FINAL REPORT

Evaluation of the Teacher Training Curriculum Model (TTCM) project (2017-2021) and its impact on the quality of teacher learning and practice in public schools

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EDUCATION

Evaluation of the TTCM project (2017-2021) and its impact on the quality of teacher learning and practice in public schools

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This report provides an independent formative evaluation of the Teacher Training Curriculum Model (TTCM) project conducted by CERD and UNICEF from 2017 to 2021 in order to transform in-service training for public school teachers.

The evaluation was commissioned by UNICEF Lebanon Country Office in consultation with CERD, produced by CAYAMBE and relied upon consultation and input from a wide range of stakeholders. The evaluation team wishes to thank every contributor for their valued input and support.

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ACRONYMS

CAS	Central Administration of Statistics
CBE	Competency-based education
CERD	Centre for Educational Research and Development (CRDP in French)
CRDP	Centre de Recherche et de Développement Pédagogique
CP	Child Protection
CTP	Continuous Training Project
DAC	Development Assistance Committee
DIFA	Differentiated instruction and formative assessment
DOPS	Direction de l'Orientation Pédagogique et Scolaire (Guidance and Counselling Directorate)
DGE	Directorate General of Education
EM	Evaluation Matrix
EMIS	Education Management Information System
FGD	Focus Group Discussion
GEROS	Global Evaluation Reports Oversight System
GPE	Global Partnership for Education
GRASPS	Goal, Role, Audience, Situation, Product or Performance, Standards
IMPI	Inclusion: MTSS Policy and Implementation
IP	Implementing Partners
IRB	Institutional Review Board
IST	Inclusion Screening Tools
KEQ	Key Evaluation Question
KII	Key Informant Interview
LAC	Literacy Across Content
LCRP	Lebanon Crisis Response Plan
MICS	Multiple Indicators Cluster Survey
MEHE	Ministry of Education and Higher Education
MEAL	Monitoring, Evaluation, Accountability and Learning
MTSS	Multi-Tiered System of Support
NGOs	Non-Governmental Organizations
NLG	No Lost Generation
OECD	Organization for Economic Co-operation and Development
PRIME	Planning, Research, Innovation, Monitoring and Evaluation
PME	Planning, Monitoring and Evaluation
PITB	Pre-service and In-service Training Bureau
QA	Quality Assurance
QITABI	Quality Instruction towards Access and Basic education Improvement
RACE	Reaching All Children with Education
RC	Resource Centre (Centre de Ressources)
RCR	Responsables du Centre de Ressources (Managers of the Resource Centre)
RITS	Reinforcing Inclusion Through Simulation
SDGs	Sustainable Development Goals
SOPs	Standard Operating Procedures
TMS	Training Management System
ToC	Theory of Change
ToR	Terms of Reference
ToT	Training of Trainers
TTCM	Teacher Training Curriculum Model
TwT	Teaching with Technology
UbD	Understanding by Design®
UDHR	Universal Declaration of Human Rights
UIS	UNESCO's Institute for Statistics
UNICEF	United Nations Children Emergency Fund
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
WB	World Bank
WHERETO	Where and Why, Hook and Hold, Equip, Rethink, Reflect and Revise, Evaluate, Tailor, Organize

EXECUTIVE SUMMARY

The context of the Teacher Training Curriculum Model (TTCM) and its objectives

The multi-layered crises facing Lebanon (Syrian refugee crisis, political unrest, economic collapse, COVID-19 pandemic, Port of Beirut explosion) have further challenged the capacity of the Ministry of Education and Higher Education (MEHE) to maintain a highly qualified and well-trained teacher corps.

In 2017, CERD partnered with UNICEF to re-design the national teacher training curriculum in accordance with the recently adopted competency frameworks for teachers, trainers and other education staff. Given the fragmented teacher education system, and the lack of clear understanding of the competency-based teaching and learning approach among main education stakeholders, the rationale of this partnership was to adopt a **global curriculum approach to teacher professional development**.

The TTCM was meant to provide a national theoretical backbone and a common framework for the planning of training modules in all training centres under the Pre-service and In-service Training Bureau (PITB) in Lebanon. The design process allowed to clearly link each module, face-to-face on online and self-paced, to a teacher competency or competency component of the 2017 framework. A **Training Management System** (TMS) was also developed for data-sharing among relevant education stakeholders (inspectors, coaches, administrators) that supports efforts to build a coherent and uniform teachers' professional development structure at the national level.

In its preface, the TTCM Teacher Training Handbook, describes the objectives of the TTCM project as follows: **i)** to Improve the quality of the training design to **target the competency framework for teachers** and **transfer to classroom practices**, to respond to the specific needs of teachers and address attitude towards cross-cutting themes in education; **ii)** to improve the capacity of the PITB to **track and disseminate** attainment of competency building per teacher and attitude change towards cross cutting educational themes; **iii)** to improve the quality of teacher training to address the specific needs of **new teachers** in the public schools system; **iv)** to improve the competencies of trainers; and **v)** to improve the quality of training within the training centres.

Maximized **transfer of acquired competencies into** teachers' routine professional practice was targeted through the adoption of a specific instructional planning approach called "Understanding by Design (UbD)". As teacher training takes place outside of the school environment in Lebanon, the expert committee set-up for the project adapted this school-based approach to national teacher training institutions practices and culture.

Objectives of the evaluation

The evaluation of the joint CERD-UNICEF Teacher Training Curriculum Model (TTCM) project was entrusted to CAYAMBE in June 2021 and took place over a seven-month period between July 2021 and January 2022. The purpose of this evaluation is contributing to the evidence generation around the -based adaptation of the TTCM in order to increase its use and effectiveness within Lebanon's new competency-based teacher training vision. This evaluation is expected to generate recommendations that will help the Government of Lebanon and its partners to build upon the major achievements and successes of TTCM while identifying necessary improvements and further actions needed to maximize its impact on teacher quality.

Evaluation scope

The evaluation covered activities and developments of the TTCM project since its adoption in 2017 to 2021 leading to an overall cost of 3,074,357 USD, with activities still ongoing after this date. Its scope included existing TTCM methods, materials and measurable outcomes, namely:

- The **Process** adopted for TTCM design, training delivery and co-construction;
- The **Content** of the TTCM materials[1] and their adaptation into self-paced modules; and
- The **Results** of the implemented training. No Monitoring, Evaluation, Accountability and Learning (MEAL) guidelines, indicators and an agenda of activities were however initially set out in a logical framework, so results could not be assessed according to fixed targets.

The general approach used in this evaluation

This evaluation was formative and process-based. It was conducted using a human rights and gender approach with focus on the right of every child to quality education, with unequivocal regard to gender equality, equity and inclusion in public schools. It adopted a mixed method approach, using qualitative and quantitative data collected at national and sub-national levels in cooperation with a wide range of education sector stakeholders, including MEHE, CERD, education experts, school teachers and staff, UNICEF staff and donor agencies. The evaluation's field visits took place between mid-June 2021 and the end of January 2022.

Two complementary evaluation approaches were used: The Beneficiary Assessment and Outcome Harvesting. These approaches helped the evaluation team find their way within the relatively complex set of TTCM documentation, addressing the main challenges of the evaluation and overcoming the limitations of the context (pandemic and social crises, fuel crisis, strikes, etc.). The pandemic and social crises made it impossible to perform randomized controlled trials (RCT) based on an experimental group in order to estimate the net impact of TTCM training on teachers or students. Therefore, the team focused on **retrospectively identifying emergent impacts** of these trainings by collecting evidence on what teaching practices have changed (step1) and then, by working backwards, determining if and how an intervention has contributed or not to these changes.

Main findings

- ***Relevance***

The evaluation team concludes that the TTCM project was **relevant**, with general objectives established based on a preliminary identification of stakeholders' needs, including teachers, trainers and indirectly students. This preliminary identification of needs, although conducted informally, singled out areas of focus that broadly respond to recognized transversal teachers' needs such as differentiated instruction, blended learning, classroom management and competency-based teaching and learning. The roll out of training modules on Teaching with Technology (TwT) and remote/online training approach played an important role in overcoming the challenges caused by the COVID-19 pandemic, yet a limited number of teachers enrolled and completed the self-paced modules. The study reveals an overall positive perception by various stakeholders (teachers, principals, trainers, Guidance and Counselling Directorate (DOPS), experts) over the relevance of TTCM training. The TTCM project established a twofold innovation: a new competency-based approach to training on the one hand addressing the competency framework, a "new instructional framework" (UbD) on the other hand, targeting improved transfer. This double change rendered the training design process more complex and somehow less relevant for the trainers and training development and implementation more difficult with several confusing misalignment of teachers vs trainers tools and approaches.

- **Effectiveness**

The TTCM project was **effective**, achieving most of its expected general objectives. The proposed modules and content successfully addressed the national competency frameworks adopted in 2017, as recognized by more

[1] As per ToR, the content includes 5 Core training modules (TWT, LAC, CP, Inclusion and Gender), Teacher Training Induction Curriculum design and theory, Trainer's competency building and curriculum development

than 86% of trainers. The Training Management System (TMS) was designed to be a purposeful and modern tool for monitoring teachers' professional development from a lifelong learning perspective. The TMS provided the trainers with a holistic view of attendee profiles, the prerequisites for attending the training, the content material, and successfully supported the design and implementation of training sessions. However, it was not fully operational over the project implementation period due to power cuts and the inability to turn on the servers. Among the challenges that emerged were the time needed for trainers to plan performance tasks (key evaluation tool according to the TTCM), the inability of the trainers to follow up on attendees in their classrooms as well as the limits of the TMS for archiving lessons for future reference. Approximately 20% of trainers considered that the allocated time for the training was not sufficient. Most of the trainers stated that the five core modules developed were clear, helpful to improve the quality of education and valuable for tackling important challenges in Lebanon (forced shift to online teaching as a result of the COVID-19 pandemic, Syrian refugee crisis). The Teacher Induction Curriculum (TIC) for novice teachers was not tested, making it impossible to perform an effectiveness analysis.

- **Efficiency**

The average unit cost of training one person under the TTCM over the five years of the project is 96 USD per person (USD 3.07 million / 32,162 trainees). However, this average is to be interpreted with precaution as it combines both the average cost of the online training (during 2020 and 2021) and the in-person training (during 2017-2019). The unit cost for 2017 was approximately 645 USD, but this high unit cost is mainly explained by the inclusion of the development costs associated with the TTCM framework and training modules that meant only the trainers were attending training sessions during this first year. Moreover, the sessions mainly consisted of Training of Trainers (ToT) and coaching workshops, which are usually considered as relatively more expensive than teacher training. The unit costs in 2018 and 2019 are more representative of the average cost of teacher training (112 USD and 93 USD respectively) and the teachers accounted for more than 96% of the training population. In comparison to other international in-service teacher training initiatives, this cost is reasonable and close to the expected cost of 100 USD per teacher foreseen in the RACEII logical framework.

- **Impact**

No formal macro- or meso-level impact assessment was conducted between 2017 and 2020, so the evaluation focused on micro-level impact of the DIFA module and interpretation of meso-impact level on teaching practices. The team observed lasting **impact** of the training on teacher behaviours and practices to varying degrees. Significant change was observed in teacher behaviour towards inclusion and child protection issues. For example, trained teachers implemented the key concepts of the child protection module in all the classes observed. The modules concerning inclusion and differentiation were observed as being generally applied in classes containing learners with academic difficulties or special needs. Regarding teaching with technology (TwT), certain teachers attributed their weak use of ICT to the lack of technological tools in their schools and others mentioned power cuts as a major barrier to teaching with technology. 76% of trainers asserted that the TTCM improved the quality of the training but stated that refresher training is essential to ensure a long-lasting impact. Concerning the most important hallmarks of the TTCM design, the UbD tools (performance tasks, rubrics, backward design) seemed to be considered more impactful by the trainers than the competency-based approach.

- **Sustainability**

In terms of **sustainability**, the TTCM proved notably adaptable to considerable unforeseen circumstances including health, political, and socio-economic crises. However, the vital role of external technical experts holds potential for concern, considering the highly theoretical and conceptual complexity of most methodological documents. The project triggered promising partnerships between CERD-PITB and MEHE-DOPS since some of

the DOPS were also trainers with the PITB. However, coordination and alignment issues were perceived among donor-supported initiatives targeting education quality. Better understanding and coordination of pre-service teacher training is also recommended. The TTCM team purposefully studied the potential for coordination between TTCM and pre-service training offered in universities, but unfortunately this aspect of the study was not used for action. Two concerns were regularly raised by the beneficiaries of the project: the need to carry out post-training follow-up and the need for a system of recognition or motivation for the trainees.

Conclusion

Undoubtedly, the TTCM project was pioneering in the implementation of a new vision for teacher continuous training in Lebanon, following-up on the modernization process triggered by the adoption of the teacher competency framework. It fostered new tools and new approaches for teacher training quality with an explicit aim to ensure a real shift from teacher training quality into efficient teaching practices in the classroom. This is a highly important step to advocate for improved and more frequent impact assessment practices in teacher training. In order to ensure sustainability of the results and further improve the process, four key points should be kept in mind, and these four key points were used to frame the strategic and operational recommendations:

1) The successful teacher training modernization process confirmed by the TTCM leads to a better understanding of the teacher competency framework as key leverage to foster quality education. However, teachers' classroom practices cannot be deeply and sustainably changed if the different components of the school curriculum are not coherent and competency-based (curriculum, teacher pre-service and in-training, evaluation guidelines); 2) Such a reform process should seek to preserve diversity among teachers' classroom practices, therefore training approaches ought not to be limited to the socio-constructivist paradigm. Teachers remain free to choose the best teaching methods and approaches, including transmissive pedagogies, to adapt to the needs of a specific class or pupil. Irrespective of the benefits of direct transmission, constructivism, active and passive teaching strategies, the effectiveness of any teaching practice depends on how teachers implement it in the classroom; 3) The adaptation of the UbD model to adult learning and teacher training institutions raised several methodological and pedagogical issues to be addressed before further development; and 4) The present evaluation paved the way to anchoring impact assessment as a key feature of training design and development at CERD learning from existing evidence.

Overall, the collected evidence is suggestive of the TTCM project being a factor associated to inclusive Education. Therefore, the project contributes to the fulfilment to children rights to education reflected in the United Nations Convention on the Rights of the Child. The DIFA module particularly addressed the needs of marginalized children through a rights-based approach. It succeeded in providing teachers with new tools and approaches to differentiate their teaching and better address children's heterogeneity.

Strategic recommendations:

REC #1: The Government should seek permanent coherence and generalized reference to competency-based teaching and learning, especially in a context of revising the Lebanese curricula, targeting increased coherence in education (teacher training (both initial and in-service), curriculum, assessment methods for teachers, exams).

REC #2: CERD and UNICEF should revise and simplify the TTCM framework and tools and extend the present tools to teaching practices outside of the socio-constructivist paradigm. Teachers to remain free to choose their pedagogies, including transmissive ones. Unnecessary complexity should be avoided in professional and methodological documents. Assessment tools should not be limited to project-based approach.

REC#3: PITB and UNICEF should consider referring to a Lebanese backward design approach based on performance tasks rather than to an international registered trademark and make sure that intellectual

property issues regarding UbD are taken into consideration if the decision is taken to maintain official reference to UbD (Memorandum of Understanding, official authorization for example).

REC#4: MEHE and CERD should pursue improved collaboration and unified effort of PITB & DOPS, bringing together to avoid redundancy and/or duplicated effort (e.g. currently two separate management systems) and allow for a better return on work and investments, with the coordinated support of their technical and financial partners.

REC#5: UNICEF and CERD should ensure provision for project quality assurance, quality control and MEAL for the next phases of the TTCM, including quality plan and MEAL guidelines

REC#6: UNICEF and CERD should conduct a Needs Analysis (NA) as a foundation for the "redesign" and re-deployment of next phases of the project. The proper structure, mechanisms and processes for a sustainable Need Analysis with a continuous and agile monitoring and evaluation system are yet to be defined. The TMS, as it is today, cannot be considered as contributing to the NA.

REC#7: CERD and its partners should provide PITB with further Capacity Development with actual targeted and customized capacity development plan for CERD's PITB permanent staff. In fact, this is the main enabler if not the major success indicator for long term impact and for the desired institutionalization of the process. It should entail revised internal and external communication flows, tools and mechanisms.

Operational recommendations

The report also formulates operational recommendations aiming at ensuring better internal quality control and tools, correcting major inconsistencies and building on lessons learned, for instance hybridization. The need for training follow-up is also mentioned. A continued effort of including human rights based and gender sensitive approaches in teacher training is recommended.

1. OBJECT OF THE EVALUATION

1.1. TTCM project data sheet

Project title	Teacher Training Curriculum Model
Country / areas	Lebanon, nationwide
support	UNICEF, KfW and EU for design and implementation, Government of Canada for evaluation
Total Budget	Total allocated BUDGET: 5,060,718 USD[2] - Used budget: 3,074,357 USD / Disbursement rate: 60%
Duration	2017 – 2021
Overall objective	Enhance the quality of teacher training at (CRDP) Pre-Service and In-Service Training Bureau (PITB) and maximize transfer of the training outcomes into more effective classroom practices.
Project components	(1) Design and development of a new design framework for training teachers in the public sector, (2) Development of the Trainer Induction Curriculum & roll out of Trainer Basic and Advanced Trainings, (3) Development and operationalization of The Training Management System (TMS), (4) Development of the Teacher Induction Curriculum (TIC) for teachers newly joining the public sector, (5) Completion of a costed assessment of all CERD training centres as per international quality standards (6) Development of five teacher training modules & adaptation of all training modules to the TTCM, (7) Roll out of training to public school teachers following the in-person, blended and remote modalities.
Implementing partners	CERD as implementing partner. Collaboration with Ministry of Education and Higher Education (MEHE) (Guidance and Counselling Directorate -DOPS).
Beneficiaries (typology & respective number)	The TTCM offered a wide range of training, Training of trainers and coaching[3]. **20,316 persons attended teachers' training sessions** and **1,386 persons[4]** attended training sessions. The beneficiaries are public-school teachers (93%), CERD trainers, as well as CERD technical staff. - 9856 teachers were trained on core modules trainings: o Child Protection: 4591 o Differentiated instruction and formative assessment (DIFA): 1647 o Literacy Across Content (LAC): 312 o Teaching with Technology (TWT): 2336 o Inclusion in Schools (IST): 253 o Inclusion: MTSS policy and Implementation (IMPI): 717 - 193 trainers were trained on the TTCM design and 60 trainers attended the other trainings as trainees: o Basic Skills: 122 o Child Protection (CP): 32 o Differentiated instruction and formative assessment (DIFA): 17 o Literacy across content (LAC): 26 o Microsoft Teams: 62 o Teaching with Technology (TWT): 44 o Inclusion in schools (IST): 43 o Inclusion: Multi-Tiered System of Support (MTSS) Policy and Implementation (IMPI): 14

[2] The TTCM does not consist of a defined set of costed activities. These figures are therefore reconstructed by the evaluation team.
[3] These numbers underestimate the total output of the TTCM, since one person might have attended more than one training session. Thus, in order to accurately reflect the number of beneficiaries, we calculated the total number of persons attending trainings under the TTCM (example: one person attending 4 trainings is counted here as 4).
[4] When the 2021 indicative budget is included (to contain training on Mawrid-e Plan, ADAPT, CLASSERA and Back-to-school material), the total number of persons trained and coached under TTCM reaches 32,162 persons, the teachers representing around 93% of this total number of trained persons.

1.2. Brief socio-economic and political context

1.2.1. A Challenging Socio-economic context

With accumulating inefficiencies and underinvestment[5] in education over the last two decades, teaching in Lebanese public schools has significantly deteriorated[6]. Even before the Syrian crisis, 30% of Lebanese students attending public schools were experiencing relatively high rates of failure and dropout, compared to those in the private sector. The multi-layered crises facing Lebanon (Syrian refugee crisis, political unrest, economic collapse, COVID-19 pandemic, Port of Beirut explosion) have further challenged the capacity of the Ministry of Education and Higher Education (MEHE) to maintain a highly qualified and well-trained teaching corps.

Large-scale international programs were launched to support the Lebanese government's goal of ensuring quality education for Syrian children, following MEHE's decision to open its public schools to refugee children to ensure their right to formal education in 2013. Thus, as part of its Reaching All Children with Education (RACE I and RACE II) plans, the MEHE has received support from international donors (UNHCR, UNICEF, UNESCO, the World Bank and other donors) to provide free education to all children in basic education up to 9th grade (EB9). The support is organized through three pillars: improved access to education opportunities (Pillar I); improved quality of education services (Pillar II); and improved education systems (Pillar III). Output 2.2 under pillar II targets **training of teachers, personnel, and educators to be coordinated by CERD**. The UNICEF-supported TTCM project is embedded into this framework. Other donors supporting Pillar II of Race II were USAID and World Learning through the QITABI 2 Project, the World Bank and UNESCO. Worth noting is also the "inclusive school" pilot program launched in thirty schools in 2018 by MEHE with the support of UNICEF.

According to 2021 government estimates, Lebanon hosts 1.5 million Syrian refugees and half of Syrian children (3-18 years) benefit from formal education, either entering public school during the morning shift (known as the first shift), or in the afternoon school classes opened for refugees (known as the second shift)[7]. The number of school-age Syrian refugees exceeded the 332,126 Lebanese children enrolled in public schools in 2018-2019[8]. The share of enrolment of Lebanese children in private schools for general education is 64%[9].

After school closures began in March 2020, the COVID-19 pandemic seriously undermined the stability of the 2020-2021 academic year. Lebanon experienced major uncertainties related to compounded crises, particularly after the severe fuel and electricity shortages at the end of the summer 2021. Schools and universities, like other businesses and working spaces, suffered from severe rationing of electricity. Private generators, usually used as a substitute to the standing EDL network, were non-functional following the significant decrease in the country's fuel imports. Public and private schools were left with an unsolvable dilemma; they could not accommodate their students in face-to-face settings due to both COVID-19 restrictions and the significant increase in transportation fees, yet they could not ensure online teaching due to the permanent state of the electricity crisis.

Under these challenging circumstances, the social climate quickly deteriorated; an exponential increase in transportation fees was the last straw, leading to a teacher strike in the fall of 2021. The academic year was delayed to November 2021 and continues to be subject to turmoil and uncertainty from teachers strikes.

[5] In the last 3 budget laws, the education budget (budget of MEHE) fell from 2,091 billion Lebanese pounds in 2018 (i.e. 1.4 billion US dollars, calculated at the exchange rate of 1507 pounds to 1 dollar at that time, or 2, 8% of GDP in 2018), to 2,085 billion in 2019, to drop to 1,953 billion pounds in the 2020 law.
[6] RACE 2: Reaching All Children with Education II (2017-2021)
[7] LRCP, Lebanon crisis response plan 2017-2020
[8] CERD (2018-2019). Statistics Bulletin. Available online: http://www.crdp.org/en/statistics-bulletin
9 ETF – Rapid assessment diagnostic assessment, Lebanon, 30 June 2021.

1.2.2. Key institutional players in teacher training

In Lebanon, responsibility for education is shared between CERD and other institutions or departments under the leadership of MEHE. CERD has the primary responsibility for the development and review of the national curriculum, learning assessment, research and evaluation, the issuance of yearly national statistical bulletins on education as well as developing and rolling out training for teachers and school personnel. CERD was established by Decree # 2356, dated 10 December 1971, as a public institution having a juristic personality enjoying administrative and financial autonomy. CERD reports directly to the Minister of Education and Higher Education who acts as a custodial authority. The MEHE is in charge of administration and policy making, including planning, data systems and teacher management. As noted by the World Bank in 2021, "close coordination between CERD and MEHE are critical for the achievement of (key) milestones" in education[10].

Since the adoption of the present curricula in 1997, CERD and PITB both oversaw the implementation of continuous training for public school teachers. Following the implementation of Law 344 dated August 6, 2001, a university degree became a prerequisite for a tenured teacher contract. As a result, the pre-service training was transferred from PITB to universities. Nevertheless, the PITB conducted pre-service training and certification of teachers of all subjects between 1973 and 2002, graduating 13,111 teachers during this period. Work started on the Continuous Training Project early in the school year 2003-2004 within the framework of a joint agreement between the Lebanese and French governments. Six resource centres (RC) were established in the Lebanese governorates, where new positions of teacher-trainers were created.

PITB currently contracts around 200 trainers of various areas of specialization. Training sessions are conducted by contractual trainers in PITB's thirty-three training centres across Lebanon. According to PITB statistics, public school teaching corps account for 40,000 teachers approximately, 40% of which are contractual teachers[11]. Similarly, around 25,000 teachers (58% of the teaching body) and education personnel are trained per year on various academic, administrative, pedagogical and technological topics. On average, 2000 training sessions take place every year across the Lebanese territory. Such sessions are all the more necessary considering two laws adopted in 1985 and 2002 that allowed the recruitment of "contractual teachers" (teachers paid "by the hour"), yielding an "over-supply of under-qualified teaching staff in public schools for basic education[12]" (RACE II). This increase in under-protected jobs in the public sector has led to a decrease in the quality of the teaching body and raised new challenges related to informality, underpayment, and under-recognition. It also created prominent discrepancies within the teaching population in Lebanese public schools.

The "Département d'Orientation Pédagogique Scolaire" (DOPS) at MEHE is mandated to monitor and coach teachers during instruction. PITB and MEHE DOPS, given their mandate, are key players in many of the interventions under the RACE 2 Pillar II "Improved quality of educational services.[13]"

[10] Foundations for building forward better, an Education reform path for Lebanon, World Bank, 2021, https://documents1.worldbank.org/curated/en/627001624033308257/pdf/Foundations-for-Building-Forward-Better-An-Education-Reform-Path-for-Lebanon.pdf

[11] CERD (2019), The Handbook of continuous training at CRDP.

[12] RACE 2: Reaching All Children with Education II (2017-2021)

[13] RACE 2 was created in response to a crisis and is not a sector plan, though it forms the foundation of an eventual sector plan, which would include tertiary education. Some of the key elements being supported through the Bank-supported Program are summarized through the use of Disbursement-Linked Indicators (DLIs) under the S2R2 program (Support to RACE II), namely DLIs 3, 4 and 8

DLI#3: Teachers and educational personnel have enhanced capacities to provide learner-centered pedagogy in public schools or learning spaces

DLI#4: Educational personnel at the school-level are capacitated and empowered to proactively contribute to better school governance and safe/enabling learning environments

DLI#8: Appropriate policy frameworks are endorsed and implemented to regulate education programs and services, strengthen school management, and professionalize teaching services

The size of the Bank-supported RACE 2 Program is estimated at about US$1.8 billion, or about US$369 million per year!

QUESTION TO UNICEF: How is it interacting/duplication with UNICEF and TTCM?

1.2.3. The unfinished Lebanese reform towards competency-based education

The evolution towards competency[14]-based teaching and learning has been recognized worldwide as a new paradigm of education since the late 1990's. As demonstrated by Halasz and Michel (2011), the need to view the curriculum and learning outcomes in terms of competencies, that is to say as a combination of knowledge, skills, attitudes and values, is seen as an evolution rather than a revolution.[15] Teacher competency frameworks are often considered as the **cornerstone of such evolutions**: they **influence greater consistency** between entrance requirements for initial teacher education, certification examinations, teacher evaluations, professional development and career progression.

In Lebanon, this evolution is not yet completed. In 1995, a New Framework for Education in Lebanon was designed by CERD as a basis for new curricula originally developed in 1997[16]. The CERD-UNICEF technical committee has underlined the importance of adopting a training approach that fosters the teacher competencies of inquiry and reflection while relying on diversified and active training methods. However, the national curriculum is still mainly content-based[17]. Official government sources recognize that "the curriculum lacks basic skills and is not as learner-centred as international standards require[18]". The Competency Frameworks Supporting Quality Teaching in Lebanon (2017) were therefore a turning point. The frameworks defined the required professional attributes along four domains.

This framework was set to serve as a practical tool for pre-service training, in-service training, recruitment procedure and performance measurement.

Each of the 4 domains is disaggregated into competencies, 12 in total, and each competency is disaggregated into components (48 in total). Each component contains a non-exhaustive set of indicators (274 in total).

Through the TTCM project, in-service teacher training was **pioneer in spreading a competency-based practice and culture** in Lebanese basic education.

[14] In this report the evaluation team shall use the term "competency", thus aligning with the Lebanese terminology. However, the evaluation team notes that in many cases, the term "competence" is privileged. Such a distinction allows a clear understanding of the difference between competency, considered as a skill needed to do a job and therefore more linked with adult learning, and competence, which is used as the ability or set of skills possessed by an individual in a lifelong learning perspective. In the recent literature, both terms have become increasingly interchangeable.
[15] MICHEL Alain and HALASZ Gabor, Key competences in Europe: interpretation, policy formulation and implementation, European Journal of Education, Vol 46, N°3, 2011.
[16] CRDP & Ministry for National Education, Youth and Sports (1995), The New Framework for Education in Lebanon
[17] CRDP & Ministry for National Education, Youth and Sports (1994), The Plan for Educational Reform.
[18] Lebanese Government, Lebanon Crisis Response Plan 2017-2020.

1.3. The TTCM project

1.3.1 Rationale for a Teacher Training Curriculum Model

The TTCM captures the essence of the CERD-UNICEF mission to enhance the quality of teacher training. Under RACE II, a committee[19] for enhancing the quality of training was established by UNICEF with financial support from the Canadian government with the objective of consolidating the procedure that establishes the yearly regional training plan among all CERD resource centres. The committee included in its plan the mission of institutionalizing the new work processes and references at CERD. The Issam Fares Institute at the American University of Beirut was commissioned to conduct a situational analysis of the public-school teacher.

In 2017, CERD partnered with UNICEF to re-design the national teacher training curriculum in accordance with the adopted competency framework. Given the status quo context of the fragmented teacher education system, the rationale was to adopt a **global curriculum approach to teacher professional development**. Indeed, the design process was based on the six major components of a curriculum according to Demeuse[20]:

Curriculum Component according to Demeuse	Corresponding TTCM component
1. The learning to be implemented	▪ Teacher competency framework ▪ Trainer competency framework
2. The pedagogical strategies and the didactic process to be implemented	TTCM theoretical framework for adult learning Standards for training centres
3. The teaching aids for the users and the learners as well as the directives concerning their use	The trainers' curriculum for PITB trainers. Teacher training Handbook
4. The disciplinary content	5 Modules: **1- Teaching with Technology (TwT);** **2- Literacy Across Content (LAC);** **3- Child Protection (CP);** **4- Inclusive Education modules that include:** *o Differentiated Instruction and Formative Assessment (DIFA);* *o Leadership and inclusive education module (L&IE) for principals;* *o Inclusion: MTSS Policy and Implementation (IMPI);* *o Inclusion: MTSS screening tools and decision making (IST) that include the development of the 331 screening tools and their concept note;* *o Reinforcing inclusion through simulation (RITS);* **5- Gender mainstreaming**, developed in 2019. Online self-paced modules through Microsoft teams The Teacher Induction Curriculum (TIC) for teachers newly joining public schools
5. The expected results and the evaluation methods	Assessment framework
6. The management of the curriculum (initial training, continuing education and post-training follow-up)	TMS both for training design and tracking of teacher construction of competencies Policy brief for an institutionalization of the new developments

Since its beginning, the TTCM project "sought to institutionalize its outcomes with the hope of creating a regulatory framework for teachers' professional development where every concerned stakeholder has a clearly

[19] This committee was composed of external educational experts as well as the leadership team from the Pre-service and In-service Training Bureau (PITB) within CERD
[20] Quoted in the Handbook, p.43.

defined role within a harmonious and coherent system"[21]. It focuses on infusing the principles of child-centred pedagogy, active learning, differentiated instruction, and inclusive education into the teaching practices of public schools' teachers.

As teacher training takes place outside school context in Lebanon, the TTCM design team chose to experiment with a specific instructional planning approach, the "Understanding by Design (UbD)[22]"and adapt it.

What is UbD?

Understanding by Design, or UbD, is a tool utilized for educational planning at the school level focused on "teaching for understanding". The emphasis of UbD is "backward design", which is the practice of looking at the outcomes in order to design curriculum units, performance assessments, and classroom instruction.

UbD target student understanding and transfer of learning (i.e. the ability to effectively use content knowledge and skill in mathematics, writing, and other subjects in real life situations). Understanding is revealed when students autonomously make sense and transfer their learning through authentic performance tasks.

Initially, the model addresses the needs of teachers for lesson planning at the school level and student's learning. It is not oriented towards teacher training institutions and adult learning. The TTCM Handbook therefore provided the necessary adaptation according to three stages (desired results=>evidence and proofs=>training / learning plan).

The UbD framework was designed by recognized US educators, Grant Wiggins and Jay McTighe in 2005. Understanding by Design® is a registered trademark of the Association for Supervision and Curriculum Development ("ASCD"). In Lebanon, UbD has been tested in several higher education institutions and international schools; however, the evaluators did not find documented evaluation of the UbD at school level, at national level or for adult training purpose.

1.3.2. Key stakeholders involved

	STAKEHOLDERS	DESCRIPTION
CORE	Teachers	Direct beneficiaries
	RCR/DEN	Training centers
	Trainers	Actors and beneficiaries,
	DOPS	Mandated to monitor and coach teachers during instruction
	Inspectors	In charge of teacher assessment
	School principal	Were partly involved
	MEHE	Coordinate systemic intervention strategy
	Implementing partners	UNICEF
INDIRECT	LAES	Responsible for the National Strategy for Education and Teaching in Lebanon (MEHE, 2007)
	AUB / Issam Fares institute	Conducted a situational analysis of the public-school teacher
	CRDP/PITB	Mandated by MEHE for teachers' In-service training
	Lebanese university	Provide pre-service learning (initial training)
	Development partners	Contribute to other RACE II pillars. World bank developed the competency frameworks
	CERD UNICEF committee	Developed the TTCM

[21] Preface of the handbook.

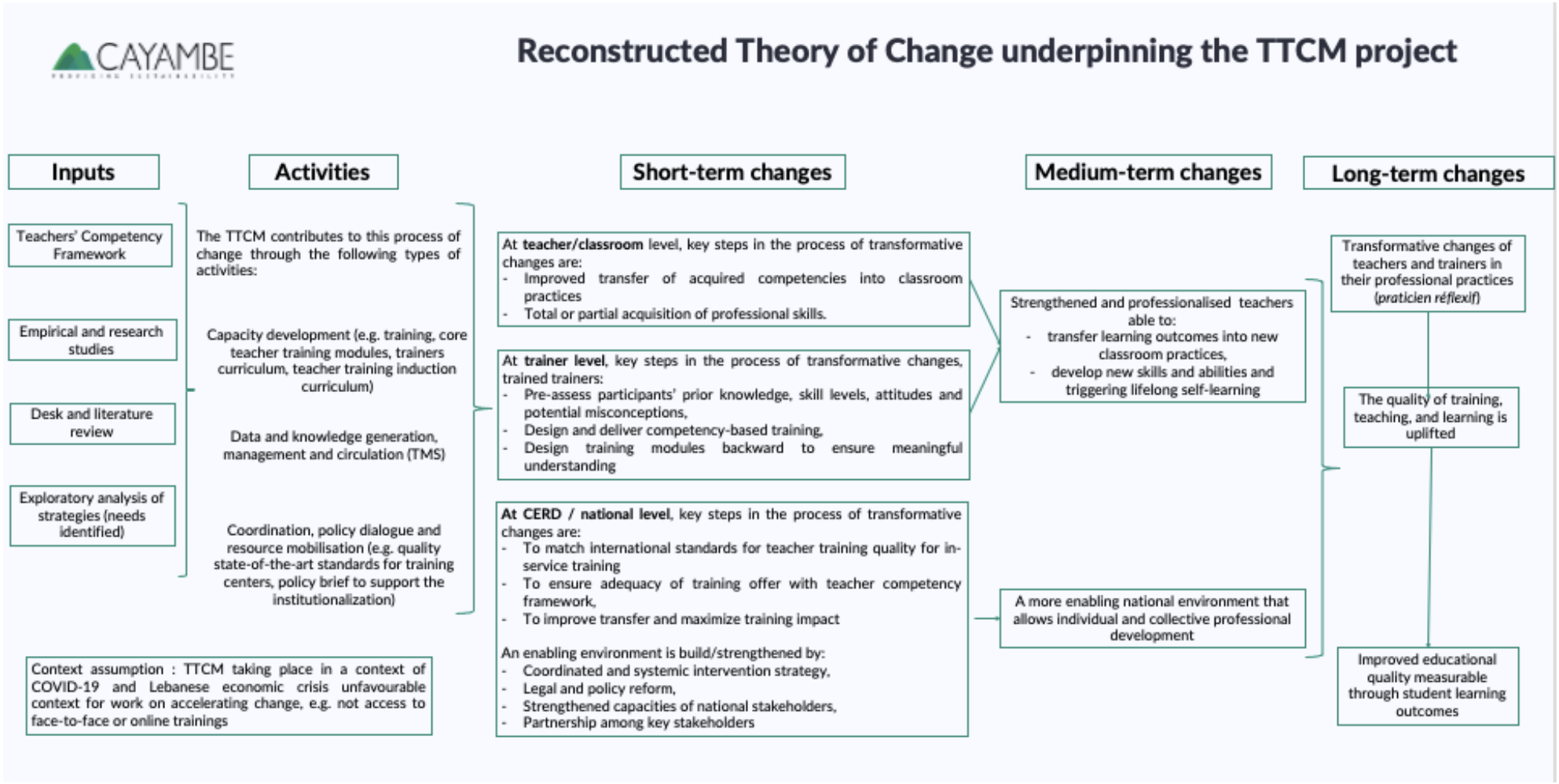
[22] The assumption mentioned in the Handbook is that "UbD fosters the concept of a competency that transcends the learning of discrete knowledge and skills of curriculum content to integrating knowledge segments within meaningful wholes which the learner can apply in real-life setting"

1.3.3 TTCM Theory of Change

The Theory of Change (ToC) for the TTCM project responds to these key objectives:

- Improve the quality of the training in order to **target the competency framework**, taking into account the lack of a clear understanding of the competency-based teaching and learning approach among main education stakeholders. For this purpose, the design process aligns with the competency framework, linking clearly each module to a competency or competency component;
- Respond to the **specific needs of teachers, with special attention to novice public school teachers**, by addressing key themes in education such as child protection, inclusion, learner centred instruction, gender issues, sustainable development and peace education; and
- Maximize the **transfer of acquired competencies into meaningful** teachers' routine professional practice. This particular objective was targeted through the adaptation of the UbD framework to national teacher training institutions practices and culture.

The evaluation team proceeded to reconstruct the ToC leading to the following scheme:


CAYAMBE
Reconstructed Theory of Change underpinning the TTCM project
Inputs
Activities
Short-term changes
Medium-term changes
Long-term changes
Teachers' Competency Framework
Empirical and research studies
Desk and literature review
Exploratory analysis of strategies (needs identified)
The TTCM contributes to this process of change through the following types of activities:
Capacity development (e.g. training, core teacher training modules, trainers curriculum, teacher training induction curriculum)
Data and knowledge generation, management and circulation (TMS)
Coordination, policy dialogue and resource mobilisation (e.g. quality state-of-the-art standards for training centers, policy brief to support the institutionalization)
Context assumption : TTCM taking place in a context of COVID-19 and Lebanese economic crisis unfavourable context for work on accelerating change, e.g. not access to face-to-face or online trainings
At teacher/classroom level, key steps in the process of transformative changes are:
- Improved transfer of acquired competencies into classroom practices
- Total or partial acquisition of professional skills.
At trainer level, key steps in the process of transformative changes, trained trainers:
- Pre-assess participants' prior knowledge, skill levels, attitudes and potential misconceptions,
- Design and deliver competency-based training,
- Design training modules backward to ensure meaningful understanding
At CERD / national level, key steps in the process of transformative changes are:
- To match international standards for teacher training quality for in-service training
- To ensure adequacy of training offer with teacher competency framework,
- To improve transfer and maximize training impact
An enabling environment is build/strengthened by:
- Coordinated and systemic intervention strategy,
- Legal and policy reform,
- Strengthened capacities of national stakeholders,
- Partnership among key stakeholders
Strengthened and professionalised teachers able to:
- transfer learning outcomes into new classroom practices,
- develop new skills and abilities and triggering lifelong self-learning
A more enabling national environment that allows individual and collective professional development
Transformative changes of teachers and trainers in their professional practices (praticien réflexif)
The quality of training, teaching, and learning is uplifted
Improved educational quality measurable through student learning outcomes

1.3.4 TTCM project timeline

The TTCM was meant to provide a national theoretical backbone and a common framework for the planning of training modules in all training centres under PITB in Lebanon. A **Training Management System** (TMS) and self-paced modules for TMS teams were also developed under the TTCM. TMS is a platform for data-sharing among relevant education stakeholders (inspectors, coaches, administrators) that supports the effort to build a coherent and uniform teacher professional development structure at a national level. Training portfolios for teachers hosted on the TMS were designed to enable tracking of the continuous construction of professional skills for teachers and trainers, as documented in the initial software design document.

Implementation was slowed down by the COVID-19 pandemic as well as the political and economic crisis in Lebanon after October 17, 2019. In addition, important changes interfered in the higher management at CERD in August/September 2020. As documented in multiple KII, PITB had to change its TTCM-TMS capacity building strategy for trainers and instead developed online training modules for teachers on Microsoft TEAMS. The PITB developed self-paced remote interactive training modules to support teachers in public schools learning how to implement blended learning modalities, online platforms and tools, and the curation of appropriate content. A synchronous online module provided clear guidance to teachers on how to complete the self-paced modules and the performance task required at the end. Although attending this training was mandatory for all public school teachers, only approximately 1,300 teachers enrolled. The economic situation and the lack of internet or appropriate devices at home were quoted as major barriers preventing teachers from enrolling (KII, Focus Group Discussion (FGD)). Notwithstanding, it continued to be offered to teachers throughout 2021.

For the 2020-2021 school year, following MEHE's decision to adopt blended learning, teachers were requested to provide remote support to children online and offline while working from home. As a result, no training took place in the first 9 months of 2020. An extra-module for Microsoft teams was designed and delivered by CERD teams to teachers in response to COVID-19 restrictions after the forced transition to online courses.

Since the TTCM/TMS was not fully implemented, PITB reverted to "MAWRID-E" training, which is a two hour synchronous workshop that targeted specific subjects related to online learning and teaching.

As part of the continuous quality improvement process for the Pre-Service and In-Service Training Bureau (PITB) at CERD, a **Teacher Training Handbook** was developed and published in 2020. The design of this Teacher Training Handbook was motivated by the desire of CERD to further enhance the quality of teacher training and support an ongoing shift towards competency-based teacher training.

Therefore, this evaluation assignment was commissioned within challenging project circumstances and had to adapt to these unexpected developments.

2. OBJECTIVES AND USERS OF THE EVALUATION

2.1. Objectives of the evaluation

The evaluation of the joint CERD-UNICEF Teacher Training Curriculum Model (TTCM) project was entrusted to CAYAMBE in June 2021 and took place over seven months between July 2021 and January 2022.

It illustrates the direct and indirect effects that the introduction of the model has had on trainers and teacher learning and practices in public schools through comprehensive analysis.

The purpose of this evaluation is to contribute to the evidence-based adaptation of the TTCM in order to increase its use and effectiveness within Lebanon's new competency-based teacher training vision. As per the Terms of Reference (ToR), the evaluation's objectives were:

- Generate evidence of the impact of the TTCM on the learning of public-school teachers as well as their practice;
- Generate evidence of the perception of public-school directors, DOPS-DGE coaches/counsellors and teachers of the impact of TTCM on teaching and learning;
- Issue recommendations to modify the design and implementation of the training modules as needed;
- Issue evidence-based recommendations for policy development to improve the quality of education; and
- Issue recommendations for further research to measure the effect of the TTCM approach on the quality of education.

2.2. Users and uses of the evaluation

This evaluation was expected to generate recommendations that will help the Government of Lebanon, and its partners (see Table below), to build upon the major achievements and success of TTCM and identify necessary improvements and further actions needed to maximize its impact on teacher quality.

Users of this evaluation and expected uses of the evaluation are outlined in the Table below.

Table 1: Users and use of the evaluation

Users	Uses (how the findings and recommendations will be used)
Government (Ministry of Education, CERD and relevant line agencies and entities)	Inform teacher professional development strategies and guide the competency-based approach to initial training and assessment. Revise the TTCM on the basis of the findings.
Teacher training centres	Share the challenges and lessons learned in rolling out the TTCM at the local level.

UNICEF staff	Update their Program Strategy in the future and ensure adequate support.
UN agencies	UNICEF Education Section and other UN agencies, in collaboration with all partners involved in the implementation of the education component of the United Nations Sustainable Development Cooperation Framework (UNSDCF), will introduce strategic/implementation changes to their strategy when relevant.
Development partners	Country programs and strategies of all development partners working in the education sector and having ties to support in other sectors will benefit from the evaluation. • Review the Theory of Change and refine intervention strategies • Design future intervention looking for global consistency of teacher training documents in Lebanon • Mainstream (into their day-to-day practices) the good practices identified during the evaluation and address the shortcomings that have emerged from the analysis.
Teachers	As end beneficiaries, teachers shall fully benefit from a better understanding of competency-based teaching and learning

3. SCOPE OF THE EVALUATION

3.1. Thematic Scope

This evaluation's scope focused on existing TTCM materials and measurable outcomes. More precisely, it embraces:

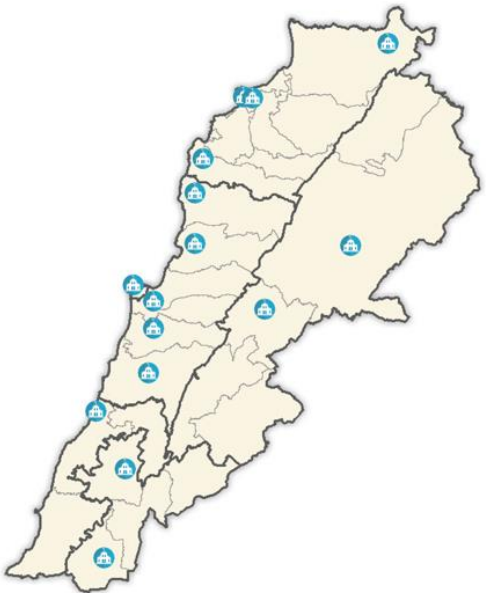
- The **Process** adopted for TTCM design and co-construction;
- The **Content** of the TTCM materials[23] and their adaptation into self-paced modules on Microsoft Teams in the COVID-19 context; and
- The **Results** of the implemented training, both in person and online, based on TMS as well as other relevant primary and secondary data sources.

It is viewed through the lens of human rights, mainly the right of every child to quality education, focusing on gender equality, equity and inclusion in Lebanese public schools.

[23] As per ToR, the content includes 5 Core training modules (TWT, LAC, CP, Inclusion and Gender), Teacher Training Induction Curriculum design and theory, Trainer's competency building and curriculum development

3.2. Geographical scope

This evaluation covered the eight governorates concerned with the implementation of the TTCM. Thus, included key informants from the 6 regional Resource Centres, trainers from the thirty-three training centres of the PITB, as well as teachers who attended trainings and school directors from fifteen public schools distributed among all governorates, as shown in the adjacent map.



3.3. Chronological scope

The evaluation covered activities and developments of the TTCM since its adoption in 2017 to the present. The following key relevant milestones (in chronological order) were considered in the assessment design and implementation.

Key Milestones	Year of initiation
Adoption of the teacher competency framework	2017
Launching of TTCM	2018
Core Training Modules developed	2018
Teacher Induction Curriculum designed	2018
TMS designed and contracted for development	2018
TTCM Assessment Framework designed	2018
TTCM Handbook finalized and published	2019
Training of trainers	2019
Training of teachers	2019-2021
Online self-paced modules Microsoft teams designed and delivered	2020-2021

4. APPROACH AND METHODOLOGY

4.1. Evaluation criteria

Criteria included in the matrix are presented in the evaluation matrix at Annex 2. They include five OECD/DAC[24] criteria: Relevance, Effectiveness, Efficiency, Impact and Sustainability. Since detailed financial statements and yearly "actual vs. planned budgets" were provided to the team, Effectiveness and Efficiency were evaluated separately and the Efficiency analysis was based on a detailed tracking of all expenditures, while linking costs to tangible outcomes and retracing the evolution of unit costs on yearly basis.

It is important to note that coherence was excluded from the initial evaluation framework. Even though it was not explicitly included in the ToR, our team of evaluators considered that the Coherence criteria is instrumental to inform decision-making at all levels. Thus, Coherence was specifically addressed by the team as a key dimension for future policy making, leading to several key recommendations, coupled with the "Relevance" dimension.

Gender mainstreaming and human rights dimensions are integrated into all evaluation criteria.

4.2. Evaluation questions

Following the initial desk review phase, the initial Key Evaluation Questions (KEQ) from the ToR have been adjusted to improve their relevance to the current implementation status of the TTCM. For example, knowing that many teachers were not able to implement their newly acquired practices in the classroom during the school closure period, the evaluation team considered it useful to also assess their **level of readiness** for the implementation of these initiatives during the class observations.

Likewise, in some instances, sub questions were added to the main overarching Key Evaluation Questions in an effort to unpack the evaluation topic. The list of KEQ organized per criterion are listed below and detailed with corresponding sub-questions, sources and indicators in Annex 2.

/ 1. Relevance and appropriateness

1.1	How is the TTCM framework and the designed modules relevant to the needs of the teachers, children and trainers in the Lebanese public schools? Taking into consideration gender, inclusion, diversity, etc.
1.2	To what extent is the TTCM design relevant to the Lebanese institutional and policy context regarding teacher training and teaching standards and priorities set by CERD and MEHE?
1.3	To what extent is the TTCM framework and the designed modules successfully targeting the national teacher competency framework?

[24] OECD: Organization for Economic Co-operation and Development. DAC Development Assistance Committee

/ **2. Effectiveness**

2.1	To what extent did the TTCM project achieve its objectives in terms of trainer enhanced competencies?
2.2	How adequate are the TTCM assessment framework and tools in assessing the level of competency building and attitude change of teachers per training module, online and face to face?
2.3	To what extent does the Training management system (TMS) including data collection, data building, the training actually delivered, implementation of TTCM and tracking effectively monitor the quality of the teacher training?

/ **3. Efficiency**

3.1	To what extent is the approach to training face to face and remotely cost-effective and cost-efficient?

/ **4. Impact**

4.1	To what extent did the TTCM training improve teacher learning online and face to face?
4.2	To what extent does the TTCM-based training achieve its objectives in terms of transfer of acquired competencies to the classroom practices of teachers?

/ **5. Sustainability**

5.1	To what extent can the TTCM approach can be scaled up and continuously refined to meet the changing needs of teachers as collected through the training management system with no additional donor funding?
5.2	To what extent can the TTCM approach be scaled up to continuously track and respond to the competency building of trainers?
5.3	To what extent the establishment of the TTCM has been able to contribute to a change in perception in the role and place of in-service teacher training and the consideration of their needs?

4.3. General Approach

More broadly, this evaluation adopted:

- A participatory approach, ensuring wide communication and full stakeholder participation. This involvement occurred at all stages of the evaluation and was facilitated by the local expert's facilitation skills and commitment to consider insider perspectives. CERD was also given a substantive role during the whole process and at all stages.
- A policy-making approach, bearing in mind the consequences of future policy choices for the systemic improvement of teacher training in Lebanon.
- A child-centred and rights-based approach fundamental to safeguarding and promoting the welfare of every child. This means focusing on the role and the effects of the teacher with

focus on vulnerable students. It also means putting emphasis on the ethical framework underpinning data collection, in line with UNICEF standards.

- A systematic approach targeting simple communication and clear messages in an already complex setting.

This evaluation adopted a mixed method approach, combing qualitative and quantitative data collection methods: quantitative information collected from secondary source such as the TMS and available financial data for efficiency considerations, qualitative and quantitative primary data collection.

As part of the inception report, a reconstructed ToC was produced. The team also reconstructed the achievements of the TTCM implementation in the absence of consolidated narrative progress reports.

For the purpose of this evaluation, two complementary evaluation approaches were used: The Beneficiary Assessment and Outcome Harvesting. These approaches helped the evaluation team find their way within the relatively highly complex TTCM documentation, addressing the main challenges of the evaluation and overcoming the limitations of the context (pandemic and social crises, fuel crisis, strikes, etc.).

- **Beneficiary Assessment**: the evaluation team focused on assessing the value of TTCM intervention as perceived by the (intended) beneficiaries, thereby aiming to give voice to their priorities and concerns (trainers, teachers, students).
- **Outcome Harvesting**: this evaluation was initially designed to focus on the impact of the TTCM project on teaching practices. Unfortunately, the pandemic and social crises made it impossible to perform randomized controlled trials (RCT) based on an experimental group to produce an estimate of the mean net impact of TTCM training on teachers or students. Therefore, the team focused on **retrospectively identifying emergent impacts**[25] by collecting evidence on what has changed then, by working backwards, determining if and how an intervention has contributed or not to these changes.

The evaluation was fully gender balanced, performed by a gender-balanced team (100% women regarding the field data collection) and committed to the full participation of women in education quality efforts. The desk review and data collection operations put emphasis on active implementation of gender-responsive classroom interaction as well as on gender-equal teaching strategies.

The research was also sensitive to vulnerable populations such as refugees and pupils with special needs. Moreover, the participatory approach and the increased stakeholder involvement helped the evaluators engage with the participants in open and transparent discussions.

[25] We provide further methodological considerations and lessons learned on impact in chapter 6.4. The study concentrated on micro and meso impact and was not designed to provide macro-level impact information using a randomized control group.

4.4. Data collection methods

The data collected for the purpose of this evaluation combined qualitative and quantitative sampling and analysis techniques generally used in mixed-method studies. The starting point was desk research, including an extensive literature review and an exhaustive review of the project's documentation and platforms, as well as a detailed analysis of all the training modules. Primary data was collected between September and December 2021, using a survey that targeted a population of 193 trainers concerned by the TTCM design (with a response rate of 56.9% and a sample size of 110 respondents), as well as in-depth interviews with fifty key participants and five focus group discussions with various stakeholders (the detailed lists are given on the next table, cf. "Table 2: Data Collection Methods" below). Finally, primary data was harvested through field visits and class observations conducted in fifteen nationally representative schools, covering all regions in Lebanon (cf. the mapping of schools and centres, in section 3.2- Geographical Scope). The main intention of the field visits was to perform class-observation using an evaluation grid that was specifically designed to capture the impact of the TTCM on teacher practices, while observing their interactions with the ultimate beneficiaries of the project, i.e. the students and the learners. It is also worth noting that the field visits allowed the evaluation team to conduct on-site unstructured or informal interviews with teachers and school principals as well as administrative staff.

4.4.1. Secondary data

An important set of secondary data and documentation was also analysed as part of the desk review and is listed in annex 6. The desk review also included a detailed comprehensive analysis of all training modules, presented in annex 7.

4.4.2. Primary data

The evaluation team organized primary data collection according to the following methods:

Table 2: Data collection Methods

1- Qualitative data collection methods			
Methods	**Stakeholders**	**Total disaggregated number of respondents**	**Sampling strategy**
Key Informant Interviews (KIIs)	UNICEF, MEHE, CERD Officers at national and regional levels, reference working group members, RCR, DEN, DOPS, Trainers, School directors, Teachers (informal)	fifty Semi structured interviews ''Saturation point''[26] reached fifteen directors interviewed	Sampling of teachers and trainers was based on lists of schools, trainers and trainees that was shared by CERD. Following the selection of fifteen nationally representative schools, the evaluation team selected a sample of thirty trainers and thirty teachers, for KII, as well as for the FGD

[26] The criterion for judging when to stop sampling the different groups pertinent to a category is the category's theoretical saturation. Saturation means that no additional data are being found whereby the researcher can develop properties of the category.

1- Qualitative data collection methods			
Methods	**Stakeholders**	**Total disaggregated number of respondents**	**Sampling strategy**
Focus Group Discussion (FGDs)	Two mixed FGD with both trainers and teachers Two FGD with teachers only One mixed FGD with school principals and teachers	Three Trainers, One RCR, seventeen teachers and two school principals.	Purposive sample from a list of key representatives of each training centre and a sample of teachers selected both from the fifteen schools and outside.
Class observation	Observe and analyse impact at meso level / Field visits to fifteen schools and Observation of two classes in each according to purposeful evaluation grid capturing essential features of the modules though methodological approach, class management, behaviour, among others, and including learners' attitude.	Fifteen schools – thirty classrooms observed	Random sampling of thirty classes from the chosen 15 schools based on criteria such as: - governorate (not more than two schools per governorate); - school size (five big schools, five medium-size, and five small); - teaching language (French / English) A balance between rural and urban areas was also considered.
2- Quantitative data collection methods			
Methods	**Stakeholders**	**Total disaggregated number of respondents**	**Sampling strategy**
Survey	Trainers	Anonymous and confidential online survey	Shared with all trainers concerned by TTCM (193), with 110 respondents (response rate of 56.9%)

4.4.3 Sampling strategy

Sampling was based on the lists of all trainers and trainees shared by CERD. The database was composed of a list of seventy-six schools (spread over the eight governorates) whose teachers received TTCM training. The sample size was set at fifteen schools with two schools specifically recommended by CERD. Selection of the remaining thirteen schools was carried out through a non-probabilistic sampling method known as "the quota method," taking as primary quotas the governorate (and districts) and the TTCM training modules attended by each school's teachers.

The final selection of schools based on the above-mentioned quotas is summarized in Annex, as well as sampling strategy for teachers, trainers and DEN, scattered across the Lebanese territory.

The evaluation team conducted a quantitative and qualitative analysis of existing data using a gender lens and carefully and deliberately examined all the implications of the project in terms of gender. The data were disaggregated by gender. The sampling methodology using the quotas method tried to reflect the gender composition of public school teachers, by including a ratio of 80% women and 20% men in our sample. This human rights-based and gender sensitive approach enabled gender balance in the KII selection, as well as in focus group composition.

4.5. Data analysis and triangulation strategy

In this study the evaluators followed a mixed research methodology, in which results obtained by one method complement those obtained by another[27]. This included a trainer survey using "Likert Scale" type questions with an increasing 5-point scaling system, which allowed evaluators to measure and quantify several situations, close-ended questions (single answer and multiple answers) and semi open-ended questions. The data analysis was performed by using the statistical software IBM SPSS 26.

The evaluation team's findings are supported by at least three different and independent primary data sources, namely Key Informant Interviews, Focus Group Discussions, and a Trainers Survey. Other sources of data were also collected from the school visits and the classroom observations.

The analysis was completed with a systematic review of the training **Modules** through a detailed assessment grid that considered how they addressed the competency frameworks as well as international teacher training standards. The team considered both ergonomics and presentation (Part I) and content (Part II). Content analysis took into consideration the TTCM design, formulation of the educational objectives, didactic and epistemological orientations of the TTCM, compliance with the competency framework, adequacy with the topics addressed, relevance of the activities and their conformity to the needs of the teachers, variety and prioritization of activities, contextualization to the socio-professional environment of teachers, interdisciplinary, presence of activities or instructions that lead to discussions or debates, reflective and creative scheme of the approach, assessment and self-assessment tools and final project / performance task.

As for efficiency, "Expenditure Tracking" or "Follow the Money" was the evaluation team's proposed methodology tracing all expenditures associated with their outputs and estimating the likelihood that these outputs produce intended or unintended outcomes. This approach systematically and exhaustively scans an intervention for operational efficiency improvement by searching for cost minimization or yield maximization potential with maximized outputs and outcomes[28]. Specifically, the methodology followed here consists of measuring all the direct and indirect costs involved in the design, development, delivery, and maintenance of the project.

This triangulation among multiple sources of information is used to support and strengthen the quality and credibility of the evidence, including abundant desk review and international benchmarks.

The reconstruction of the ToC provides the framework for the triangulation strategy and the triangulation exercise benefited from the complementary expertise of our multidisciplinary teams, combining quantitative and qualitative data sources, as well as content analysis of modules.

[27] Creswell, J. W. (2014). Research Design: Qualitative, Quantitative and Mixed Methods Approaches (4th ed.). Thousand Oaks, CA: Sage

[28] The Follow the Money approach is a pragmatic yet exhaustive way of identifying efficiency improvement potential. In the Follow the Money approach, all expenditures connected with an intervention are tracked and the resulting outputs are recorded. In a second step, these outputs are assessed according to their magnitude and quality, as well as their likeliness for triggering intended or unintended outcomes. While "following the money" through the system, the evaluator searches for cost minimization potential (could the same result be achieved in a less costly way?) and for yield maximization potential (could more result be achieved based on the same costs?) BMZ WP (2003), Tools & Methods for Evaluating Efficiency (Federal ministry for Economic Cooperation and Development, Germany, 2003) https://www.scribd.com/document/297838198/BMZ-WP-Tools-Methods-Evaluating-Efficiency

4.6 Limitations and mitigation measures

One of the major challenges of our research was the compounding effects of the energy crisis, the strikes and the school closures. These uncertainties imposed a number of constraints on the data collection for this project.

These constraints were all predicted among main risk factors during the inception phase, and contingency plans were already foreseen by our team, in accordance with UNICEF and PITB. Hence, a provision was made for the observation of recorded courses, and a teacher's survey was drafted and validated by CERD in order to be used as a substitute to actual classroom observation, which mitigated the risk of the prolonged shutdown of public schools.

Fortunately, after the schools reopened their doors to students, our team was able to conduct the fieldwork as initially planned. Therefore, the teachers survey was no longer needed since the school visits included one-on-one interviews and/or informal discussions with teachers and the focus group discussion included teachers in various settings, such as FGD with teachers and mixed GGD with teachers and trainers. All planned school visits and classroom observations were conducted during the short period of school opening. Interviews with teachers, principals and RCR also suffered significantly from delays. Nevertheless, our team succeeded in reaching the target of 50 KII, and even succeeded in performing several face-to-face and on-site data collection operations.

The evaluation team's research is intended to cover a long period of five years (2017-2021). Some of our targeted participants were already retired, some have shifted to other jobs and some have left the country or were not willing to cooperate. Hence, the list of Key Informant Interviews was slightly adjusted with the help (and in accordance with) UNICEF and PITB.

Finally, only 54% of the trainers responded to the trainer's survey, which could generally be considered as a satisfactory response rate. Yet, taking into account the nature of the TTCM, with its wide range of modules and components, and considering that not all trainers were trained on all modules, the survey couldn't answer some important research questions, including the evaluation of some modules due to missing data. Therefore, other sources of data were used to mitigate this lack of information, especially the trainer FGD.

However, the main limitation was the post-COVID-19 context. School closures kept teachers away from their classrooms for an entire school year and this exceptional circumstance undoubtedly had an influence on the medium- and long-term impacts of the TTCM training received by teachers. The evaluation team adjusted its investigation methods to account for this specific context, using qualitative and wide observation methods that were confirmed whenever it was possible during interviews with teachers.

To summarise, some of the evaluation questions could not be totally answered, and among them:

Question 2.1 relating to effectiveness: the project was not conceived as a set of costed activities. No Monitoring, Evaluation, Accountability and Learning framework and indicators were formulated from the start, therefore effectiveness considerations are rather based on achievements than on expected results.

Question 2.3 relating to the effectiveness of the TMS: The TMS ceased to function shortly after its creation because of the fuel crisis, making it impossible for the evaluation team to gather data and

evidence. Almost all stakeholders agreed on its importance but could obviously not report on its use. Results were collected from stakeholders who had the opportunity to use it before it was stopped.

Question 3.1 relating to the efficiency**:** for the same reason as 2.1 above, the efficiency evaluation of the TTCM was complex in the absence of planned output variables. The team could only rely here on the number of staff actually trained (this number was organically increasing despite the challenges from strikes, economic crisis, electricity and internet shortage, Covid 19, etc. ; and in 2021 CERD added additional trainings (such as Classera, back-to-school, etc.). In response to this challenge, the evaluation team chose to link expenses to the outputs (the number of beneficiaries specifically the number of teachers and trainers trained). Thanks to this approach, the efficiency evaluation is not mainly focusing on the unit costs. It is oriented toward distinguishing between capital investment and administrative expenditures. Since all expenditures are tracked, expenditures that cannot be connected to any activity or output automatically surface. The “unit cost” approach was used to compare online training and face-to-face trainings (as requested in the TOR), since this distinction also refers to two different phases (pre- and post- 2019 financial collapse).

Question 3.1 relating to the efficiency**:** for the same reason as 2.1 above, the efficiency evaluation of the TTCM was complex in the absence of planned output variables. The team could only rely here on the number of staff actually trained (this number was organically increasing despite the challenges from strikes, economic crisis, electricity and internet shortage, Covid 19, etc. ; and in 2021 CERD added additional trainings (such as Classera, back-to-school, etc.). In response to this challenge, the evaluation team chose to link expenses to the outputs (the number of beneficiaries specifically the number of teachers and trainers trained). Thanks to this approach, the efficiency evaluation is not mainly focusing on the unit costs. It is oriented toward distinguishing between capital investment and administrative expenditures. Since all expenditures are tracked, expenditures that cannot be connected to any activity or output automatically surface.

Question 5.1 related to the potential for the project to be scaled up without new donor funding was not addressed either. Within the deep crisis context going on in Lebanon, Donors are still highly mobilized to provide CERD with financial support, and long-term vision about Lebanese public finances was not available.

5. FINDINGS AND PRELIMINARY CONCLUSIONS

5.1. Relevance

This first section analyses the relevance of the TTCM project including global TTCM design, training process and modules delivered. It considers the adequacy of TTCM in meeting the needs of the target audience (mainly teachers and trainers, but also indirectly students) and to the Lebanese context and education system, including the 2017 teacher competency framework.

5.1.1. Relevance of TTCM framework and modules to the needs

The relevance of TTCM framework and modules to the needs responds to the following question: *How is the TTCM framework and the designed modules relevant to the needs of the teachers / children/ trainers in the Lebanese public schools taking into consideration gender, inclusion, diversity and children's rights?*

Response to teacher's needs

1. The TTCM project was based on pre-identified needs collected from various national and international sources, including the TALIS report. Several stakeholder consultations were carried out. CERD regularly collects reports from school principals on their needs. The Faculty of Education at Lebanese University was consulted formally to co-define the major needs. (cf. KII and desk review). Student needs were also taken into account and the benefits of competency-based approach and inclusive education were considered.
2. Nevertheless, no formal teacher and trainer Needs Assessment (NA) was conducted in a systematic manner for the selection of the module topics (KII, desk review). Some of them (gender, child protection) were proposed by UNICEF based on their international expertise. However, as teachers were kept away from methodological design of the TTCM, they were not fully considered as reflexive practitioners.
3. Both trainers and school principals felt they were well placed (and entitled) to help identify and prioritize teacher needs but indicated that they did not feel involved in the needs assessment (cf. KII, FGD, school visits and excerpts below). The directors were unanimous in their lack of awareness of the TTCM project. Some principals mentioned regular contact with the CERD to report on the training needs of their teachers; however, for the TTCM project or design, they were not interviewed and had little or no role. They felt unable to genuinely respond to the adequacy of the modules related to the needs of teachers, even if they believed any training was useful. Some others noted the weakness of the practical side of the training compared to that of the theory. (KII, schools' visits).
4. The topics, the content and the suggested activities of the modules are considered to be completely relevant by most teachers and trainers and are in line with the pedagogical approach adopted for the TTCM project, but with notable differences from one module training to another (*CF. Analysis of Modules in annex 7*). The DIFA module was particularly relevant within the context of the 2018 inclusive school program piloted by MEHE in thirty schools (cf. KII, FGD, school visits and excerpts below). As confirmed by the trainer survey, 75.9% of the respondents considered that the TTCM had filled a need in the trainers' practices and more specifically that the TwT and MS Team modules helped tackle the forced shift to

online teaching as a result of the COVID-19 pandemic, while DIFA and CP helped tackle important issues, particularly in the context of Syrian refugee crisis. (cf. KII, FGD, Survey).

''The "needs data" comes from the schools' directories whether primary, secondary, coaching and career guidance centres, they send the data to CERD [...] I don't interfere in the data collection process; we received a report containing: coaching and career guidance visits to schools and teachers for example and they noticed the following needs (…) plus at CERD we receive teachers' needs from the academic sections, we receive feedback from our trainers at RCR '' **KI, PITB**

''The needs were looked at from two different aspects: there is on a yearly basis a collection of needs that was happening outside this project anyhow between CERD and the ministry at regional level so they have these committees at the region level that would include the coaches from DOPS, the directors of école normale, so directors of the training centres [...] We conducted a needs assessment and the theoretical assessment based on the data that is out there, we didn't go out there and collect additional data […]''Content for training was responding to an imminent need! that's why we selected, for example differentiated instruction as one of our "core modules". they are actually the "pilot modules". […] they were responding to a need because there was the inclusive schools pilot project.'' **KI, External consultant**

''Of course, it wasn't the only project CERD was working on, there were USAID and QITABI but they were smaller projects such as Arabic language training or Active board training. TTCM project was more global aiming at enhancing the trainings quality of Lebanese teacher in the public sector. [...] we looked in different areas, asking ourselves what are the other projects of the Ministry of Education, what are MEHE's needs, what MEHE is asking us to train. Then we looked at the global orientations for education and we also looked at the faculty of pedagogy until we had a clear idea of the topics.'' **KI, PITB**

Response to trainers' needs

5. 75.9% of the trainers considered that the training filled a need in the trainers' practices while 19.3% did not (cf. KII, FGD, Survey). PITB confirmed that the project increased internal capacity to adapt and fully own training contents prepared by external experts (KII).

Adequacy of the conceptual and theoretical framework

6. The desk review confirmed that TTCM conceptual framework was supported with an abundant theoretical literature review mixing various internationally recognized approaches concerning school-based teacher practice, adult learning strategies, competency-based teaching and learning and teacher professional development. Above all, these approaches and topics reflected the capacities and the experiences of the group of experts and CERD staff who developed them. (cf. KII, FGD, literature and documentation review). However, the very widely documented theoretical baseline also brought complexity and to some extent, confusion (KII, desk review, trainers' survey). It is built on the assumption that the socio-constructivist paradigm is "the best way" or "the only way", which is not backed by research evidence.
7. Based on classroom observations and analysis of training modules, the needs of learners particularly the most vulnerable, were taken into account indirectly through the themes adopted (DIFA, TWT, CP…), and correspond to internationally recognized standards to address inclusive education issues. The whole project was highly gender responsive and gender wise, considering the needs and circumstances of people of all genders.

Adequacy of the modules to quality standards for training design and development

8. The TTCM modules have been designed and improved based on the comments received by the RCR; the excessive reliance on the RCR, especially for reviewing the content and the design of the modules, is considered challenging to the quality control process in the context of their busy agenda. (cf. Study of Modules, KII). Stakeholders confirm that there is still room to improve the TTCM design with the TMS workflow, the adaptation of modules to online training and the use of the TMS for teacher training tracking purposes were identified as the most important components that require improvement (cf. Trainers' Survey).
9. Despite this control, the evaluation team identified several areas for improvement in the modules and a lack of proper citation of sources, in particular regarding illustrations, eager to raise intellectual property issues. Areas for improvement were also identified to ensure internal consistency of the modules with the TTCM design framework and recommendations. Important differences in the internal organization of the modules were also noted, as well as several cases of confused terminology for which specific recommendations are formulated in this report. The evaluation team noted that some references are not backed up with solid evidence, for example the "multiple intelligences" theory[29], and should therefore be presented with more precaution. A more unified table of contents is also missing as well as global presentation standards for training modules. Other areas for improvement include, assessment of the types of exercises, summary points to anchor the concepts, functional / heuristic diagrams and mind maps, table of contents, self-assessment tools, and a multilingual glossary, in particular. Adequacy of several skills / objectives and criteria of the competency framework and the theoretical framework of the TTCM with the training modules was also identified as challenging and more detail is provided in Annex 7. Above all, terminology and theoretical concepts are still significant and should be more balanced with practical methodological and didactic approaches and concepts (cf. Study of Modules, KII). This finding is also supported by the trainer survey. Indeed, despite the generally positive perceptions of the UbD framework as an interesting innovation, the trainers considered that they are the most challenging components when delivering the training.

''The modules depended on those who made them, and each trainer had them as he could according to his abilities and experiences.». **Trainer**

Relevance of the selected topics for the modules

10. The topics covered by the core modules (especially differentiated instruction, inclusion, literacy, gender, child protection) were relevant to tackle COVID-19 constraints and especially when dealing with the challenges of the inclusive education program and the Syrian crisis context. The TTCM ensured compliance of methodological guidelines and content regarding

[29] This theory developed by Gardner (1983) resonates for teachers, but the scientific community is far from unanimous considering that this theory mixes talents, personality traits and abilities. In 2016, Gardner himself recognized that this theory did not rely on scientific substantiation.

all aspects of child rights with an emphasis on the right to education. Although not directly linked to a need expressed by teachers, the child protection module brought additional tools and efficiently supported the upsurge of more inclusive practices in several cases, especially when faced with the evolving requirements of children with special needs. Teachers who followed these modules stated unanimously that they were better equipped to identify and to bring basic supports to children in psychological distress (cf. FGD, KII). The trainers (some of them are also DOPS) adapted their content to other needs of their audience (especially for psycho-social support and awareness). The gender mainstreaming module raised strong awareness among male trainers more than female, with 100% of male respondents considering that the GM module raised strong awareness among teachers .

> "*Because in the public sector we do not have technology infrastructure, so there was a need to introduce teachers to the programs especially Microsoft Teams. It is very good but teachers cannot use it suddenly without any training*" **Trainer**

Relevance of the modules to TTCM design

11. Most objectives of the training modules appreciated at varying degrees the pedagogical, didactic and epistemological orientations prescribed by the Teacher Training Curriculum Model (TTCM design). They generally follow the principles of the TTCM design in the majority of its planned dimensions, as well as the teacher training policies in the Lebanese education system. (see Analysis of the modules in appendices). Moreover, according to the trainer survey, 86.7% of the respondents considered that the TTCM design allowed them to better target the newly adopted competency frameworks that supported the quality of teaching in Lebanon (cf. Literature and documentation review, Analysis of the modules, international benchmarks, Survey).
12. Nevertheless, the trainers that were interviewed unanimously agreed that this new TTCM approach was difficult, complex and time consuming, and this was confirmed further in the survey and FGD. For many of them it was a rather theoretical approach and the architecture was difficult to adapt and apply. In the trainer survey, around 25% of the respondents considered the time allocated for the training was insufficient and 1 out of 5 trainers considered that the training did not fill a need in their daily practice, with women being slightly more unsatisfied than male trainers. One can therefore conclude that although relevant, the approach was not fully effective due to this complexity (cf. FGD, KII, Survey).
13. As stated in the Handbook, the change in teachers' practices according to UbD principles was an important expectation of the TTCM and a very welcomed objective according to most trainers. Yet there was no evidence to support that this target was achieved, since it was impossible to identify traces of the "backward design" in the teachers' practices. Even though the external consultants assumed that the way training modules are designed should influence the way teachers design their own lesson plans, there was no supporting evidence found during our research (cf. KII, FGD, Classroom observations, excerpts below). Several stakeholders even assumed that the way the modules were designed was not to be shared with teachers (see finding 15).

''*So, in order to improve the work of all trainers, we found that the TTCM was the answer for this need. [...] Teachers prepare a primitive planning; they prepare a unit or a lesson, when to cover an activity, in this unit, on this page. Instead of having a holistic planning aiming to cover short-term and long-term learning outcomes. This cannot be achieved without understanding this new architecture. This is our aim in the trainings to change the strategies and ways of thinking* '' **RCR**''

"It was a turning point at the time that was much needed, because we had to come up with a designing approach that unified everyone's way of preparing training modules, because every centre was working separately, for designing their own training modules (…)we're making sure that these modules are of course up to the standards, but we did not have a common way to design them. [...] Yes. So basically, the way we design our training modules should influence the way teachers design their lesson plans. And this helps them achieve their curricular aims because if you start looking at the final goal, and then planning backwards to achieve it with your students, then you would be able to achieve it.'' **RCR**

5.1.2. Relevance of TTCM design to Lebanese context and standards

The relevance of TTCM design to Lebanese context and standards responds to the following question: *To what extent is the TTCM design relevant to the Lebanese institutional and policy context regarding teacher training and teaching standards as well as priorities set by CRDP and MEHE?*

The adequacy to the Lebanese context was assessed mainly within the adoption of a competency framework for teachers and trainers in 2017, as well as the regulatory framework and professional culture of these actors. Adaptability to the specific national crisis context was also analysed. The research instruments used in this evaluation aimed to validate the consistency of the TTCM with the content and approach of initial teacher education. This relevance analysis adopted a comparative approach (Mawrid-e, initial training programs, qitabi, former in-service trainings not aligned to TTCM).

Consistency of the TTCM design with the contents and approach to pre-service teacher training

14. As stated under finding 21, the TTCM is consistent with the competency-based approach in Lebanon; however, this approach is not yet adopted in initial teacher training. A study was carried out to analyse existing references to competencies in initial teacher training programs in Lebanese universities, but this study was not used for further coherence-building strategies. Coherence of UbD instructional design used for the TTCM with initial training programs could not be assessed as part of this evaluation.
15. As confirmed by key TTCM decision makers[30], the teachers are not aware of the TTCM design and the innovations it supports (competency framework and UbD). Therefore, the TTCM principles and "backward design" methodology do not fully reach teachers or initial teacher trainers, which creates a discrepancy in training approach.

''*The teachers are not aware of the TTCM design, and do not know we have changed our architecture. When a teacher is teaching their students, he does not inform them about the strategy adopted in his teaching (backward design, competency-based, etc.), he just explains the lesson. Same case for the training.*'' **KII with members of the technical committee**

[30] Source: KII with members of the technical experts committee.

Adaptability of the TTCM with Lebanese context and recent external constraints (COVID, security problems, logistical and infrastructure problems...)

16. Online training and self-paced Microsoft Teams modules helped the teachers in the context of the COVID-19 pandemic (cf. KII, Classroom observations, FGD). In the trainer survey, only 30% of respondents stated that they followed training sessions in TwT. Among the group of respondents who attended the TwT training, 80% considered that it was clear and useful, and almost the same proportion considered that it was helpful to tackle the forced shift to online teaching and training. Moreover, only twenty-three respondents stated that they followed training sessions in LAC. Among the group of respondents who attended the LAC training, 60% considered that it was clear and useful, and almost the same proportion estimated that it was helpful to tackle the challenge of the forced shift to online teaching and training. The Gender mainstreaming module was considered as tackling a key challenge in Lebanon. Female trainers are more likely to strongly agree than men regarding the importance of this module to tackle key issues in Lebanon, and to the level of awareness that it helped raising
17. Nevertheless, when delivering online training, some trainers stated that they were not always able to apply the TTCM design as planned. For them, face-to-face training is more effective since the TTCM design requires infrastructure and equipment that are normally lacking in public schools in Lebanon, especially in the current socio-economic crisis context. This issue raises questions regarding the effectiveness of these modules, since most trainers stated that they faced difficulties to adapt for online training (cf. KII, FGD, also see our effectiveness analysis).

> *''With the pandemic and the deteriorating situation and in Lebanon, the needs and challenges have multiplied and the TTCM must take them into account and adapt. [...] Continue the TTCM project and re-evaluate this project to revise, further simplify and improve it*.'' **Trainer**

Overall consistency of the TTCM design with the various training offers in progress and carried out in the last three years

18. Compared with other ongoing training projects and programs, the TTCM design approach with its three stages (desired results=>evidence and proofs=>training / learning plan), was considered to be more complex (great number of competencies and indicators are targeted, many steps were involved in the design such as performance tasks, rubrics, etc. and a complicated (and sometime unnecessary) theoretical apparatus was needed (facets of understanding, GRAPS, Where and Why, Hook and Hold, Equip, Rethink, Reflect and Revise, Evaluate, Tailor, Organize (WHERETO) for example). Yet, the TTCM represented itself as a global project based on a whole new approach and was a pioneer in systematizing references to the competency framework.
19. This transition to the TTCM was reported as more difficult than traditional approaches adopted. For many trainers the theoretical base was too complex and the architecture was considered difficult to adapt and apply (KII, FGD, international benchmark).

Enthusiasm and motivation

20. The respondents all showed enthusiasm and motivation for this project and its new approach. Despite some coordination issues between the Ministry (DOPS) and the CERD (PITB), the current momentum seems to be relevant and appropriate to ensure better coordination and better institutional ownerships within MEHE. (KII, literature and documentation review)

> *"We usually send CERD on an annual basis our recommendations concerning the needs that must be tackled. We noticed that CERD have started taking our recommendations into consideration. […] we are ready to collaborate*" **MEHE**
>
> *''Teachers were very motivated during the training''* **School Director**

5.1.3. Relevance of TTCM framework and modules with national competency framework

The relevance of TTCM framework and modules with national competency framework responds to the following question: *To what extent is the TTCM framework and the designed modules successfully targeting the national teachers" competency framework?*

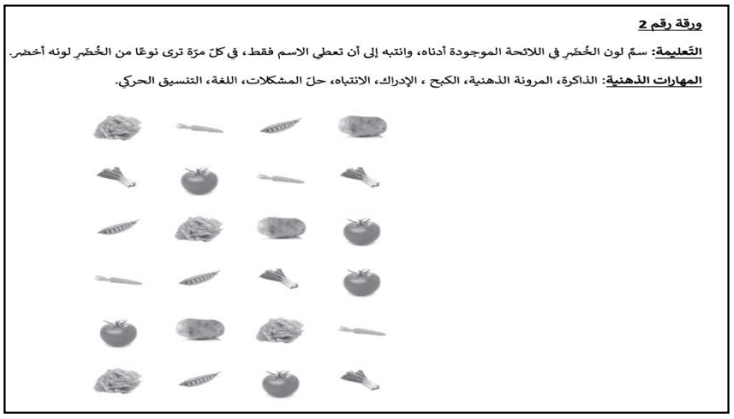
Correspondence and Complementarity of Documents: TTCM Framework, the designed modules and the national teachers' competency framework

21. The TTCM design introduced the UbD approach, in addition to the newly adopted competency-based approach, which meant that trainers and teachers were required to adapt to both concomitant innovations. Once this adaptation was successful, additional complexity arose for teachers accustomed to teaching by objectives according to the current Lebanese curricula (cf. KII & excerpts below, FGD, Survey). The trainers consider that the most important hallmarks of the TTCM design are the performance tasks (17.8%), the rubrics (12.9%), the understanding by design and the backward design (10.8%), which tend to prove that UbD concepts were more valued than technical references to the competency framework (12.2%). This result is also consistent with the question regarding the most used components in the training development, when the competency-based approach (14.7%) ranked behind the use of performance tasks (30.5%) and rubrics (17.9%), these two components of the Ubd ranking first and second respectively.

> *''For me the TTCM program is like a road map for my training course. It is very well organized. It has a logical order from the beginning till the end. Its stages are clear. [...] The planning in the TTCM design requires a lot of time. [...] The whole process is still not steady. [...] Unfortunately, the books we use in the public sector do not cover the needs of the learners nor the needs of the teachers to implement the TTCM. Individual implementation of the TTCM will create a mess because it will not be systemized. The CERD is working on an advanced level, and they prepared the guidelines for competencies for teachers, trainers, coordinators and others. [...] But again, as long as the program is simplified it can reach all the trainers and teachers and lastly the students ''* **Trainer**

22. Based on the analysis of the modules, the evaluation team noted several issues of internal inconsistency between the objectives of the training modules and the different activities

designed. The adequacy between TTCM design, the Competency Framework and the objectives of the Training Modules were in some cases only declarative, which meant several skills / objectives / competencies announced at the start of the modules were not broken down into activities and/or performance tasks. The analysis also identified several cases of methodological dysfunction and misalignments. Some content seemed to be designed for children rather than for teacher trainees. For example, the evaluation team expected the IMPI module to provide teachers with authentic and real-life based case studies based on professional teaching situation *(images and videos of inclusive schools or methods or strategies of classroom management that include children with special needs. Particular: dysphasia, dyslexia, learning disorder / difficulty, attention disorder, behavioural disorders)*. Instead, some of the examples proposed seemed unadaptable to adult learning standards and rather referred to their pupils' real-life situations. As an example, *(IMPI, p.59-30), Document 2* addresses trainers' recommendation to name the vegetables with a green colour from the list presented above. There are undoubtedly much more age-appropriate resources that could be used and exploited to meet the needs and expectations of teachers.


ورقة رقم 2

التعليمية: سمّ لون الخُضَر في اللائحة الموجودة أدناه، وانتبه إلى أن تعطي الاسم فقط، في كلّ مرّة ترى نوعًا من الخُضَر لونه أخضر.

المهارات الذهنية: الذاكرة، المرونة الذهنية، الكبح ، الإدراك، الانتباه، حلّ المشكلات، اللغة، التنسيق الحركي.

Preliminary conclusions regarding Relevance

REL 1: The TTCM project successfully responded to major needs of Lebanese education stakeholders. Although the needs assessment was not formalized, the TTCM project was based on pre-identified needs by various sources such as a wide range of stakeholders and education sector decision makers and ongoing projects. Trainers, School Principal, DOPS, teachers etc. did not feel systematically involved in the needs analysis but were convinced that the proposed topics were relevant. More specifically, the TTCM has filled a need in teacher and trainer practices and helped them tackle the forced shift to online teaching during the COVID-19 pandemic, while addressing important issues, particularly the Syrian refugee crisis.

REL 2: The TTCM met the trainers' need to **create a common training design and strategy** as well as a standardized model that could be adapted and adjusted to various topics and audiences. Therefore, the TTCM increased trainer ownership of modules prepared with international experts. The whole design is globally consistent and most modules respect the TTCM framework. Most trainers showed motivation and enthusiasm. Internal consistency of the modules could be improved with no unified table of contents as well

REL 3: The TTCM design duly responded to the teacher's competency framework and the ongoing shift of Lebanese education towards competency-based teaching and learning. This finding was fully relevant for trainers. However, the relevance of the TTCM for other actors, in particular teachers, is challenged by existing inconsistencies within the Lebanese education system (curricula by objectives, initial training only partially

competency-based and not designed backward, competency-based assessment framework for pupils still causing difficulties).

REL 4: The TTCM design process succeeded in mobilizing a wide range of lessons learned from research in regard to adult learning and teacher professional development.

REL 5: The TTCM project introduced two concomitant innovations: competency-based training and backward design following the UbD model. Great acceptance was noticed of the UbD principles; however, the project did not equally shed light on competency-based training and learning. Further improvement is required to make sure competency-based teaching and learning is fully adopted and understood by all education stakeholders as a pre-condition for next curriculum reform.

Rel 6: The change in teacher practices according to UbD was not supported by any evidence, since it was impossible to identify traces of the "backward design" during classroom observations.

5.2. Effectiveness

The objective of this section is to highlight the extent to which the TTCM objectives were achieved, or are expected to be achieved, in terms of enhanced trainers' competencies, adequacy of assessment framework and tools to assess the level of competency building and attitude change of teachers, and effectiveness of the TMS in monitoring the quality of teacher training

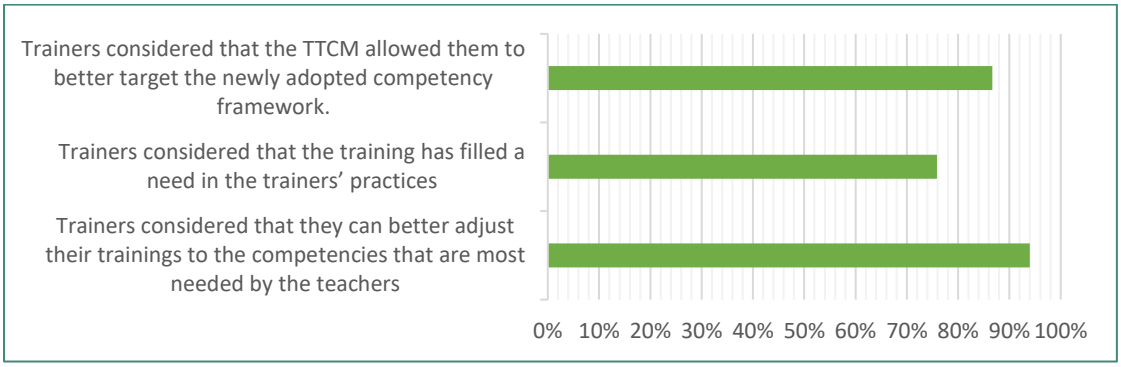
The TTCM offered a wide range of training, Training of trainers and coaching. The beneficiaries of training and coaching activities are: public-school teachers, CERD trainers, as well as CERD technical staff.

5.2.1. Extent to which the TTCM enhanced trainers' competencies

The extent to which the TTCM enhanced trainers' competencies responds to the following question: *To what extent did the TTCM project achieve its objectives in terms of trainer enhanced competencies?*

Skills of trainers and their ability to train according to TTCM

23. A feeling of general satisfaction clearly emerges in the interviews from many different stakeholders. Teachers are satisfied with the training received and are more motivated (mentioned in FGD) and by headteachers during school visits, brought up in four interviews (DEN, RCR, trainer and KII). In the DIFA teachers' feedback report, more than 80% of teachers agreed on the trainer's competencies and mastery of the training subject as well as the trainer responsiveness to teacher needs. The trainers find the new training more consistent ad effective to target the competency framework, with no significant gender difference:



24. However, some trainers indicate that the planning (the three stages) can be time consuming or too theoretical and should be simplified. Among the group of respondents who attended the CP training, 73% of the valid answers estimated that it was helpful to tackle the challenge of the Syrian refugee crisis. Among the group of respondents who attended the IEM training and the GM training, the percentage of valid answers that estimated they were helpful to tackle the challenge of the Syrian refugee crisis was 50% and 60% respectively (cf. KII & excerpts below, FGD, Survey).

"*The child protection training was very beneficial, and the trainer was excellent […] There must be more motivation within the trainings, this depends on the trainers' teaching style. Most of them are theoretical and do not tackle the practical part.*" **FGD – teacher**

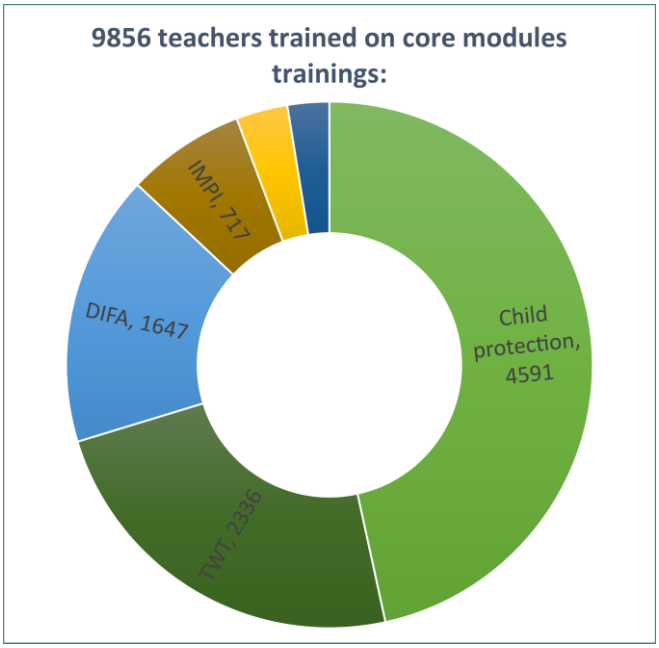
"*Trainers and trainees liked the work, and the activities were interactive. They sensed the difference between this training and the previous traditional ones. So of course, it is better to continue the TTCM trainings*." **DEN**

"In 2018 and 2019, immediately before COVID. We received a lot of positive feedback from teachers, they were able to notice the difference in the way we designed our training, and they were able to see that this helps them achieve their goals better if they follow the same way though we did not train them on TTCM, it was implicit within the training" **RCR**

"The first time I worked using the TTCM, I set two competencies and I was very excited to do the work, but when I reached the third stage it was very annoying especially that it is also linked with the assessment. Then I set only one competency to be able to minimize this challenge. Because if you do any activity that it is not linked to your outcomes, you are required to go back and add or edit your activity. This is a bit frustrating for me. This is what I have also heard from my colleagues, they have the same opinion […] But again, as long as the program is simplified it can reach all the trainers and teachers and lastly the students. Later on, we can add more details, but first we need to simplify it". ***Trainer***

5.2.2. Adequacy of assessment framework and tools in assessing the level of competency building and attitude change of teachers

The adequacy of assessment framework and tools in assessing the level of competency building and attitude change of teachers responds to the following question: *How adequate are the TTCM assessment framework and tools in assessing the level of competency building and attitude change of teachers per training module, online and face to face?*



With the backward design approach adopted by the TTCM, assessment tools are designed early in the training process, and are meant to focus on transfer into classroom practices. They rely mostly on "authentic performance tasks" and based of "Rubrics" with theoretical background explained in a 24-pages framework document. According to the TTCM, the effectiveness of the competency building process for teachers is to be considered by trainers during the whole training process. process thanks to the design of performance tasks and other assessment tools (quiz, observations, other activities).

Consistency of the Framework and assessment tools face-to-face with the competency framework and the TTCM

25. Consistency between the newly adopted competency framework and the TTCM approach was fully noticeable when reviewing the modules and corresponding assessment tools (performance tasks), despite some incoherence between training objectives and targeted competencies. The modules and their corresponding assessment strategies are gender-responsive and child sensitive, as requested by TTCM. The complexity of the teacher competency framework (high number of competencies and components, confusing coding system) constituted one of the major constraints for the trainers, who were faced with an overwhelming number of competencies to be assessed in their training design (cf. KII, FGD, Survey, Module analysis). The evaluation team also noted some misalignments affecting the effectiveness of performance tasks like for example the description of possible performance tasks in the handbook (p. 71) with unexpected products for adults (painting, sculpture, collage, poetry reading, song…). The same misalignment can be found in the assessment framework, where the online references suggested for rubric formulation target teacher-made rubrics to assess their students' project, and therefore cannot concretely inspire trainers creating rubrics to assess a teacher's project. for children. However, globally, the design process and proposed assessment strategies early in the training design process effectively address expected teacher competencies building process during the training.

> *"There is a close relationship between the competency framework, the training modules and the targeted skills but the networking between the objectives and the skills of the modules TTCM with the competency framework is a very complex task. It will have to be simplified further to be more effective by being satisfied with the concepts with the highest priority as he found it very difficult as it requires a lot of effort from the trainers.* **Focus group – Trainer**

26. In its "basic" design i.e., in a face-to-face training setting, the framework and assessment tools allow:
    - The constant adaptability of training and connection to teachers through a pre-training assessment (see KII and desk review),
    - Good evaluation of the effectiveness of the training provided through the performance tasks and other assessment tools according to KII and FGD. However, teachers were evaluated based on the performance tasks, without knowing that their activities could be "graded" by some trainers. As stated in one mixed focus group, trainers and trainees did not have the same representation of the performance tasks. For the former they are part of the assessment process while for the latter it is only used as a demo (see trainers' KII and FGD). This discrepancy is also confirmed in various KII, when one consultant stated that the performance tasks are instrumental to grade the trainees, while another CERD-PITB staff considered that they are only used as part of a formative assessment and they are not used as part of a grading process. Nevertheless, none of the teachers were aware that the performance tasks were effectively used for assessing the training, and they thought they were only used to illustrate a potential assessment for future training. This discrepancy was probably due to the absence of a proper training on the assessment of the performance tasks during the first four years, since this training only took place in 2021 (cf. the 2021 Budget).

27. However, some remaining challenges were raised:
    - The assessment framework and tools are considered as complex, time consuming and not always practical (KII).
    - The assessment framework focuses only on project-based learning and assessment, with the wide use of "rubrics", and is not adapted to other pedagogical strategies, for example transmissive pedagogies
    - Five trainers considered that the assessment tools can be improved. Indeed, training on the assessment tools was already planned and conducted by CERD during 2021 in order to fill-in this gap.
    - Finally, since this responsibility belongs to the guidance office from the Ministry of Education (coaches), the impossibility to carry out follow-ups in class is seen as a shortfall by both trainers and trainees. (cf. KII, FGD, see verbatim below). Indeed, according to TTCM conceptual documents, performance tasks require participants to apply their knowledge in authentic situation which means that ideally, they should be assessed in class.

"*I believe that the performance task is a good measurement tool to see if the trainees acquired the knowledge, skills and competencies as this was the main concern: how to apply and use those competencies*." **DOPS**

"Other than the performance test, there are other evidence that trainers need to collect during the training. It resembles formative assessment that we use with our students the same idea, these quizzes asking questions, doing some kind of group work activities, mentoring, observing and so on. These help trainers make sure that everything is acquired before reaching the performance task. So by the end of the training the performance task becomes a complete work and also trainees present their work and they get feedback from trainers, and they have the chance to improve their work. " **RCR**

"What I like about the TTCM is the performance task. It synthesizes everything that was covered during the training course. It can also be used by the trainees as a self-assessment to check their acquisition of what was covered during the training." **Trainer**

"Very few teachers did the performance tasks. This is because most of our work is ready. It is good and not good at the same time. Sometimes it limited the scope of our work unlike previous trainings, the scope was not that well defined. We used to give the training based on the needs and not based on what (competencies) must be covered […] In certain stages, before reaching the performance task, we felt that there were some repetitions or in other places there were a lot of details as information or activities that could have been skipped. For instance, we have 5 hours' trainings. Instead of doing 3 or 4 activities in which teachers need to reach a synthesis or create a product. During the child protection training, every 10 or 15 mins you need to start a new activity in order to cover everything you have in the training. This is to make sure that when you reach the performance task everything was covered, and all the competencies were covered" **Trainer**

Consistency of the Framework and assessment tools online with the competency framework and the TTCM

28. Overall, teachers and trainers considered that face-to-face training was more effective than online training. Being short in duration (2 hours), online training did not allow the TTCM methodology to be fully applied and did not encourage the use of assessment tools such as performance tasks. In addition, the evaluators noted the difficulties of several teachers to access the internet, electricity or computers in a context of deteriorated school infrastructure (some teachers follow the training from their phone). Moreover, 20% of the trainers considered that the TTCM face-to-face training had improved the teachers learning, and 18% of the trainers considered that the TTCM online training had improved the teachers learning. (cf. FGD, KII & excerpts below)

"We cannot reduce this gap unless we go back to the face-to-face trainings. I cannot do a performance task for 2 hours in an online training session. It cannot be guided or evaluated or use the rubrics. We do not have enough time to do all of this. Besides we face internet issues that waste some of the time allocated for the session (using the links, not being able to join the sessions…). " **RCR**

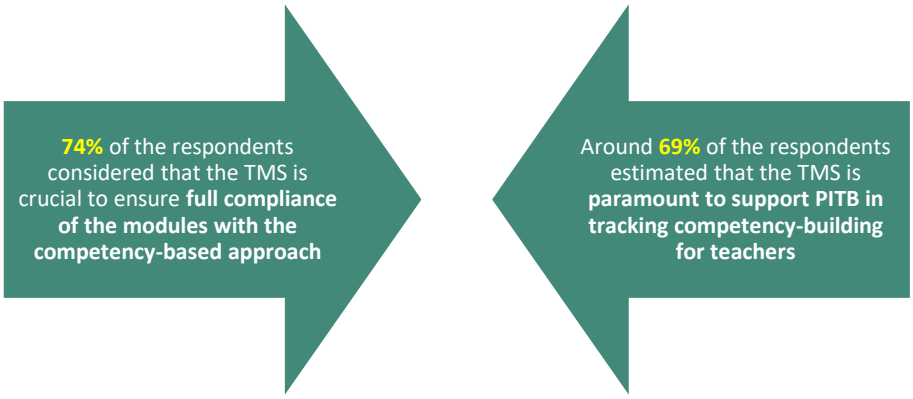
Online training does not make it possible to pass all the objectives of the TTCM training, especially since most teachers work on their smartphones and not on their computers. Even the assessment is "fuzzy" and cannot be done well. **Trainer**

"The workshops were only two hours long and to be honest we were using more like the traditional methodology, setting a plan for the workshops from the first activity till the last one. We did not include a performance task because the time was limited. My last activity was always Q&A" **Trainer**

5.2.3. Effectiveness of the TMS in monitoring the quality of teacher training

The effectiveness of the TMS in monitoring the quality of teacher training responds to the following question: *To what extent does the Training management system (TMS) including data collection, data building, the training actually delivered, implementation of TTCM and tracking effectively monitor the quality of the teacher training*.

29. The data collection confirmed 2 major findings reflected in the survey as follows:



"*Our main problem was, when we started using the TTCM project, the petrol and diesel problems began, so the TMS is down. Unfortunately, this is the situation, and we cannot ask teachers to enter the TMS for training and the software is shut down because of power cut*." **KI – PITB**

"*I got trained on the TMS but we did not use it yet. It is not working yet. We were not able to implement everything in the TTCM because the TMS platform is still not working.*" **DEN**

"We have tested TMS, but today we are waiting because we have electricity issues, and the server is down. We are facing many problems. But we have tested TMS software, and we have tried to build a new module as a training module, that was tested approximately by 2,000 teachers. Of course, like any other software we have some bug" **KI – ICT consultant**

30. The designed (but poorly used) TMS purposefully mixed a twofold objective: an automation of the module design process for trainers; and the creation of e-portfolios for trainees. In many countries, e-portfolios are considered to be a powerful tool to monitor and follow-up on teacher professionalization from a lifelong learning perspective. Trainers also had the opportunity to plan training content according to the portfolio of each teacher. The TMS could provide an opportunity for both the MEHE and the CERD to plan large-scale training courses by identifying the common gaps to different teacher profiles. However, all these expected results still require concrete experimentation. As the CERD TMS is still down due to electricity shortages, the evaluation team did not have the opportunity to compare the CERD TMS with the DOPS management system and ensure they are fully complementarity.

31. TMS users reported areas for improvement and required targeted training. For example, one trainer stated that the TMS automated some processes, but kept the same number of procedures and signatures needed for each phase, thus introducing more complexity for the validation process. However, it was impossible for the evaluation team to draw a conclusive image of the TMS.

"*Yes of course, if we go back to the TTCM, what I know that every trainer must prepare a module. To prepare a module and to propose it, he or she must follow a procedure. And TMS has automated the steps to facilitate the creation of a new module and the official approval of this module. So, I can say here that TMS must facilitate this process.*" **KI – ICT consultant**

"*the TMS has created the workflow, now the difference is that everything is documented it was there also before having this newer. So this is where the TMS has added value, huge added value with respect to access and readability of that data, again and the invitation for in depth analysis of this data*." **KI – TTCM expert**

"*It is very good but teachers cannot use it suddenly without any training.*" **Trainer** "*As a platform, it is very beneficial: firstly, it introduced the teacher to the competencies, the majors of the curriculum, this is what we call the backward design. We set up the curriculum based on the competencies, so this platform is very useful because it exposed all the details related to competencies, to skills, to capacities and so on.*" **DOPS**

Preliminary conclusions on Effectiveness

EFFEC 1 – Objective of Enhanced trainers' competencies: Overall satisfaction with enhanced trainer competencies. Most stakeholders are satisfied, whether it is the target audience (teachers and headteachers are satisfied with the training received) or supervisors such as DEN or RCR with the training of trainers.

EFFEC2 – Adequacy of the assessment framework and tools in assessing the level of competency building and attitude change of teachers: Most of the stakeholders believe that the TTCM respects the newly adopted competency framework. Although, the process is reported as time-consuming in both the planning / creation of activities and teacher evaluation for trainers. The possibility to carry out a follow-up in the classes following the training sessions appears to be a deficit in the process of the TTCM evaluation process.

EFFEC 3 – Effectiveness of the TMS in monitoring the quality of teacher training: Taking into account that the TMS is down, the TMS appears to be a purposeful and modern tool for monitoring teachers' professional development from a lifelong learning perspective, it provides the trainer with a holistic view about the attendees and their profile, the prerequisites to attend the training, the content material, etc. and creation of training modules / sessions.

TMS has automated the steps to facilitate the creation of a new module and the official acceptance of this module. However, it could also benefit other stakeholders, such as DOPS or even teachers. The actors indicate that the platform could be simplified both in terms of IT skills and the time it consumes. It should be noted that due to the current situation, the TMS does not work and that these remarks come from the first tests carried out on the software. Contingency plans should be carried-out to mitigate such predictable challenges, especially those linked to the deteriorating infrastructure

In conclusion, the TTCM project expected five results (see below):

- **R1 Improve the quality of the training design to target the competency framework for teachers and transfer to classroom practices, to respond to the specific needs of teachers and address attitude towards cross-cutting themes in education**: The proposed modules successfully addressed the national

competency frameworks adopted in 2017. However, such an approach is not yet adopted in initial teacher training and was not considered as essential by most trainers.
Coherence of UbD instructional design used for the TTCM with initial training programs could not be assessed as part of this evaluation. The TTCM proposed a twofold approach, which addressed these two objectives, but in the end, it tended to focus more on content rather than teaching methods.

- **R2 Improve the capacity of the PITB to track and disseminate attainment of competency building per teacher and attitude change towards cross cutting educational themes**: The project has created the TMS tool for monitoring teacher training, but it was not fully operational over the period.
  Also, teachers' attitude change is noted, but causality not necessarily proven (trainers do not have access to the classroom and cannot provide follow-up).
- **R3 Improve the quality of teacher training to address the specific needs of new teachers in the public school system**: The teacher training induction curriculum exits, but was not tested.
- **R4 Improve the competencies of trainers**: satisfaction from all stakeholders, including trainers and teachers, teachers seem satisfied with the training received and more motivated.
- **R5 Improve the quality of training within the training centres**: Taking into account the enhancement of the trainers' skills and the overall satisfaction of the stakeholders, the quality of training within the training centres has improved but left aside the modernization of the training process and involvement of school directors.

5.3. Efficiency

The purpose of this section is to highlight results and to efficiency within a given budget showing how they enhance the quality of training and ultimately students' learning outcomes

The yearly spending is analysed according to two categories:

1) Development costs (including cost for developing the training modules and for implementing and delivering the training sessions); and
2) Current spending or "administrative and operational costs" (including, on one hand, the wages and salaries of coordinators, external consultants and support activities for CERD and on the other hand, coordination and preparation meetings, as well as accounting, management and administrative coordination).

This expenditure classification follows the economic classification of public spending and the "Golden Rule" of public finance, distinguishing between current and capital spending, in order to assess productivity as well as "the composition, performance (effectiveness) and efficiency of public expenditure" of public administrations[31]. The economic classification considers the final use of the expenditure, such as investment, current consumption (e.g. intermediate consumption and compensation of public employees), or transfers (e.g. social benefits).

In the case of the TTCM, the "development costs" could be divided into two types of spending, both referring to "investment in human capital":

[31] Alessandra Cepparulo and Gilles Mourre (2020), How & How Much? The Growth-Friendliness of Public Spending Through the Lens, European Commission's Directorate-General for Economic and Financial Affairs, https://ec.europa.eu/info/sites/default/files/economy-finance/dp132_en.pdf

Sub-Total (1): *Cost of delivering the training*

+

Sub-Total (2): *Cost of developing and reviewing the modules, developing new platforms such as the TMS, or the cost of studies and research.*

Similarly, current spending or "administrative and operational costs" could be divided into two types of spending, both referring to wages and salaries allocated for administrative or managerial tasks, as well as *ad hoc* consultancies that are not linked to tools, modules or platform development (such as External Auditors, advisors, etc.)

Sub-Total (3): *Operational and technical assistance costs (steering committees meetings and coordination workshops, ad hoc consultancies, External auditors, project management, etc.)*

+

Sub-Total (4): *Administrative Costs: Secretary, Internal Audit and accounting, etc.*

For 2021, the budget showing the planned vs. actual spending was not available when the evaluation was conducted (between November and December 2021). Since CERD was still proceeding in closing the financial year of 2021, and since the planned vs actual budget was not yet available, CERD shared an excel file that reflected all the payments that will be made till end of 2021 and their details, and the amount requested from UNICEF in order to be able to proceed with the payments. For example, the 2021 budget planned to train more than 10,000 teachers on the online modules and Mawride training on online teaching and learning, yet it is difficult at this stage to retrace the actual spending as well as the effected training, since the financial statements for 2021 were not finalized when the evaluators conducted this analysis. Therefore, the cost-efficiency and cost-effectiveness analysis will be mainly based on the 2017-2020 budget period, and the expenditures of 2021 will be analysed separately, using a more descriptive methodology, since the closing of the financial year of 2021 was still in process at CERD. The inclusion of the 2021 budget will mainly serve to illustrate the future decrease of the unit costs, when a greater number of trainees are involved in future training in the coming years.

Costs-effectiveness of the online training

32. Number of trainers trained online in 2020 and 2021: Sixty-two CERD trainers were trained on the Microsoft Teams module by an expert in 2020. 193 trainers were trained on the TTCM design[32]. Moreover, 1,027 people had also attended online training for trainers in 2020 and 2021.
33. The overall cost of the year 2020 was 240,431 USD and the actual spending in 2021 amounted to 253,315 USD. Thus, the overall expenditures for 2020 and 2021 amounted to 493,746 USD. Since the training was mainly conducted remotely during this period, the evaluation team

[32] Excel sheet "Liste des formateurs (trainers) qui ont suivi la formation au TTCM design"

assumes that the overall cost of the online training conducted between 2020 and 2022 is 493,746 USD.

34. The operational, technical assistance and administrative costs (sub-total 3 & 4) amounted to 154,800 USD in 2020 (representing 64% of the total expenditures of 2020) and to 97,925 USD in 2021, representing 39% of the total expenditures of 2021. Therefore, the costs of the administrative staff and external consultants as a percentage of the overall cost of the online training for both years is around 51%. This percentage could be considered high, but it is expected to decrease significantly in the future (as it already did in 2021 compared to 2020, falling from 64% to 39% in 2021) since the fixed costs related to external consultancies and development cost will not be included in future budgets.

Costs-effectiveness of the face-to-face training

35. In 2018, 11,245 people attended teacher training or coaching sessions on core and non-core modules, especially DIFA, TWT, LAC, IST, CP. In 2019, 7,594 teachers (5,976 training slots) were trained nationwide on teaching with technology, differentiation, formative assessment, inclusion: MTSS policy and implementation, inclusion: MTSS screening tools and decision making and child protection. Thus, the total number of teachers attending face-to-face training between 2018 and 2019 is 18,839. 867 people (trainers, CERD staff, DEN, RCR) attended training or coaching sessions (on DIFA, TWT, LAC, UbD) in 2017. 422 people attended training and coaching sessions in 2018. Moreover, 30 CERD trainers were also trained on IST in 2019. The total number of trainers and CERD staff attending training before 2020 was 1,319 persons.
36. The total expenditures between 2017 and 2019 were 2,580,601 USD. These expenditures allowed the development and delivery of training attended by 20,158 people. The average cost for training one person face-to-face was 128 USD (compared to 155 USD for the online training in 2020). This is due to the significant costs of administrative and operational tasks in 2020.
37. In 2017, 867 people were trained using a budget of 559,572 USD, with an average cost for training one person at around 645 USD. This could be explained by the nature of the training (mainly training of trainers), but also by the importance of the administrative and operational costs of **310,740 USD.** Yet 2017 remains an exceptional year since it includes all the preparation work before the launching of the teachers training.
38. In 2018, average cost for training one person was around 112 USD, which is lower than the yearly average, due to the massive training of teachers and trainers, and to the relatively lower administrative and operational costs (representing only 14%). Finally, in 2019 the average cost for training one person was around 93 USD, which is the lowest in three years, mainly due to the quasi absence of costs related to developing new modules.
39. This suggest that, compared to 2019, the cost of online training in 2020 seems to be relatively high. However, the 2021 budget already shows a significant decrease in the unit cost of training due to the lower volume and percentage of administrative costs and operational costs.
40. The operational and technical and administrative costs (subtotal 3 &4, all costs other than the cost of developing and delivering the modules, the platform, the training and coaching) amounted to 310,740 USD in 2017, representing 55% of total spending in the 2017 budget. The lowest operational and technical cost before the crisis was reached in 2018, representing 16.5% of the total expenditures of 2018. In 2019, this ratio increased to 30%, which was slightly higher than the average ratio of 29% for face-to-face training between 2017 and 2019. The total expenditures for the three years amounted to 741,127 USD.

Table 3: Number of trained staff from 2017 to 2021

Number of trained staff per year	2017	2018	2019	2020	2021[33]	TOTAL
Trainers, Den, RCR, IT, CERD staff	867	422	30	67	960	**2346**
Teachers	0	11245	7594	1477	9500	**29816**
TOTAL	**867**	**11667**	**7624**	**1544**	**10460**	**32162**

Costs-efficiency of the online training and Cost-efficiency of the face-to-face trainings

Table 4: Evolution of Unit costs from 2017 to 2021 (online training)

		2017	2018	2019	2017-2019 FACE TO FACE	2020 ONLINE Trainings	Expected 2021 ONLINE trainings[34]	2017-2021
A-	Total cost per year	559 572	1 310 354	710 675	**2 580 601**	240431	253 315	**3 074 347**
B-	Number of trained persons	867	11 667	7 624	**20 158**	1544	10 460	**32 162**
C-	Average cost per person **(A/B)**	645	112	93	**128**	155,7195596	24	**96**
D-	Sub-Total (1): COST of delivering trainings	170 332	855 287	370 593	**1 396 212**	61135	115 891	**1 573 238**
E-	Sub-Total (2): Cost of Developing Modules	78 500	238 618	126 144	**443 262**	24496	39 499	**507 257**
F-	Sub-Total (3): Operational and technical assistance costs	266 391	142 899	158 400	**567 690**	136800	10 125	**714 615**
G-	Sub-Total (4): Administrative Costs	44 349	73 550	55 538	**173 437**	18000	87 800	**279 237**
H-	Development costs (investment) **(D+E)**	248 832	1 093 905	496 737	**1 839 474**	85631	155 390	**2 080 495**
I-	Operational and administrative costs Current spending). **(F+G)**	310 740	216 449	213 938	**741 127**	154800	97 925	**993 852**
J-	% Development costs / total budget. **(H/A)**	44,47	83,48	69,90	**71,28**	35,62	61,34	**67,67**
K-	% Operational and administrative costs / total budget. **(I/A)**	55,53	16,52	30,10	**28,72**	64,38	38,66	**32,33**

- Cost of developing the TTCM as a model: **3,074,357** USD.
- Number of persons trained (virtually + face-to-face): **32,162**

[33] Reminder: this number includes back-to-school, Mawride, classera and other "non TTCM" trainings. CERD provided no disaggregated data

[34] Including Mawride, Classera, back-to-school, etc.

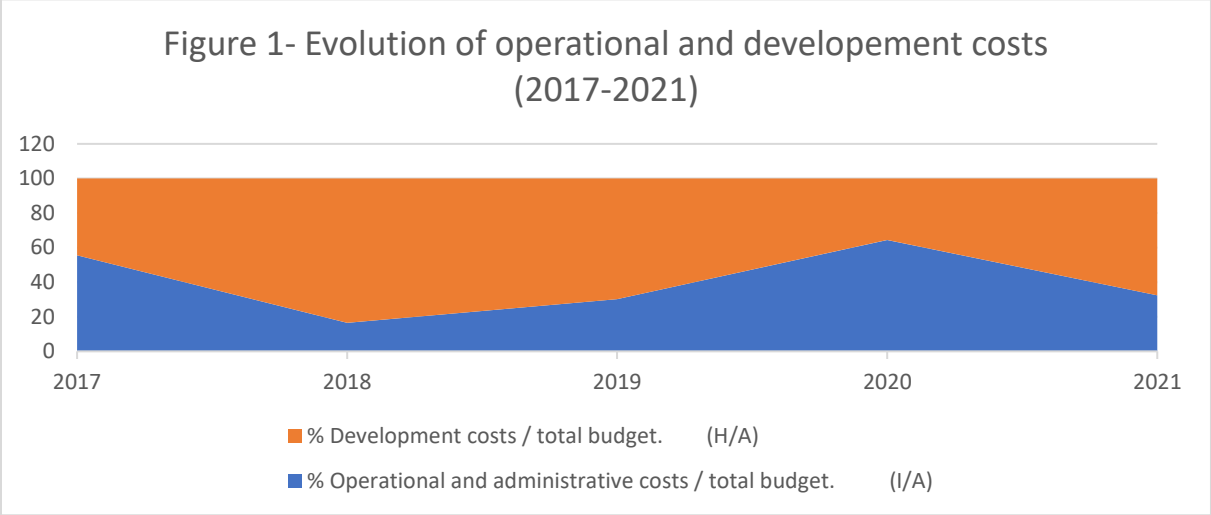
- Thus, the overall Cost of TTCM design / Number of trainees who were trained (virtually + face-to-face) is **96** USD.

Since 20,158 people were trained between 2017 and 2019, the average cost for training one person face-to-face was **128** USD (compared to **155,7** USD for the online training in 2020, or the average unit cost of **96** USD for online training for the period 2020-2021).

i. Overall Cost of the online training / Number of trainees who were virtually trained: ***41*** *USD*

ii. Overall Cost of TTCM design / Number of trainees who were trained (virtually + face-to-face): ***96*** *USD*

iii. Overall Cost of the face-to-face training / Number of trainees who were trained face-to-face: ***128*** *USD*



Preliminary conclusion on Efficiency

EFFI 1: Regarding the budget of the TTCM training, an annual budget has been drafted between 2017 and 2020, which represents the progress of spending for each year and shows the actual versus the planned expenditures for each rubric. This facilitates the tracking of expenditures and allows for better transparency.

EFFI2: The actual spending shows a tendency to save money whenever possible and the actual spending is far below the planned budget, especially for content development and for the cost of training delivery. In both cases, the CERD-PITB maintained their regular daily rates normally used for their trainers (even after the devaluation of the Lebanese Lira). **When the indicative budget for 2021 is included, the total expenditures will amount to 3,074,347 USD.**

EFFI3: Evolution of spending between 2017 and 2021: Decreasing unit costs with time.

The highest output was reached in 2018 (11,667 people trained), but it was also the year with the highest actual spending (more than 1.3 million USD). Conversely, the lowest spending was in 2020 (240,431 USD), yet the number of trained persons was also very low in 2020, due to the dire economic conditions facing Lebanon and public schools during this period.

Therefore, the efficiency analysis is based on the ratio of the total yearly cost to the number of trained persons as shown in the Line C in Table 6.

The actual total spending between 2017 and 2021 amounts to 3.07 million USD, while the total number of people trained was 32,162 (cf. section 2). Therefore, the average unit cost of training one person under the TTCM for the five years is 96 USD per person (3.07 millions / 32162 persons attending training).

Nevertheless, this average is not significant in itself, since it mixes the averages of the online (2020 and 2021) and the face-to-face training (2017-2019).

Between 2017 and 2019, the training was entirely conducted in the traditional face-to-face manner. The unit cost for 2017 was around 645 USD: this training was limited to trainers and mainly consisted of ToT and coaching workshops. Yet 2017 remains an exceptional year since it includes all the preparation work before the launching of the teachers training. The unit costs in 2018 and 2019 are more representative of the average cost of teachers training (112 USD and 93 USD respectively) since the teachers counted for more than 96% of the trained population. This cost is close to the expected cost of 100 USD per teacher foreseen in the RACEII logical framework.

EFFI 4: the average unit cost of face-to-face training for the period 2017-2019 is 128 USD and the cost of online training is expected to drop with time due to return-on-scales

In 2020 and 2021, the training was conducted online and most of the trainees were teachers following the self-paced modules of Microsoft Teams in 2020 and teachers following the Mawrid-e training on online teaching, learning and back-to-school material in 2021. The unit costs for 2020 and 2021 are around 155.7 USD and 24 USD respectively. Hence, when combining the output of 2020 and 2021, the average unit cost of online training is 45 USD, showing a significant decrease in the cost of training due to the exploitation of the scale effect.

The higher unit costs for 2020 are mainly explained by the importance of the administrative and operational costs as shown in the previous sections (cf. section 6), yet this average remains reasonable, and in any case lower than the expected cost of 100 USD foreseen in the RACEII logical framework. Moreover, online training is usually more cost-effective when the number of trainees increases, and/or when the number of sessions/years increases due to the return on scale.

5.4. Impact

Impact evaluation and measurement of a teacher training operation is a complex task. Further methodological conclusions on impact in teacher training are presented in the conclusion. This section shall focus on both the micro (desk review, KII, FGD) and the macro (class observation, KII) dimensions. It also builds upon a teacher satisfaction survey conducted after delivery of the DIFA module in 2018. The triangulation of these different data sources made it possible to visualize the effect of TTCM from different angles to complement and validate the results obtained. Impact is measured regarding teacher learning and the analysis also explores the question of transfer of acquired skills into classroom practices.

5.4.1. Improvement of teacher learning online and face to face

The improvement of teacher learning online and face to face responds to the following question: *To what extent did the TTCM trainings improve teacher learning online and face to face?*

Observed traces of TTCM training in the classroom

41. In spite of the entire school year spent outside the classroom in 2020, the teachers did not lose all traces of the training. However, the evaluation team can say that the visible impact of the training could only be observed at the level of marginal practices. Indeed, the CP module has been generally applied well. TwT related practices were less observable (three out of fifteen schools). DIFA and Inclusion (IMPI, IST, ...) were applied at “level 1” that is to say, class observations brought to light interest and constructive encouragement toward learners with academic difficulties and some differentiated practices. The team did not observe in-depth change in teaching practices and there were no differentiated medium or content for them. Hence, more specialized training and follow-up sessions are still needed to complete the "awareness" training already carried out. (cf. KII, FGD, observations).
42. There were no systematic impact study, follow-up or class observations after the training because of the COVID-19 pandemic and the Beirut Port Explosion.

> *We have been teaching online for almost two years. Online classes are different. And we cannot follow up with the teachers to check if they have implemented what they acquired during the trainings in their classes.''*
> **Trainer**

Results of assessment of teachers’ capacities and skills before and after the training

43. The assessment was generally done, but not systematized. Often the trainers did not have time to assess, especially for online training. Although required by the TTCM guidelines, previous knowledge assessments were not always carried out (cf. KII, FGD) and did not seem to be fully understood as a necessary step for training delivery (KII, focus groups).
44. The CERD survey on Differentiated Instruction and Formative Assessment Feedback[35] specified that during the months of May and June 2018, 26 inclusive schools and 669 teachers were trained on the DIFA module. To assess the impact of this training, 380 teachers responded to

[35] Training of teachers 2018, Report on the *Differentiated Instruction and Formative Assessment Feedback*

the electronic feedback survey designed by CERD and the TTCM expert team with fourteen quantitative questions and eight qualitative questions. Qualitative and quantitative data analysis was conducted on MS Excel (Differentiated Instruction and Formative Assessment Feedback, p.3). However, after examining the survey's results, the evaluators noticed that the interpretation of some results was ambiguous and to a wide extent exaggeratedly positive. For example, only 9% of the surveyed teachers considered the module on formative evaluation "immediately transferable", although this represents 50% of essential questions within the DIFA module. Only 22% of teachers think the DIFA module changed their perception of differentiation. Less than half of the attendees (42%) agreed on the usefulness and applicability of the module, which is presented as a "very positive result."

> *"Teachers found difficulties understanding most of the terminology. Everyone needs more training, starting from the trainers to the trainees. [...] We need training to remind us the stages of TTCM, Because we did not implement it sufficiently to acquire it very well and we were not able to communicate with each other or exchange our work."* **Trainer**

Behavioural change (motivation, confidence, tutoring)

45. Many precautions should be taken when referring these findings to changes driven by the TTCM. The evaluation team is not in a position to confirm a direct causality between teachers changing practices and the TTCM modules they followed. Nevertheless, according to school principals and some DOPS interviews, there were significant changes and development for teachers, especially in terms of behaviour, during training and after. They have become more flexible, especially on issues of inclusion and child protection (KII, schools visits). The feedback received by the directors following the TTCM training was rather positive. Many of them noted a significant change in teacher behaviour, particularly when dealing with pupils with special needs or learning difficulties.

5.4.2. Transfer of acquired competencies into classroom practice

The transfer of acquired competencies into classroom practice responds to the following question: *To what extent does the TTCM-based training achieve its objectives in terms of transfer of acquired competencies to the classroom practices of teachers?*

Convincing results of a qualitative study on the performance of teachers

46. There was no qualitative study of teacher performance. The classroom observations conducted by the team showed that teachers kept a good record of the training. As documented in the observation grids and confirmed during FGD, teachers sought to apply what had been acquired, particularly through the followed module (s). This finding mainly applies to CP and to some extent DIFA, although differentiation is not generalized, less to TwT, used by only 20% of observed teachers (cf. Classroom observations, KII & excerpts below). Also, the modules relating to inclusion (IST, IMPI, etc.) and differentiation (DIFA) were generally applied in classes where learners with academic difficulties or special needs. This was observed in 68% of teachers adopting a positive attitude toward them and 71% of teachers

surveyed with cases in class, facilitated the integration of learners with special needs or learning difficulties, by a spatial distribution that allows them to participate, communicate and be autonomous. In most cases, these learners received additional guidance and constructive encouragement. The interviews with school principals and trainers confirmed that the attitude and behaviour of teachers changed significantly after the TTCM training. They became more eager to accept the presence of special needs children in their classes. Their perspective had also changed vis-à-vis learners with learning difficulties (interviews with directors and trainers). However, no transfer occurred regarding UbD principles and backward design approach, as the teachers were not informed of the new design process.

''We did not really apply the TTCM project on the ground. Have we had the time to practice and work on it, we could have probably seen some results with the teachers in terms of motivation, knowledge transfer, competence acquisition, etc. sadly we cannot judge the efficiency of the program on the trainers and the teachers'' **DOPS**

''I noticed some progress. But I don't remember the details'' **School Director**

''TTCM trainings have been very effective in teaching teachers the different ways of dealing with special cases and struggling learners'' **School Director**

"I wish we can also push teachers to prepare the classes on TTCM. It should be a full-fledge program whereby teachers can access and insert their class material. This would help us as DOPS observers to evaluate the teacher and directly add our feedback on their work and their competencies if acquired or not […] personally, I never saw the involvement of both CERD and DOPS on the TTCM in the same time. There was no presence for both of them together. Again, I was only exposed to the TTCM as a trainer from CERD and not as a coach at DOPS. ***DOPS***

"Upon our observations, we noted an improvement in the teacher's competencies, and we noticed a change in the behaviour of teachers who attended the trainings; they are more motivated, posing questions, and even trying to change their way of teaching in their classrooms. The design of the trainings had an indirect impact on them." ***MEHE***

Concluding reports by trainers or other actors in education

47. There was no official follow-up or impact assessment.

Quality and good performance of teacher portfolios

48. No formal impact study has been done. TMS is a promising tool, but it has not been used and could therefore not be assessed.

''The TMS for example is important but not everyone has been trained in its use." **Trainer**

'' The Teachers' Portfolio has helped organize and target certain training courses. [...] I tell you again, we didn't follow up" **Trainer**

''I was unable to make face-to-face class observations with her teachers as schools were closing due to the pandemic'' **School Director**

Preliminary conclusion on Impact

IMP 1: The teachers have not completely lost all traces of the training followed, but the evaluation team can say that the traces found remained at a superficial level of practice. The twenty-five class observations carried out allowed the evaluation team to conclude that the TTCM training modules (CP, DIFA, G, IST, MIPI, TWT) were not without effect on the professional practices of teachers, but to varying degrees. The teachers were not using technology during the observed classes.

IMP 2: There was an observable change in teachers' behaviour, during training and afterwards, toward inclusion and child protection issues (observations, KII).

IMP 3: No follow-up or class observations after the training allowed for a refresh of the acquired competences after the COVID-19 shutdown nor within the interrupted 2020-2021 school year. CERD trainers usually do not perform school-based training or follow-up. This situation is regretted by most stakeholders.

5.5. Sustainability

The purpose of this section is to highlight the extent to which the TTCM project is sustainable, specifically the ability of key stakeholders to sustain intervention benefits beyond donor funding to rely on locally available resources. The focus will be on the capacity of the project to be scaled up and continuously refined to meet the changing needs of teachers, to continuously track and respond to the competency building of trainers and to be able to contribute to a change of perception in the role and place of in-service teacher training and a consideration of their needs.

5.5.1. Potential for scaling-up for teachers with no additional donor funding

The potential for scaling up responds to the following question: *To what extent can the TTCM approach can be scaled up and continuously refined to meet the changing needs of teachers as collected through the training management system, with no additional donor funding?*

Communication, coordination and reporting on teachers' training needs and developments

49. Regular reporting was ensured by the project's main expert deployed at CERD. Mutual trust between UNICEF experts and CERD staff was reported and documented in the verbatim below. There was an attempt to create a committee to include other stakeholders, but ultimately, this was not the case.

"[The expert] *was the UNICEF representative at CERD, so yes of course there was an alignment with UNICEF. We also requested people from the general directorate and inspectors to be within the committee, but the request was not fulfilled, and we couldn't wait anymore. So, we kick started the project and we reported to them what was being done and all the findings. The steering committee included representatives from UNICEF and CERD. There was always this look between both entities the UNICEF and CERD to supervise all the work that was being done. Firstly, to compose the annual workplan, for the minister's approval, then for the implementation there were many meetings to oversee how it implemented. We had a decree about it for CERD. UNICEF also was present in most of the meetings and if not available we would update them by reports. But we had weekly status meetings"* **KI – PITB KI – PITB**

"I never saw the involvement of both CERD and DOPS on the TTCM in the same time. There was no presence for both of them together. Again, I was only exposed to the TTCM as a trainer from CERD and not as a coach at DOPS. I felt the TTCM was adopted by CERD and not shared fairly with the rest of the units. It was not cascaded down to the coaches nor the teachers. I don't think the TTCM was given its rights to all the stakeholders to be used fully as it should be" ***KII - DOPS***

Identification of initiatives implemented or to be implemented at the institutional level

50. Conditions are favourable to set-up a partnership between the DOPS and the PITB with the trainers overseeing the continuous training of the teachers and the DOPS overseeing the follow-up of the teachers in class. Staff members from both institutions agree on the high readiness of staff and decision-makers to enhance this collaboration, while underlining the improved ties and collaboration in previous years. Despite some past information and communication shortages, new initiatives are on track most notably for the implementation of a single software or two compatible software solution for monitoring teachers' professional development (see KIIs, excerpt below). In the meantime, However, new funding was raised for CERD to develop more training activities and donors are still highly mobilized to support teacher training.

"*We usually send CERD on an annual basis our recommendations concerning the needs that must be tackled. We noticed that CERD have started taking our recommendations into consideration. […] we are ready to collaborate*" **KII – MEHE**

51. The TTCM project team supported its new vision for educational content with a set of proposals compiled in a policy brief aimed at the upsurge and adoption of a new regulatory framework for teacher in-service training and increased teacher participation though regulatory changes (mandatory sessions for example) and/or financial incentives. The policy brief also recommended to systematize impact assessment. However, the policy brief remains a short document and was not widely diffused nor discussed. The potential for the recommendation of the policy brief to be further developed and implemented without donor funding are scarce in the present Lebanese context with ongoing poor visibility about public finances. However, the project leaves interesting remote learning modalities eager to be used with no additional costs, provided internet access is granted.
52. Donor coordination within the "quality" pillar of RACE 2 was rather rare globally. Most donors reported that they had heard or consulted little about the project. Some of them reported the existence of newsletters as an initiative to keep partners informed. The evaluation team had no access to these newsletters, and this practice was not reported by TTCM stakeholders (see KIIs, excerpt below).

Introduction of a system of continuous remediation or possible adjustments

53. The needs assessment and the impact evaluation are reported as two key components to improve and conduct on a regular basis to capture teachers and trainers' evolving needs. However, an operational training management system (TMS) is necessary and was still lacking when the evaluation was completed.
54. Due to the various crises that are going throughout Lebanon, most activities are at a standstill, but the various stakeholders have expressed the desire/need for new training and/or retraining sessions. In order to guarantee the sustainability of the TTCM project, it must demonstrate its ability to capitalize and appreciate its effects in order to adjust and regulate itself regarding future reforms.

"Other than the performance tasks, there are other evidence that trainers need to collect during the training. It resembles formative assessment that we use with our students the same idea, these quizzes asking questions, doing some kind of group work activities, mentoring, observing and so on. These help trainers make sure that everything is acquired before reaching the performance task. So by the end of the training the performance task becomes a complete work and also trainees present their work and they get feedback from trainers, and they have the chance to improve their work." **KII – RCR**

"*Since we did not continue with all the training sessions based on the TTCM, they might have forgotten it. […] But once face-to-face trainings become feasible, we planned to do 45 training sessions for induction curriculum that were not actually implemented especially for teachers on contract basis and high school teachers who recently graduated*" **RCR**

"*I am able to use the TTCM but the refresh is always important. Just like the students now, we need to remind them of the classroom practices. Also, both trainees and trainers need this refresh. I like to use the TTCM in my next training taking into consideration my feedback and the feedback of my colleagues concerning the part that requires a lot of time and we reach the same results."* **Trainer**

Adaptability of the TTCM to all circumstances (sanitary, safe, economical, …)

55. TTCM proved its great adaptability to different circumstances. Notably, the evaluation team can mention the creation of Microsoft Teams and training sessions that have been given online. However, this has negative consequences such as cessation of certain activities or reduced efficiency, reduced training duration, impossibility of applying the training evaluation framework and tools, etc. (KII, FGD).

"We all know that during online training, you cannot have full attention from the participants for more than 2 hours or 2 hours and a half. This led us to stop planning based on the TTCM due to this limited period of time. Because any training session planned following the TTCM must last for at least 2 training days which are equivalent to 10 training hours. So, there was a gap, we were not able to implement the TTCM as we wanted to do […] We cannot reduce this gap unless we go back to the face-to-face trainings. I cannot do a performance task for 2 hours in an online training session. It cannot be guided or evaluated or use the rubrics. We do not have enough time to do all of this. Besides we face internet issues that waste some of the time allocated for the session (using the links, not being able to join the sessions…). " **RCR**

Coordination and involvement of all actors and stakeholders

56. There is a lack of coordination and involvement of other stakeholders such as MEHE/DOPS, inspectorate, school principals, other donor organizations, parents, etc. despite the attempt to create a committee as previously stated. This lack was reported by trainers, DOPS, as reported below. This can be explained by the important design and research work carried out during the preparation phase with many trainer-oriented activities carried out (KII).

"It is the DOPS responsibility to go to schools and follow-up, and by not involving them within the training project, the TTCM project will not attain its desired outcome. […] But again, as a DOPS coach, how am I able to evaluate the teacher without being myself introduced to the TTCM? Hence the need for DOPS to be involved within the TTCM trainings should not be disregarded. […] ***DOPS***

5.5.2. Potential for scaling up for trainers

The potential for scaling up trainers responds to the following question: *To what extent can the TTCM approach be scaled up to continuously track and respond to the competency building of trainers?* This section has mainly been supported by the KIIs, school visits and FGDs and confirmed by the presence (or not) of appropriate documentation

Presence of training follow-up

57. There was no particular follow-up on the field after the sessions:
    - Trainers did not have access to the classroom;
    - School directors were not considered as key stakeholders for training follow-up purposes despite some very interesting innovations like school-based training; and
    - The DOPS and inspectors were not aware of this new training and have not been trained in it themselves. Therefore, none of these actors can support or attest to the implementation of classroom training with the exception of DOPS who are also trainers.

    This lack of training follow-up was mentioned as a regret/shortfall among most of the actors interviewed at all levels (KIIs, school observation, FGD).

> "*The problem was that we did not get the targeted results. There was not enough time to cover all the information and we did not follow up with them to know the challenges they have faced in practice. I think that the trainers must follow up on a monthly basis with the trainees to check the challenges or gaps they faced in practice* […] *I do not think there were any follow- up with the teachers. The follow up was basically done by school supervisors, but not all of the supervisors were interested or willing to do so.*" **DEN**

Introduction of a recognized certification or any other motivation

58. Currently, no form of recognized certification or any other type of formal motivation was introduced. The success of the TTCM project and the intent to pioneer competency-based teaching and learning may raise new questions that challenge the present regulatory framework for global coherence purposes (KII, FGDs)

> "*This is again, this is why believe institutionalize it although it has been institutionalized at CERD, CERD alone is not enough, it needs to be institutionalized at the ministry's level because this will entail developing policies, to make training mandatory, developing policies related to teachers' appraisal model that is not there, improve their salary scale one step at a time every two years like, you know, the traditional way. There's no certification of teachers, etc.*" **KI – UNICEF**

Development of strong communication with teachers

59. Teachers were not considered as real partners within this global change in teacher training. In particular, they were not informed about:
    - The adoption of a new architecture;
    - The key concepts and methods associated with TTCM with the ambition for teachers to reproduce them in class, in particular the backward design; and

- The aspects of the evaluation in which they are subjected and assessed.

The initiative to strengthen communication with teachers via Whatsapp was undertaken by many trainers, making it possible to develop better communication and reinforced support.

> "*I'm sure, they would welcome it, but we need to communicate it to them. And this was not something that we have achieved maybe because of COVID, okay, because the pandemic started in the middle of the process, or towards the end of it. So we were working on it, we reached the school principals, teachers, all the administrative stuff, and so on, the next step was parents, and we could not actually reach it, because maybe it's not that common to train parents in Lebanon, this is step forward we need to be working on, we need to work on engaging parents in their children's learning. And hopefully, this will be part of the coming plans […] Most of the teachers that were involved in the trainings accepted this approach. They were aware of the three stages but they did not acquire an in-depth understanding of how they were designed*" **RCR**

5.5.3. Change of role and place on INSETT

The changing role of INSETT is assessed by responding to the following question: *To what extent the establishment of the TTCM has been able to contribute to a change in perception in the role and place of in-service teacher training and the consideration of their needs?*

Change with regards to continuing planning training operations

60. The RCRs, DENs, trainers and DOPS interviewed and involved in the TTCM project are convinced of the added value of the project, including its components, and are waiting to resume activities through more effective involvement and communication with certain actors such as teachers, other TFPs, local supervisors, etc.

> *We always dream about unifying the educational system in Lebanon, unifying all the parties. Now, we cannot wait until all parties are unified, we need to proceed with the work and allow others to join forces to build a system worthy of the entire nation."* ***KI – PITB***

Preliminary conclusion on Sustainability

SUST 1 – Potential for scaling-up teachers with no additional donor funding: The TTCM proved its great adaptability to different circumstances. Notably, the evaluation team can mention the creation of Microsoft Teams and training sessions that have been given online. However, this has negative consequences such as cessation of certain activities or reduced efficiency, reduced training duration, impossibility of applying the training evaluation framework and tools, etc, but it should be remembered that the current context remains very difficult. Several beneficiaries expressed the need for new training or refresher training and for some form of recognition or motivation for the trainees within a revised regulatory framework.

SUST 2 - Potential for scaling up trainers: The project was able to adapt to different contexts and to develop a training approach promoting trainers' constant adaptation. However:

- There is no training follow-up, which does not allow trainers to observe the impact of their training on the trainees, and to adapt their training if necessary. Accordingly, in consultation with the DOPS – mostly marginalized within the framework of the project and unfamiliar with the TTCM theoretical framework – It is necessary to carry out a post-training follow-up.
- No recognized certification or other professional motivation exist,

- Communication with teachers is still poor, preventing trainers from discussing with their trainees to adapt training and determine the skills they need to strengthen.

SUST 3 - Change of role and place of INSETT and the consideration of their needs: most of the stakeholders interviewed and involved in the TTCM project are convinced of the added value of the project and its components and are waiting to be able to resume activities with more effective involvement and communication with certain actors. Indeed, there is a lack of coordination and involvement of many stakeholders such as MEHE/DOPS, inspectorate, school principals, other donor organizations, parents, etc. but new upcoming quality-related initiatives could trigger new collaboration opportunities.

In conclusion, the sustainability of the project is questionable. On the one hand, the project has been able to demonstrate its ability to adapt to different contexts and to develop a training design theoretically allowing constant adaptation for scaling-up. On the other hand, several challenges remain:
- First, the project does not seem to have sufficiently involved all stakeholders, in particular teachers and school principals, but also other donors involved in teacher training as well as the DOPS who monitor teachers in class,
- The inconsistency between pre-service and in-service training approach remains an obstacle. Training should be the "red thread" of a teacher's career and be part of a continuum.
- Spaces for exchange and dialogue between stakeholders, follow-up, monitoring and methods of capitalization were not identified during this assessment, making it difficult to produce knowledge with a view to adjustment leading to the sustainability of the approach.

Under the present institutional settings, the TTCM approach does not make it possible to monitor and respond to the competency building of trainers in a participatory and global manner. The policy brief is a first step to think institutional reform of teacher training in a more systemic manner allowing better sustainability of the TTCM.

5.6. Human rights and gender equality

61. The TTCM project is part of the RACE II program, which addresses human rights and fosters inclusion of all refugee children. It targets better integration of these children into Lebanese public schools by addressing key topics such as differentiated education and child protection. Addressing education personnel's attitude towards cross-cutting themes in education (child protection, inclusion, learner centred instruction, gender issues, sustainable development, peace education) is recognized as a key TTCM expected outcome.
62. The TTCM project significantly contributed to the fulfilment of children rights to education and more specifically, marginalized children. For this reason, findings and analysis of this report are directly related to the United Nations Convention on the Rights of the Child (commonly abbreviated as the CRC.) The TTCM training was conceived within the framework of the inclusive school project that aimed for basic education to ensure equitable access to quality education through a rights-based approach and promotion of a child-friendly environment in schools.
63. Several TTCM instruments explicitly refer to a right-based approach:
    - The teacher induction curriculum for novice teachers includes the development of openness and acceptance of otherness in all its forms as a key professional activity for teachers under the category "Professional relations" (PR.SCHL) and explicitly mentions inclusion, child protection, human rights, children's rights, cultures, gender equality, environments, contexts as key areas with related modules; and

- The child protection module provides trainers and teachers with full information and new skills about children's rights.

64. Gender issues are fully addressed within the modules. For example, the DIFA module includes instructions for teachers to consider learners characteristics according to their gender or culture. The gender module equally supports better consideration of a gender lens into Lebanese public schools. Several modules under the induction curriculum address gender discrimination and measures to fight them.

6. LESSONS LEARNED AND FINAL CONCLUSIONS

The adoption of the teacher's competency framework in 2017 targeted an improvement in the quality of teachers and teaching in Lebanon. This instrument is recognized worldwide as a "the main integrating element to improve teacher quality." [36] In many countries, the adoption of a teacher competency framework has led to new challenges, including debates on how to define a teacher and teaching quality. The effect of competency frameworks is maximized if they can influence entrance requirements for initial teacher education, certification examinations, teacher evaluations, continuing professional development as well as career progression within a defined national context.

The Teacher Training Curriculum Model (TTCM) project was undoubtedly a pioneer in promoting and implementing a new vision of teacher continuous training in Lebanon, following-up on the modernization process triggered by the adoption of the competency framework in 2017. It fostered new tools and new approaches for teacher training quality with the aim to ensure a real shift from teacher training quality into efficient teaching practices in the classroom. Definitely, this is a highly important step to trigger improved and more frequent impact assessment practices in teacher training. Of course, the project only addressed in-service teacher training as a first step for a deeper transformational process. There is still a long road ahead, and the research on teacher's initial training adequacy with the competency framework performed within the TTCM project is an important step, although with limited use and effect during the project implementation period.

The global relevance and coherence of the TTCM was analysed according to both Lebanese and international standards and more broadly, the objective to improve teacher quality in the country following a policy approach. International policy research highlights important challenges in defining teacher training quality across countries and notably:

- It is generally difficult to create a general consensus on the priority of education goals; therefore, the main duties, responsibilities and roles of a teacher[37];
- There is not a single type of teacher job, although it is possible to identify common professional teacher competencies. Teaching is not the same in a disadvantaged suburb or in a privileged district and those discrepancies may require some specific knowledge, attitudes, abilities and values; and
- The quality of an individual teacher may be influenced significantly by the learning environment. Therefore, it is useful to analyse teacher effectiveness in close relationship with actual school environment and pupil characteristics.

The evaluation team would like to underline four main lessons learned:

(1) the successful teacher training modernization process triggered by the TTCM;

(2) the importance of preserved diversity among teacher classroom practices;

(3) some methodological issues linked with the adaptation of the Understanding by Design (UbD) framework for teacher training institutions and policies; and finally,

[36] European Commission, DG Education, *Boosting teacher quality: pathways to effective policies*, 2018, https://data.europa.eu/doi/10.2766/069297

[37] Ibid. Confirmes by many research papers (Françoise CROS, Alain MICHEL, among others).

(4) an update on existing evidence in regard to systemic impact assessment within teacher training reforms.

6.1. The TTCM allowed deep progress towards a modernized and competency-based teacher training system

The TTCM project was highly successful in introducing new and modern tools and approaches for competency-based teacher training, namely:

- Adopting a holistic training curriculum approach based on a coherent set of pedagogical components;
- Building on professional competency frameworks (both for trainers and for teachers);
- Providing a unique framework for training design and planning related to the competences to be acquired by trainees;
- Setting-up a specific tool to follow-up teacher training and monitor quality following a lifelong learning perspective;
- Building on in-service training to promote collaborative work among teachers and facilitate the exchange of ideas to create professional learning communities;
- Designing a specific model for new teachers with poor initial training; and
- Measuring the impact of the training on teacher practices.

The TTCM design framework was designed in close collaboration between CERD and UNICEF experts; therefore, it led to improved ownership of the training by Centre for Educational Research and Development (CERD) trainers who shall no longer accept “ready-to-use” training modules prepared by external consultants.

This new vision for educational content was supported with a set of proposals (policy brief) aimed at the upsurge and adoption of a new regulatory framework for teacher in-service training and increased teacher participation though regulatory changes (mandatory sessions for example) and/or financial incentives. The TTCM team also appeals for changes in teacher training provision allowing better training follow-up; in particular, modifying the CERD mandate according to which trainers are not allowed to visit the classrooms.

The results and impact of the project also suggest a need for improved coherence in the Lebanese education system, in particular when the Lebanese government intends to carry out a wide curriculum reform. Curriculum for students learning (presently being reformed with the support of the World Bank), student assessment or teacher initial education are to be consistent to foster quality education.

The whole process partly failed to tackle the role of school-based training within this whole modernization process, where school directors should be considered (and internationally they are more and more valorised) for training and pedagogical leadership purposes. This approach should also include reforms in training processes and channels in addition to content and design, offering school-based refresher training in collaboration with school directors and allowing teachers to apply their learning in authentic situations in the classroom. In addition, by choosing to train teachers in methods and concepts as advocated by TTCM design, the project would benefit from making Lebanese teachers reflexive practitioners who are not limited to the application of successful recipes.

6.2. The project adopts the socio-constructivist paradigm as "unique" reference

The TTCM conceptual framework is based on the assumption that the socio-constructivist paradigm is the best or only way to address the challenges of competency-based teaching and learning. Its assessment framework insists on project-based learning and assessment, with the wide use of "rubrics".

This assertion is not considered today as demonstrated by evidence; on the contrary, research tends to show that there is not "one best way to teach," but different effective pedagogical approaches according to the profile and preferences of the teacher, the context of teaching and the attitudes and heterogeneity of students. Most specialists adhere to socio-constructivism to define competency-based learning from a student perspective.

However, **the best adapted approach to effective teaching is not unanimously defined**, with experts still questioning the differences between complex subject-based competencies acquisition ("apprentissages scolaires") and life skills (also referred to as transversal skills), requiring different approaches. In other words, while everyone agrees on the need to promote high-quality teaching, the debate on what constitutes good practice is far from over and does not conclude that socio-constructivism is the only "right" approach. The evaluation team can safely say that there are two clearly defined orientations rooted in philosophies of education and empirical research, and that **none of them has been proven "superior"**:

- Direct instruction/explicit teaching (teacher's role is to communicate knowledge in a clear and structured way), based on behaviourism, defending objective-based learning at least for subject-based competencies requiring specific subject-based knowledge. They recommend moving progressively from simple to complex; and
- Constructivism (students should act as participants in the process of acquiring knowledge). Constructivist approaches generally privilege problem-based and project-based learning in order to stimulate reasoning and cooperation within students. Socio-constructivist approaches generally recommend starting with complex situations.

OCED analysis on teacher practices and abundant research show that virtually, **most teachers will rely on both approaches at some point in their teaching**, moving between the two depending on the needs of a specific class and the objectives of various stages of lessons. In most countries, teachers are free to choose the teaching approach corresponding to the needs of their pupils and there is no universal teaching method for all pupils and all situations.

Notwithstanding the benefits of direct transmission and constructivism, active and passive teaching strategies, **the effectiveness of any teaching practice depends on how teachers implement it in the classroom**. Research shows that to address the numerous challenges they face, teachers should develop reflexive practices, eager to support their permanent adaptation.

In addition, project-based activities and assessment are widely recognized as a powerful tool to develop transversal skills, however, it is exaggerated to consider it as the only effective method for competency-based teaching. The assessment framework of the TTCM, mainly based on "rubrics", only applies to project-based teaching and therefore tends to be widely based on this untrue assumption.

6.3. The adaptation of UbD to adult learning leads to increased complexity and generates confusion

The Teacher Training Curriculum Model (TTCM) is not only a competency-based teacher training project; it also refers to the experiment of an international curriculum design framework, the "Understanding by Design (UbD)" framework according to Wiggins and Mc Tighe (2005)[38], adapted for adult learning and more specifically, teacher professional development outside the school. This approach is presented as "the best" or even "the most effective" one by many TTCM experts, decision makers and documents, leading to the conviction that UbD-based socio-constructivist approaches are the most adapted to competency-based teaching and best suited to maximize impact on classroom practices.

As presented in Australia[39], the UbD model is mainly used in the world as **a framework for designing a sequence of lessons for pupils at the school level**, addressing the equivalent of competency referenced as "T.SPP.PLAN"[40] within the Lebanese competency framework**.** The evaluation team found no existing or assessed experiment of the UbD at the systemic level or for teacher training institutions. The TTCM handbook intended to **transfer the logic of UbD from the school level into a global strategy for teacher training, where the trainer is the teacher and the teacher is the pupil. In this case, the required backward design is based not on the school or national curriculum, but rather on the teacher competency framework.** It is a very valuable exercise of isomorphism, based on the common idea among TTCM stakeholders that if the trainer adopts UbD, the teacher will tend to adopt UbD.

This shift led to huge adaptation work and theoretical research by the TTCM team, including some highly complex theoretical considerations and new terminology (facets of understanding, Goal, Role, Audience, Situation, Product or Performance, Standards (GRASPS), Big ideas and essential questions, where to guideline for lesson planning) generating confusion **between teacher competencies and student competencies.** For example, if "backward design" is viewed as an approach for teacher training, it is described as a teaching method in the glossary of terms (Annex C)[41]. Bearing in mind that the 2018 teacher feedback reports overall confusion around the notion of competency/attitude/knowledge ("*Some confusion remains, however, between knowledge, competencies and attitudes* », page 6), questions arise over the introduction of many new concepts at the same time being too ambitious. Wiggins and Mc Tighe question the attempt to implement too many initiatives simultaneously (e.g., UbD, Differentiated Instruction, Curriculum Mapping, Marzano's "Strategies" etc.) as sometimes problematic. As they draw lessons learned from the field, the fathers of UbD recommend, "think big but start small and smart", bearing in mind the theoretical complexity

[38] Handbook, p18.

[39]https://education.nsw.gov.au/teaching-and-learning/professional-learning/teacher-quality-and-accreditation/strong-start-great-teachers/refining-practice/planning-a-sequence-of-lessons

[40] The 2017 competency frameworks organise competencies according to a coding table stating 4 professions, 4 domains and 12 competencies. T.SPP.PLAN is to be understood as follows: T stands for Teacher (profession), SPP stands for Specialised Professional Practices (domain), Plan stands for "Plan for the teaching and learning process" (Competency).

[41] « Many teachers begin their unit design with the means—textbooks, favored lessons, and time-honored » activities— rather than deriving those from the end—the targeted results, such as content standards or understandings".

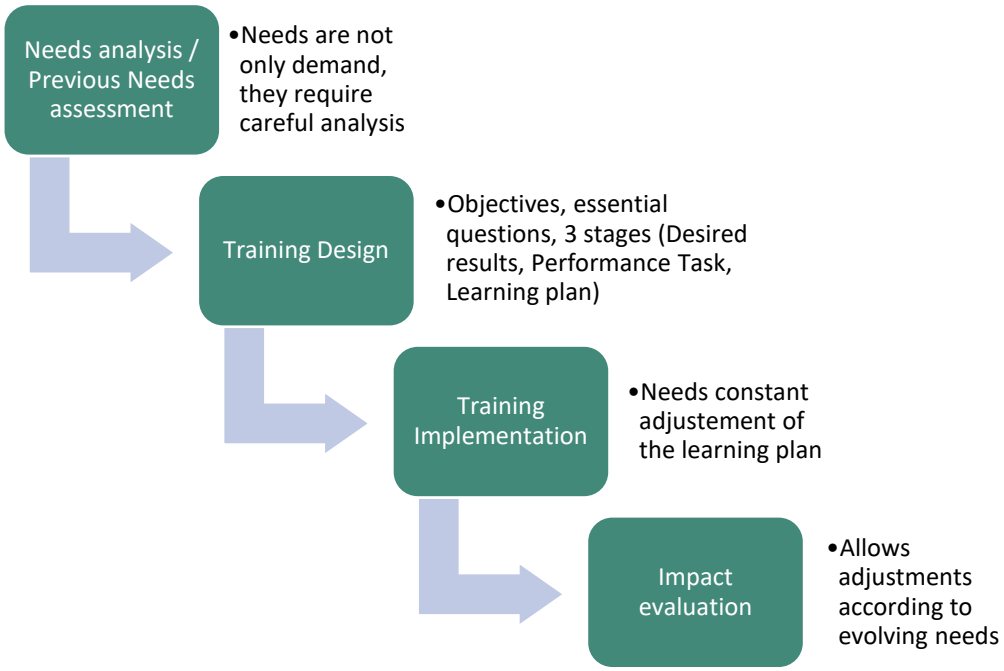
of the model[42]. Announcing that, "UbD is the official way to plan all lessons from here on" is also not recommended.

The UdB model adopts an approach based on backward design, i.e. designing assessment tools together with training objectives. The importance and impact of formative evaluation early in the training design process are no longer debated in adult learning theories and all "training engineering" approaches. Since the TTCM design was focused on the adaptation of the innovative educational framework proposed by UbD, some essential phases of training engineering were even neglected. For instance, it failed to capture needs assessment and evaluation/follow-up/impact assessment as essential parts of the process. Although included in the theoretical model, the "Previous knowledge assessment" phase of the TTCM was not enough taking into consideration the preparation of TTCM modules; therefore, it partly failed to capture the strong heterogeneity of public school teachers during sessions.

6.4. The TTCM triggers renovated debates about impact analysis of in-service training on teacher learning and practices

The initial core subject of this evaluation targeted impact measurement in teacher training, and the TTCM project brought this topic as an important element of the teacher training approach. This is key to develop any "modern" training engineering approach, be it in accordance with UbD or not, which should design impact measurement strategies and tools early in the design process.

The proposed figure shows this process, and demonstrate that this "classical" training engineering approach is fully compatible with existing TTCM principles:



[42] Grant Wiggins, 12 ways to kill understanding by design from the start, 2014, https://grantwiggins.wordpress.com/2014/11/12/12-ways-to-kill-understanding-by-design-ubd-from-the-start/, consulted in November 2021.

However, the TTCM team did not go far enough in the integration of impact measurement. Of course, be it formative or summative assessment, impact measurements are a complex operation and each education system must create its own relevant reference framework. The crisis context was not favourable to an ambitious impact evaluation envisaged from the beginning, with relevant baseline data.

However, the project shed light on interesting practices on *ex post* evaluation of teacher training impact, building on qualitative and quantitative data on 2 of the 3 dimensions usually considered for impact assessment:

- The **Micro dimension**, building on immediate impact on teacher outcomes. Outcomes refer to evidence of total or partial acquisition of new professional skills. These results are measured against the objectives. It builds on the appreciation of the beneficiaries "on the spot" of the added value provided by the training and the ability to reinvest in the new skills acquired. Related data can be collected through questionnaires or interviews. The TTCM organized such a survey for the DIFA module with success.
- The **Meso dimension**, considering the transfer of learning outcomes into new classroom practices. It relates to the capacity of the trainees to transfer the learning outcomes into a change in professional practices on a daily basis. In this case, through classroom observations, evaluators shall observe the direct and observable effect of training on professional practices. The TTCM project tended to systematize this approach through the generalization of performance tasks referring to authentic professional situations. However, as mentioner before, the performance tasks were not realized in professional (classroom) context, because teacher training in Lebanon is mainly done in training centres. Preferably, evaluators shall include a pre-test and a post-test to assess, according to a purposive sampling method.
- The **Macro dimension**, considering the impact of such training on education quality assessed through student learning outcomes. This third dimension requires more time and more theoretical and methodological consideration. The link between teacher training and student outcomes is not yet considered as unequivocal and this uncertainty is linked with the difficulty to objectivize impact on students. Therefore, this third dimension shall be considered with all required caution and evidence-based approaches and was not taken into consideration in a scientific manner within the framework of the TTCM project.

In all cases, specific precautions are necessary to systematically consider training content and the conditions underpinning the delivery process, as well as monitoring strategies, but impact assessment are now considered as essential for any teacher training reform process. Of course, it should be contextualized to the peculiarities of the learning environment. The impact of the training may differ depending on the trainers' individual abilities and practices. Therefore, impact measurement must consider the context of the training, including its material and economic parameters. Measurement recommendations are suggested in the next chapter.

7. RECOMMENDATIONS

7.1. General remarks that are used for framing the recommendations

The Teacher Training Curriculum Model (TTCM) project was not designed "backward," first defining quantified objectives, together with expected outcomes and their indicators, then planning all the steps backwards. Activities were conceived annually, and results measured, but without a clear reference framework. The reconstruction of the ToC permitted the elaboration on objectives and targets set forth in the Handbook, but no clear Monitoring, Evaluation and Learning framework was provided from the beginning.

According to RACE II, Teachers enhanced capacities was the major need for public schools in Lebanon (output 2.1). The TTCM Handbook defined this "effective professional development" strategy as, namely: "(1) developing a global curriculum framework for teacher professional development including training, (2) encouraging teacher engagement in curriculum-focused training and collaborative learning activities, (3) developing strategies to monitor the quality of the training delivered to teachers and its impact on classroom practices in alignment with national standards, and (4) ensuring that teachers who have not completed initial training are exposed to high quality continuous training."[43].

The evaluation team provides the following recommendations with the hope that they can be useful in such a challenging context.

7.2. Strategic recommendations

NBR (in Ref. to the findings)	RECOMMENDATION	Responsible entity	Priority
In ref. to findings 10 & 21-24	**Rec #1: Continue the transition to competency-based teaching and learning with particular focus on coherence of curriculum components.** a) The Lebanese curriculum is not competency-based, it is structured by objectives and follows a rather strict subject-based approach. Still, teachers need solid support to plan the sequences of lessons efficiently, in accordance with the objectives and progression set forth in the curriculum. Further reforms should continue with the introduction of competency-based teaching and learning in a coherent way. b) The 2017 competency frameworks adopted a complex structure (high number of competencies and competency components, confusing coding system - as for example T.SPP. PLAN mentioned in the report). As this structure is now better understood by stakeholders, it is probably too early to change it but education authorities should take this complexity into account and target simplification at a later stage. c) As in-service training is considered to be the pioneering way to spread a competency-based teaching and learning culture in Lebanon, the whole model should take stock of existing discrepancies a including as regards pre-service training be used as leverage to accelerate reform and promote	Government	High

[43] TTCM Handbook, p.3

	increased coherence in education (teacher training (both initial and in-service), curriculum, assessment methods for teachers, exams); d) TTCM design / framework / approach to be clearly defined and agreed upon before moving to next steps and seeking the regulation needed. Shared understanding to be ensured across stakeholders and communications		
In ref. to findings 6, 12, 15, 21-24, 27	**Rec#2 Revise and simplify the TTCM framework and tools, and extend proposed tools to other** a) Avoid "tabula rasa" approaches and do not discredit transmissive pedagogies, allowing teachers to smoothly and progressively adapt their practices; b) Revise the assessment framework in order to refer to activities which are not necessarily project-based and rubrics c) Develop an impact assessment method to be implemented within a clear and re-defined MEAL framework d) Target transmitting methods more than content and consider teachers as reflexive practitioners; and e) Simplify approaches and concepts and avoid unnecessary complexity within TTCM documents. (e.g. simplify the handbook to focus the approach on effective teaching practices, with theoretical references in annex).		
In ref. to findings 8-9	**REC#3 Refer to a Lebanese backward design approach rather than to an international registered trademark and make sure that intellectual property issues regarding UbD are taken into consideration if maintained official reference to UbD in public documents.** While fully respecting the deep theoretical research and work carried out by the TTCM team, it seems possible to refer to backward design as a Lebanese approach. Most modern "training engineering approaches" recommend evaluation strategies and tools be prepared early in the training process. Most tools used within the TTCM, for example performance tasks or essential questions, could be considered as part of this Lebanese approach. A simpler approach in terms of needs analysis=>training design and assessment tools=>training implementation=>impact assessment is recommended. Should official reference to UbD be maintained, discussions should be organized with the owner of this international registered trademark, namely ASCD, taking the form of an official authorization or MoU. UdD is not the only approach/tool and it might be dangerous to present it as "the best way" (as per any other singular approach).	PITB and UNICEF	High
In ref. to findings 2 & 29	**REC#4: Improve coordination and collaboration between MEHE-DOPS and CERD-PITB to enhance the feedback mechanism that ensures transfer of teacher learning from training to classroom practice.** a) Bring together, in a common taskforce, the Guidance and Counselling Office (DOPS) with the Pre-service and In-service training Bureau (PITB) to avoid redundancy, and/or duplicated effort (e.g. currently two separate management systems) and allow for a better return on work and investment; and b) Donors and donors' representatives or supporting entities should follow-up on future efforts dedicated to mediation between DOPS and PITB. It should not be left to each specific project to deal with this issue separately.	Ministry + CERD + DOPS	High

	c) Use this common framework to develop the policy brief and make it a consensual MEHE document on the future of teacher training. Even if there are challenges to ensure buy-in of some stakeholders, this is to be part of any next step, be it donor-funded or not.		
In ref. to finding 9	**REC#5: Ensure provision for project quality assurance, quality control and Monitoring, Evaluation, Accountability and Learning (MEAL) for the next phases of the TTCM.** The global QA package should be composed at least of the following components: a) Quality Plan; b) MEAL Plan and tools and clear ToC; c) MEAL resources not allocated to the project; d) Communication and dissemination plans defined in the preparation phase prior to full design and ultimately development; and e) External review & Quality Assurance (QA) of project deliverables not defined.	UNICEF + CERD	High
In ref. to findings 1-2-3 & 55-57	**REC#6 Conduct a Needs Analysis as a foundation for the "redesign" and re-deployment phase , and impact analysis as a continuous reflection, review, and readjustment as needs change and the trainings are revised based on feedback from teachers and trainers** a) Funding streams secured and a metaplan for the revisited project to be embedded in CERD's Strategic Planning b) Needs Analysis to become a process that includes all concerned stakeholders (RCR, DEN, Trainers, as well as MEHE DOPS, teachers), ***including non MEHE actors such as Educational Inspectorate (central inspection)***; c) The proper structure, mechanisms and processes for a sustainable Need Analysis with a continuous and agile monitoring and evaluation systems are yet to be defined. As to the TMS as it is today, it cannot be considered as contributing to the NA; d) Training and **tutoring system** to be endorsed if these needs are driven from the future need assessments e) Development of a sustainability plan and exit strategy.	UNICEF + CERD	High
In ref. to findings 54 to 57	**REC#7: Provide PITB with further capacity development** a) Empower internal PITB resources and improve internal coordination to involve existing staff. Although the evaluation team recognises that CERD-PITB are understaffed, some of its staff were not fully involved in the TTCM project. Instead, there was a high coordination with external experts and consultants and not all PITB permanent staff had the opportunity to benefit from an upscaling of their competencies. Any new design will have to look into an actual targeted and customized capacity development plan for CERD's PITB permanent staff. In fact, this is the main enabler if not the major success indicator for long term impact and for the desired institutionalization of the process; b) The feedback provision model is to be reviewed since it is not sufficient or meaningful enough to send emails to "trainers or teachers" requesting their feedback on a document or by responding to a survey without clarity on the full process, what every specific milestone informs, their role in it and (most	CERD-PITB, Donors	High

	importantly) the outcome of their feedback, and the adopted decision/document and the next steps (in line with recommendation #3); c) Communication (both internal and external) requires more attention as it is an intrinsic part of creating clarity and receiving proper feedback as well as creating a community of practitioners. Such a community is recognized as key to teachers' motivation, engagement, impact and high performance; d) Stakeholders' engagement. Trainers and teachers are to be actively engaged in any revision process: revised needs analysis and assessment, global process, quality control, revised assessment guidelines. Other stakeholders equally including but not limited to other CERD departments, students, experts; e) Designing the whole project with six overloaded RCR (major team players) from the system requires a more robust plan, resources, and a stakeholder engagement strategy. RCR were involved in almost all the stages of the TTCM, which is a double edge sword. One suggestion could be to support staffing the sub-entities and providing technical assistance to the regional centres.		

7.3. Operational recommendations

NBR (in Ref. to the findings)	RECOMMENDATION	Target	Priority
In Ref with findings 1 to 7	**REC#8: Establish a set of quality standards for the modules and seek external independent review of the content.** TTCM components and plan to be revisited based on the various findings. It might be more pragmatic to address the planning of a Teacher Training Curriculum Model as encompassing the curriculum and its design, development, delivery, and evaluation models. **Formalize the presentation of the modules taking into consideration:** - The clarity and the attractiveness in the presentation of the modules; - The relevance of the authentic resources used (images, videos, etc.); - The use of referenced and high-quality resources; - The use of summary points for anchoring concepts; - The use of functional / heuristic diagrams and mind maps - The insertion of a balance sheet of acquisitions; - The insertion of a plurilingual glossary; - Respect for all pedagogical, didactic and epistemological orientations of the TTCM; - Adequacy with all competency framework skills; - Internal consistency between the objectives of the modules and the activities;	**PITB & Module designers**	**High**

	- The relevance, variety and prioritization of activities; - More contextualization of the activities with the socio-professional environment of teachers; - The balance between interdisciplinarity and the specialization of resources; - More activities that lead to discussions or debates; - Follow an approach based on a reflexive and creative scheme; - More balanced types of exercises offered (texts, diagrams, tables, illustrations, etc.); - The inclusion of self-assessment tools; - The mention of the sources and references of the documents used; - Plan activities that lead to a final project / final task linked to the socio-professional challenges of the field.		
In ref. with findings 16-17	**REC# 9: Alternate training between face-to-face and distance (hybridization) via an educational platform.** The next deployment phase needs to involve all trainers in all the training modules. - The presence of Feedback proposal on the performance and progress of learners strongly anchored in CERD "training engineering" approach; - Respect for the duration of the video capsules used (around 5/10 minutes); - Videos that exceed 10 minutes are chaptered using a clickable menu.	**CERD-PITB & module designers**	**Medium**
In ref. with findings 16-17	**REC#10: Ensure further specialization, post-training follow-up for teachers.** Follow-up and training refresher could target the DIFA and CP module, considered as the most impactful.	**CERD-PITB & module designers**	**Medium**
In ref. with findings 16-17	**REC# 11: Better address teacher heterogeneity. A more systematized previous knowledge assessment, or more simply needs assessment, should allow to differentiate trainers' practices.** - The systematic use of differentiated training practices and previous knowledge assessment eager to take into consideration the heterogeneity of teachers	**CERD-PITB trainers**	**Medium**
In ref to section 7.6	**REC#12: Continue the effort of including human rights based and gender sensitive approaches while pursuing the effort towards inclusiveness and child protection.** a) Better address the needs of teachers to receive targeted support to improve inclusion and build on lessons learned from the inclusive school project to provide teachers with school-based support composed of real professionals (Psychomotor therapists, Speech therapist, Special education teachers (remedial)); and b) A detailed analysis of the successes of the CP and inclusive modules should be made, in order to draw lessons for future modules and training.	**Ministry & PITB**	**Medium**

In ref. to findings 3- 14- 44- 54-	**REC#13: Promote collaboration within the school team involving school directors, most notably for needs assessment and training follow-up purposes.** Improving collaboration between the members of the school team *(teachers, management, remedial teachers, psychoeducator)* and parents in order to quickly list the difficulties, get information or obtain avenues of intervention. Such intervention is particularly required for needs assessment purposes. School-based training was carried out in some schools as part of the TTCM and should be carefully considered for upcoming training initiatives.	**MEHE**	**High**
In ref. to findings 28-29-20	**REC#14: Diagnose TMS's current status before moving to any re-design and deployment phases.** Technical aspects need to be addressed to ensure readiness. Obviously, this shall be covered by the formed Task Force (composed of CERD's staff and supported by proper external expertise as defined during the diagnostic / auditing phase).	**CERD**	**High**
In ref. to findings 49&50	**REC#15: Streamline with other donors and improve coordination mechanisms on quality-related issues.**	**UNICEF**	**High**

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