revolution brought down two governments in less than a year. Before and after the explosion, the government, aided by the same incompatible politicians, has been violently oppressing the revolution, killing and maiming citizens in cold blood. All these reasons indicate that the political system is the major deterrent to the education system in Lebanon.

The 1994 reform plan restructured the educational system by giving more choice to students in the secondary phase as well as providing vocational students with the opportunity to join mainstream higher education (Shuayb, 2016). A comprehensive assessment of the 1910 curriculum conducted by Lebanese Association for Educational Studies (LAES) in 1999 provided incontestable evidence of myriad weaknesses that stymied the successful implantation of the curriculum (Kirdar and Brock 2017, p. 68). The CERD was assigned to carry out curriculum development and reform, however the LAES (2006, p.15) Vision Document reported that:

Although the bold step taken [by CERD] to develop school textbooks for all educational cycles has contributed to making the national textbook available to all, the quality of these textbooks suffers from: 1) absence of a single independent authority for developing and monitoring textbooks in accordance with pre-determined criteria, and 2) the stagnation of the school textbooks.

LAES Vision Document sets thirteen items as a result of the qualitative analysis of the CERD reform where the main finding was:

The curricula, teaching methods, and accompanying activities do not aim, in one subject matter area or across subject matter areas, to develop critical thinking and moral reasoning and related attitudes enough to enable individuals to live and work in a changing modern society and to turn into lifelong learners. (LAES 2006, p. 23)

Moreover, LAES Vision Document (2006, p. 23) reported that 'the 1910 general education curricula did not list under its general goals any goal for development of critical thinking and moral reasoning, though it mentioned moral commitment, to prepare students to adapt to change and to the demands of living and working in changing modern societies.' In addition to that, LAES Vision Document (2006) inform us that the curriculum evaluation of the new curricula showed that the general thinking skills, if referred to in the curricula, have not been reflected in the goals of different subjects, textbooks, and teaching practices. Shuayb (2016, p. 237) argues that 'adopting a consensus approach to the development of curriculum and textbooks limits opportunities to prepare individuals to think critically and creatively about issues affecting their current lives'. As a result, education in Lebanon does not help students acquire the skills (critical thinking abilities and moral reasoning), attitudes (accepting others), and beliefs (learning does not end with formal education) that develop their ability to live and work in a changing society and to become lifelong learners (LAES, 2006).

As a result, we here analyse and synthesise findings from the LAES Vision Document and CERD Curriculum Decree and General Targets in comparison with Mayssa's critical thinking model and its four competencies.

B1. Good Questioning Skill

Lebanese Vision Document	Curriculum Decree	Similarities with Mayssa Framework	Differences with Mayssa Framework
	and General Targets		
The curricula, teaching methods,	There is absolutely no		"Questioning is a powerful tool that may
and accompanying activities do not	evidence that	None	be used in the initial stages of promoting
aim, in one subject matter area or	suggests that young		critical thinking"
across subject matter areas, to	people or students are		
develop critical thinking and moral	encouraged to		"A clearly formed question is more likely
reasoning and related attitudes	question authority		to suggest its own solution"
enough to enable individuals to live	either in the		
and work in a changing modern	classroom or in		"The purpose of questioning is to bring
society and to turn into lifelong	society.		about an answer to a problem".
learners. P.23			·

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	This extends to		"Questioning is the driving force of critical
	parents and teachers.		thinking and there is a need to understand
			what makes a question a 'good question'"
			"Higher stage of curiosity develops under
			the influence of the social context where
			one starts asking other people questions
b			• • • •

The style and quality of teaching this underdeveloped Lebanese curriculum increases students' fear of questioning authorities who can be teachers, parents, principals or political leaders (Abou Assali 2012; Frayha 2012b). Shuyab (2016, p.237) states that: 'the single narrative, used in most public Lebanese schools, provides children with no opportunity to question and answer big questions. Instead, they learn only to remember information in order to recite for exams'.

B2. Problem Solving Skills

Lebanese Vision Document	Curriculum Decree and General Targets	Similarities with Mayssa Framework	Differences with Mayssa Framework
Academic concerns and matters dominate education in Lebanon and normally do not deal with social and environmental problems and with contemporary changes in the modern society. P. The general goals of some subjects noted the need to develop some general thinking abilities, such as problem-solving in mathematics. P. 23	Identifying difficulties and problems and analysing them in a scientific methodology by means of systematic thinking and scientific research.	Dewey provides five distinct steps to solve problems "(i) a felt difficulty; (ii) its location and definition; (iii) suggestion of possible solution; (iv) development by reasoning of the bearings of the suggestion; (v) further observation and experiment leading to its acceptance or rejection; that is, the conclusion of belief or disbelief.' (Dewey, 1910, p.72).	(iv) development by reasoning of the bearings of the suggestion; (v) further observation and experiment leading to its acceptance or rejection
Curricula do not adequately cover global concerns and challenges such as natural disasters, pollution problems, and issues related to pollution, poverty and diseases. P.27			

B3. Communication skills

Lebanese Vision Document	Curriculum Decree and General Targets	Similarities with Mayssa Framework	Differences with Mayssa Framework
Mathematics and sciences are allowed to be taught in a foreign language in intermediate and secondary cycles was inherited from the old curricula, however the new curricula extended that to the elementary cycle. The use of a foreign language as a language of instruction in mathematics and sciences poses problems which negatively affects learning in those two subjects. The initiative to develop school textbooks for all educational cycles has contributed to making the national textbook available to all and was an advanced move. However, the discrepancy in quality among textbooks for different classes and subjects, where the lowest quality has been observed in the area of languages, especially Arabic.	Deepening his knowledge of the Arabic language, enhancing the skill of linguistic communication, and raising it towards literary appreciation and creative expression. Mastering the skill of communication in languages as a tool for cultural and civilized communication and interaction. Enhancing basic language communication skills, and raising them to the level of literary and linguistic appreciation and creative expression. Providing the child with basic language communication skills, including understanding, reading, and written and verbal expression, while stimulating the tendency to read. Providing the appropriate environment to encourage the child to communicate with others and express himself.	"The use of language is an integral part of the communication skills" "Dewey (1910) argues that an individual's oral and written speech can be a tool of conveying information that assists the thought development process since thoughts deal with meanings and their suggestions" "Passive communication including reading and listening means obeying and accepting the thoughts and ideas of others without questioning (Dewey, 1909)"	Dewey places a great emphasis on the organisation of words that have specific meanings because when words combine, they 'form sentences in which meanings are organised in relation to one another' (Dewey 1910, p.185) "Dewey (1910) argues that language does not only include written and oral words but also signs such as gestures" "Dewey believes that vocabulary can be more accurate 'by making vocabulary more precise' (Dewey 1910, p.180)"

According to the LAES Vision Document the learning outcomes in languages, mathematics, and science are low as measured by national standards; on the other hand, the outcomes of mathematics and science are low as measured by international standards (LAES, 2006). It is worth noting that starting with the Kindergarten

cycle there are inherent weakness related to learning reading, writing, foreign language, mathematics, psycho-motor activities, and technology (LAES 2006; Shaaban,1910). The reason to that is the misinterpretation about the concept of "mother language" in a curriculum that is too general that led to confusion (LAES, 2006) (see Appendix E, item 4-h). This, somehow and not entirely, explains the low performance of students in mathematics and sciences in the TIMSS international study where Lebanon ranked 58th globally in maths and sciences. For Grade 8 students, Lebanon scored in math, 426 in 2003, 449 in both 2007 and 2011, and 442 in 2015. Moreover, the score of science at 8th grade is 435 in 2003 and 404 in 2007.

B4. Collaborative skills

Lebanese Vision Document	Curriculum Decree and General Targets	Similarities with Mayssa Framework	Differences with Mayssa Framework
Although participation of the educational community was much wider than previous times, this partnership was not comprehensive enough and did not involve all parties concerned (teachers, students, and parents). While "cultural openness" is mentioned in the general objectives of foreign languages, "national identity" appears in the general objectives of Arabic. Similarly, the concept of "living together" appears along the concept of national identity, in one of the general objectives of Arabic and then disappears from the special objectives of Arabic, and from the general and special objectives of all other subjects. (LAES 2006, p.25)	Participation in social and political work, within the framework of the Lebanese democratic parliamentary system, is a citizen's right and duty towards his community and country The participation of all citizens in the educational process, through educational, humanitarian, political, economic and social institutions is a national duty to achieve and maintain the public interest. *If we compared among the general objectives, the specific objectives, and the content, we would find that certain topics that appear in one level tend to disappear in another. All these examples point to the lack of alignment in the pedagogy of civic education and participation.	"Collaborative learning is constructed within the social context (Dewey, 1959)"	"For Dewey, collaboration is an activity where individuals have the ability to work together empathetically to reach a common goal by communicating freely, thinking together, exchanging ideas, solving problems cooperatively within a moral and ethical dimension" *Civic Education and participation as a school subject does not deal with developing moral reasoning in particular and moral education in general. Dewey believes that individuals learn from experience (Dewey, 2007) and emphasises the importance of one individual helping the other in a collaborative atmosphere.

In summary we compare and contrast each quote with the deconstructed competency from Mayssa's model in the literature review.

Good Questioning Skills. Despite some apparent similarities to the importance of clear and precise questions, there is no clear criterion for understanding what makes a question a "good" question in the Policy. It is not just a question of interacting, but of knowing how to respond to a problem, driven by curiosity. Therefore, we reject the hypothesis that in the Lebanese curriculum this competence has the same meaning with respect to the Mayssa framework.

Problem Solving Skills. Three important stages of critical thinking are missing, such as being able to define the problem, reason, develop further observations and experiments. Therefore, we reject the hypothesis that in the Lebanese curriculum this competence has the same meaning with respect to the Mayssa framework.

Communication skills. Although there are similarities with respect to the importance of a precise use of written and oral language, there is a lack of references to the organization of words and gestures, elements that often change the same meanings. Therefore, we reject the hypothesis that in the Lebanese curriculum this competence has the same meaning with respect to the Mayssa framework.

Collaborative skills. Despite similarities with respect to the importance of the social context and the collaborative experience, references to the empathic, moral and ethical dimensions are lacking. Therefore, we reject the hypothesis that in the Lebanese curriculum this competence has the same meaning with respect to the Mayssa framework.

England Education Policy Analysis read through Mayssa's Framework of Four Competences for Critical Thinking drawing on John Dewey

English Policy document	Similarities with Mayssa	Differences with Mayssa Framework
	Framework	

Journal of Groundwork Cases and Faculty of Judgement Taysum Publishing House ISSN				
 B1. Asking good questions Key Stages 1 – 4 (5-16yrs) Language and Literacy 6.2 They should be taught to give well-structured descriptions and explanations and develop their understanding through speculating, hypothesising and exploring ideas. This will enable them to clarify their thinking as well as organise their ideas for writing. Spoken language Years 1 – 6 ask relevant questions to extend their understanding and knowledge use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas Key Stage 2 Reading Comprehension answering and asking questions. 	English The good Questioning Skills are Intended Learning Outcomes for spoken language.	Intended Learning Outcomes to ask good questions are not explicitly stated in the reading or writing of Key Stages 1 – 4 other than Reading Comprehensions. Statutory Assessments are not conducted on spoken language and do not systematically require children to question the marker of their tests. Rather students are encouraged to respond to being questioned about the text. The test papers do not ask the candidates to write a series of questions that would enable them to identify the key terms of the problem that need defining to understand the text on a deep level.		
Key Stage 3 and 4 Reading Comprehension asking questions to improve their understanding of a textPupils should have guidance about the kinds of explanations and questions that are expected fom them. They should help to develop, agree on, and evaluate rules for effective discussion. The expecttion should be that all pupils take part.		This lack of requiring students to ask questions in their formal assessments can position a school to not encourage students to ask questions because this is not assessed, and it allows learning and teaching to focus on other Intended Learning Outcomes that are assessed to optimise students' outcomes in the national tests and secure their high position in the league tables which leads to a light Ofsted Inspection and less stress that can negatively impact on teachers' and students'		
Mathematics Year 2 Programme of Study ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ask-and-answer questions about totalling and comparing categorical data	Mathematics The Intended Learning Outcomes only require questions about descriptive statistics which are yes/no answers	Mathematics The curriculum Intended Learning Outcomes do not overtly require students to explore questions about how meeting the Intended Learning Outcomes in their mathematics curriculum can be applied in the real world and map to their narrative capital that underpins their pathways to achieving their goals culturally, economically, politically and ecologically for a good life with a happy ending.		
Science Key Stage 1 They should be encouraged to be curious and ask questions about what they notice.	Science there is evidence of asking questions.	The Intended Learning Outcomes require students to ask questions but this is not formally assessed in statutory assessments.		
Key Stage 1 Science They should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions,				
Lower Key Stages 2 Science They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.				
Upper Key Stage 2 Science They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena				
Key Stage 3 Science Pupils should decide on the appropriate type of scientific enquiry to undertake to answer their own questions and develop a deeper understanding of factors to be taken into account when collecting, recording and processing data. They should evaluate their results and identify further questions arising from them identify further questions arising from their results				
Key Stage 4 develop understanding of the nature, processes and methods of science, through different types of scientific				

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 enquiry that help them to answer scientific questions about the world around them History Key Stages 1-4 frame historically valid questions and create their own structured accounts, including written narratives and analyses Key Stage 1 They should ask and answer questions, Key Stage 2 They should regularly address and sometimes devise historically valid questions about change, cause, similarity and difference, and significance. Foreign Language Key Stage 2 Engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help 	History Key Stages 1 and 2 identify the importance of asking questions but this is not assessed. Foreign Language Key Stage 2 and 3 identifies asking questions.	History Key Stages 3 and 4 do not mention asking questions. Foreign Language Key Stages 3 and 4 do not identify asking questions		
 Key Stage 3 finding ways of communicating what they want to say, including through discussion and asking questions, 2. Problem solving skills Key Stages 1 – 4 'Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems'. Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language Can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions. Students should be taught to apply their mathematics to both routine and non-routine problems, including breaking down 	Problem solving identified with much potential in breaking down problems into a series of simpler steps. There is potential here to link curriculum's programmes of studies by breaking problems down into a series of questions taking a logical and theoretical approach (where mathematics only makes sense with the incorporation of irrational numbers) and then applying that to the real world that needs to navigating the challenges of irrationality in a search for truth and identification of lies and their impact in students' personal and social lives.	The intriguing problems are never defined so problems such as how to advocate for strategies to prevent VUKA, war, entitlement, slavery, racism, patriarchal gender relationships, sexual abuse, bullying, and achieving the Sustainable Development Goals are not addressed. The use of data in mapping progress against Key Performance Indicators on trajectories to achieving the Sustainable Development Goals (SDG), benchmarking SDG progress within and between states, regions and internationally, and mobilising problem solving skills using mathematics to propel entrepreneurial economies that deliver government policies for business start-ups are not taken up.		
more complex problems into a series of simpler steps. Citizenship Key Stage 4 They should experience and evaluate different ways that citizens can act together to solve problems and contribute to society.	Citizenship Key Stage 4 Students need to know how to act together to solve problems and contribute to society.	Citizenship Key Stage 4 The skills for problem solving are not articulated as a model with Key Performance Indicators that can be benchmarked on the pathway to meeting the Intended Learning Outcomes. There is no formal assessment of these skills for credit towards becoming college eligible or gaining an apprenticeship of a grant for a business start-up which prevents the problem solving developing culturally diverse and inclusive business models for prosperity and peace and sustainable growth.		
B3 Communication skills English Key Stages 1 – 4 A high-quality education in English will teach pupils to speak and write fluently so that they can communicate their ideas and emotions to others, and through their reading and listening, others can communicate with them.	Communication skills are identified	Communication skills are not broken down into sequential skills and explicitly scripted in grade descriptors, preventing formal assessment of communication skills needed to answer questions using 'consecutive discourse' which highlights the importance of ordering of meanings. This ordering affects how individuals express and communicate their thoughts in verbal and written modes. For Dewey (1910), communication is an active reflective process that develops with intellectual standards. Passive communication including reading and listening means obeying and accepting the thoughts and ideas of others without questioning (Dewey, 1909). Instead of reading and listening to obey, individuals read and listen to information with the desire to learn in order to seek		

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		answers to questions (Dewey, 2004). As Dewey (1959) points out, it is only through participation in the world and communicating with others that individuals find out what is difficult or challenging for them personally to develop their thoughts critically.		
B4. Collaborative skills	These Intended Learning Outcomes	These Intended Learning Outcomes are not		
English Key Stages 1 – 4 working effectively in groups of different sizes and taking on required roles, including leading and managing discussions, involving others productively, reviewing and summarising, and contributing to meeting goals/deadlines	engender collaboration	formally assessed, so there is no evidence that skills that empower collaboration are met. No collaborative work was explicitly scripted in any of the other disciplines to meet the Intended Learning Outcomes (ILOs) of collaboration. For Dewey collaborative IOLs are met when individuals can individuals have the ability to work together empathetically to reach a common goal by		
listening to and building on the contributions of others, asking questions to clarify and inform, and challenging courteously when necessary				
planning for different purposes and audiences, including selecting and organising information and ideas effectively and persuasively for formal spoken presentations and debates		communicating freely, thinking together, exchanging ideas, and solving problems cooperatively within a moral and ethical dimension.		
listening and responding in a variety of different contexts, both formal and informal, and evaluating content, viewpoints, evidence and aspects of presentation				
improvising, rehearsing and performing play scripts and poetry in order to generate language and discuss language use and meaning, using role, intonation, tone, volume, mood, silence, stillness and action to add impact				
Physical Education	Commendable	The skills for assessment to solve problems and		
Key Stage 3 take part in outdoor and adventurous activities which present intellectual and physical challenges and be encouraged to work in a team, building on trust and developing skills to solve problems, either individually or as a group		build trust are not stated as Intended Learning Outcomes.		
Key Stage 4 take part in further outdoor and adventurous activities in a range of environments which present intellectual and physical challenges and which encourage pupils to work in a team, building on trust and developing skills to solve problems, either individually or as a group				

In summary we compare and contrast each quote with the deconstructed competency from Mayssa's model in the literature review.

Good Questioning Skills. Despite some apparent similarities to the importance of clear and precise questions, there is no clear criterion for understanding what makes a question a "good" question in the Policy. It is not just a question of interacting, but of knowing how to respond to a problem, driven by curiosity. Therefore, we reject the hypothesis that in the English curriculum this competence has the same meaning with respect to the Mayssa framework.

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B1 Asking questions

التعصمن في ميلاين المعرفة والتدريب على تغليقة با تاميلا المية ومراسلة الدراسة العلى Education is general and varied, allowing expansion of thinking and gradualism to obtain more specialisation in the fields of knowledge and its applications in preparation for scientific competence and continuity of high schooling skills. (Article 2. Iragi Schools Regulations. schedule 2, 1977)		The Descriptor (p.28) deals with complex issues both systematically and creatively, but does not address the development of the skill to ask questions
B2 Problem Solving Skills : الثانوي الى : الثانوي الى : الثانوي الى : الثانوي الى : الثانوي الى : الثانوي الى : المانوي المانوي المانوي المانة المانة المانية والمانية والمانية بالمانية المانية والمانية بالمانية والمانية والمانية والمانية والمانية والم : والذي تقديم الماني المانية والتي تقدم من والديوقواطية المعبر والتفسئل المانية والتعالم والمانية مانين المانية الماني المانية المانية المانية المانية المانية المانية الماني المانية الماني الماني الماني المانية الماني ماني الماني ماني الماني والماني الماني ماني ماني ماني ماني ماني الماني الماني الماني الماني ماني ماني ماني ماني مماني ماني الماني الماني ماني الماني ماني ماني ماني ماني ماني ماني ماني	Descriptor (p.28) make sound judgements in the absence of complete data	It remains unclear how making sound judgements in the absence of complete data in students' real world contexts is assessed formally
Secondary education aims to: Enabling young people who completed primary school and enrolled in secondary education to continue developing their personalities from all their major, intellectual, moral and spiritual aspects by discovering their abilities and tendencies and guiding them and developing their knowledge and imbibing Arab and Islamic culture their original values and virtues impregnate them with science and its applications in life, keep pace with its progress, acquire skills and intellectual and practical trends leading to professional and productive work, and continue high studies, provided that all of this is consistent with the characteristics of adolescent growth and the goals of society to grow up important citizens of God loyal to their nation and their homeland, adhering to socialist and popular democratic principles and to the moral virtues as contributors. In advancing their society on modern foundations based on the realization of science and technology, possessing the will to struggle for the advancement of the Arab nation, overcoming the challenges it faces, achieving its goals of unity, freedom and socialism, and carrying out its role in building human civilization and achieving world peace based on truth and justice. (<i>Article 1, Iragi Schools Regulations, schedule 2, 1977</i>)		
B3 Communication Skills عد النشاط اللاصفي عضرا الماسيا في التشاط التريوي عام وتلحل قبه معارية التعبير عن معرات علمة وعلمة وقبة وتلبية وكشفة وكشا معرفة وتعليم في تنظيم حاصية الماريح العامية التعارية والأساليب السيقراطية (الاجلية من الاحلال تكثير توجيع تلك بالإراف البينانية التريسية وسلمة الاتحاد الرطني لطلبة العراق كما يمكن ان يشارك في بعض لواع التشاط الاباء والاجلية من ريكرس بعضيا للاحلال والمالسيات الموتنية والتريسية The extracurricular activity is considered an essential element in the educational activity in general and the practice of expressing scientific, practical, artistic, sports and scout skills is manifested in it. It is also manifested in its organisation of the development of cooperative collective spirit, democratic methods and socialist trends under the supervision of the teaching staff and the contribution of the National Union of Iraqi Students. Parents can also participate in some types of activities, and some of them will be dedicated to celebrating national events. (<u>Article 33, Iraqi Schools Regulations, schedule 2, 1977)</u> .		Descriptor (p.28) communicate their conclusions clearly to specialist and non-specialist audiences but this does not develop communication within and between their problem solving teams and how this propels advocacy for peace and prosperity
B4 Collaborative Skills تعنى البيئة التريسية بتعلق التعان بين الطلاب وغرس روح المودة والعمل الجماعي بينيم في مجد عن موزوي الأعمال بينيم في مجد دستندي في وتتريبيم على تولي القدادي التعاون بين إبعال المهنت وعلى القدام المعنونية على معاون موزوي الأعمال بينيم في مجد دستندي في الا تسميم على تولي القدادي التعاون بين الطلاب وغرس روح المودة والعمل الجماعي بينيم وتتطييم قد معال المعرب وغرو يها وتشيئي القدامة التعميش الا تسميم على تولي القدادي التعاون بين الطلاب وغربي القدامة المعالية المعالية المعالية المعالية المعالية المعالية وعلي المعالية المعالية وغربي القدادي التعاون بين المعالية المعالية المعالية المعالية المعالية وغربي التعاون من العرب وغربية وتتقلي مع الموالية المعالية المعالية الا تسميم على تولي العالي والاعران المعالية وعلي المعالية وعلي المعالية وعلي التعاون العربي وتتقلي مع المعالية المعالية المعالية المعالية وعلي المعالية وعالي وتعاون مع المعالية وعالي وتعاون العراني المعالية وعالي وتعاون العراني والاعراني المعالية وعالي وتعاون الا تسميم علي تولي المعالية وعالية وعالية وعالية المعالية وعالي المعالية المعالية وعالي العالية المعالية وعالي وعالي والعراني العالي وعالي والعراني المعالية وعالي وعالي المعالية وعالية المعالية وعالي وعالي المعالية وعالي وعالي عمل المعالي معالي وعالي و		Descriptor (p.28) demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level (with the profession). The descriptor focuses on individual work rather than building collaborative skills and assessments are done on an individual basis.

In summary we compare and contrast each quote with the deconstructed competency from Mayssa's model in the literature review.

Good Questioning Skills. Despite some apparent similarities to the importance of clear and precise questions, there is no clear criterion for understanding what makes a question a "good" question in the Policy. It is not just a question of interacting, but of knowing how to respond to a problem, driven by curiosity. Therefore, we reject the hypothesis that in the Iraq curriculum this competence has the same meaning with respect to the Mayssa framework.

Problem Solving Skills. Three important stages of critical thinking are missing, such as being able to define the problem, reason, develop further observations and experiments. Therefore, we reject the hypothesis that in the Iraq curriculum this competence has the same meaning with respect to the Mayssa framework.

Journal of Groundwork Cases and Faculty of Judgement Taysum Publishing House ISSN Communication skills. Although there are similarities with respect to the importance of a precise use of written and oral language, there is a lack of references to

the organization of words and gestures, elements that often change the same meanings. Therefore, we reject the hypothesis that in the Iraq curriculum this competence has the same meaning with respect to the Mayssa framework.

Collaborative skills. Despite similarities with respect to the importance of the social context and the collaborative experience, references to the empathic, moral and ethical dimensions are lacking. Therefore, we reject the hypothesis that in the Iraq. curriculum this competence has the same meaning with respect to the Mayssa framework.

Comparative Analysis

The findings reveal that all four cases of Italy, Lebanon, England and Iraq Good Questioning Skills. Despite some apparent similarities to the importance of clear and precise questions, there is no clear criterion for understanding what makes a question a "good" question in the Policy. It is not just a question of interacting, but of knowing how to respond to a problem, driven by curiosity. Therefore, we reject the hypothesis that in the Italy, Lebanon, England and Iraq curriculum this competence has the same meaning with respect to Mayssa's Framework of Four Competences for Critical Thinking drawing on John Dewey.

Problem Solving Skills. Three important stages of critical thinking are missing, such as being able to define the problem, reason, develop further observations and experiments. Therefore, we reject the hypothesis that in the Italy, Lebanon, England and Iraq curriculum this competence has the same meaning with respect to Mayssa's Framework of Four Competences for Critical Thinking drawing on John Dewey.

Communication skills. Although there are similarities with respect to the importance of a precise use of written and oral language, there is a lack of references to the organization of words and gestures, elements that often change the same meanings. Therefore, we reject the hypothesis that in the Italy, Lebanon, England and Iraq curriculum this competence has the same meaning with respect to Mayssa's Framework of Four Competences for Critical Thinking drawing on John Dewey.

Collaborative skills. Despite similarities with respect to the importance of the social context and the collaborative experience, references to the empathic, moral and ethical dimensions are lacking. Therefore, we reject the hypothesis that in the Italy, Lebanon, England and Iraq curriculums this competence has the same meaning with respect to Mayssa's Framework of Four Competences for Critical Thinking drawing on John Dewey.

As Taysum identifies in 'Generous or Harsh Post-war Economies and Education Systems to create identities for war or peace' in this edition of the open access journal Groundwork Case and Faculty of Judgement, applying ABCDE with Mayssa's Framework of Four Competences for Critical Thinking drawing on John Dewey offers the opportunity to develop deliberative approaches in the classroom. Gaining the Four Competences for Critical Thinking of Mayssa's Framework drawing on John Dewey empowers students to build and sustain an explicitly understood social contract and its explicitly understood duties and rights that all citizens agree with and commit to. The deliberative approach is explored in the papers of this open access journal and needs to be taught at all levels of all education systems (Taysum, 2019a) drawing on empirical teacher leadership models. The learning needs to be mapped to policy to achieve the Sustainable Development Goals (United Nations, 2016), aligned with commercial interests.

Through peaceful deliberation, it is possible to develop attitudes and behaviours that amplify the philosophy of moral imperatives in the complex relationships between nation states with different power, different unit labour costs, different Gross Domestic Product per capita, different resources, different means of production and different access to wealth and freedom with regard to the United Nations Declaration of Human rights (1948). More equitable education systems

and more equitable institutions can develop if citizens have the competences for critical thinking. The finding of fact in this comparative policy analysis where East meets West is that the four competences for critical thinking from Mayssa's Framework of Four Competences for Critical Thinking drawing on John Dewey are not scripted in education policy. Citizens need the thinking tools of critical thinking to call out fake news and advocate for ethical frameworks with moral compasses (Waghid and Smeyers, 2014).

Journal of Groundwork Cases and Faculty of Judgement Taysum Publishing House ISSN A Knowledge to action strategy to emerge from this critical policy analysis is that education policy needs to have Intended Learning Outcomes that map to Mayssa's

Framework of Four Competences for Critical Thinking drawing on John Dewey. Students who have the opportunity to gain these four competences of critical thinking as part of a formal curriculum, empowers them to develop more equal relationships of power between themselves and others, and particularly with those in authority, without fear of repercussions

Note from the authors:

When gathering information on Lebanese Education Policy we encountered a number of limitations. The Ministry of Education has no policy documents available. The research required intensive searches online, sharing of materials from peers in the field and translations of policy statements from Arabic to English. Unfortunately, we did not receive replies from email requests made to The Lebanese Ministry of Education

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