First Aid Midterm Evaluation

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1. INTRODUCTION

BRC-FL and the National Societies are currently implementing a five-year Development Program (Action Plan) *"Rode Kruis Vlaanderen helpt helpen: duurzame impact door inzet op zelfredzaamheid"* (2017-2021), financed by the Belgian government in Rwanda and Tanzania.

The two specific action plans being reviewed are:

- Rwanda: Improved community resilience (WASH) in Karongi and Rutsiro district and enhanced organizational first aid capacity (2017-2021)
- Tanzania: Improving institutional and community capacity to meet the own health needs (2017-2021)

These projects are realized with funding from the Directie-Generaal Ontwikkelingssamenwerking (DGD).

This midterm evaluation track consisted of three parts: a workshop at BRC-Fl HQ in November 2019, a field visit in Tanzania and Rwanda in January 2020 and this report, from which the final version was submitted on Monday, the 25th of May 2020.

The **output** of this midterm evaluation is a strategy document containing an **analysis of the current learning components**, a **roadmap towards increased learning outcomes and cost-effectiveness,** and an **assessment of the options for innovative and digital learning**.

In this introduction, the purpose and structure of the document is explained.

In chapter 2, an overview is given of the observations and interviews that were conducted in Tanzania (Kigoma region) and in Rwanda (HQ in Kigali and Karongi district).

Chapter 3 contains the main analysis, where the 7 objectives that were chosen for this evaluation are explored. First, we look at the current situation, as could be observed during the field visit. After, possible improvements are presented, linked to didactical and pedagogical concepts.

Chapter 4 is based on the 5 moments of need when (master) trainers and volunteers in the workflow will need to learn. This approach to learning is different from the standard classroom training that expects trainees to follow one training and learn all necessary knowledge, skills and attitudes. We analyze how these 3 target groups need to be supported not only through the initial training but also through performance support as they start taking up their role in the field.

In chapter 5, the High Impact Learning that Lasts model is used to analyze if the necessary building blocks for impactful learning are integrated in the program design.

In chapter 6, a roadmap gives an overview of the most impactful possible improvements. They are in a logical chronological order, with an indication on cost effectiveness.

Finally, chapter 7 will provide a general conclusion to this report.

3. FOCUS ON THE OBJECTIVES

After the workshop with the BRC-Fl stakeholders back in November, a MoSCoW[1,2] analysis (distributing the priorities in the following categories: Must have, Should have, Could have, Won't have) was made to determine the focus of the field visit. For the First Aid project, 7 priorities were selected. In this segment of the report, we will look at these priorities, describe the current situation in the field and give some suggestions on how to improve, if possible. After every objective will be a clear indication of the current situation through a coding system and a short explanation:

Very good	Good	Partially OK	Insufficient	Absent

3.1 Improve the capturing of feedback

Basic/standard First Aid training

During the observation, a cultural difference related to feedback became apparent. In Western culture, critical thinking as a skill is a central part of the education system. People are constantly stimulated to give and receive feedback and even then, it doesn't always feel natural. It puts the person giving feedback, but certainly the person receiving feedback, in a vulnerable position. What I have observed of African culture in general, is that the education system (big number of students in one classroom, unidirectional way of teaching) doesn't have the means or the cultural background to focus on these critical thinking skills. Also, especially in Rwanda, the culture is very polite, people are so respectful towards each other that this sometimes prevents them from really speaking their mind which also hinders the opportunity of self-reflection by the trainer. Lastly, you can't expect a lot of in-depth feedback on the didactical methods from the trainees, as they come from a static educational background. Most of them have no similar learning experiences to compare the course to. Therefore, using a feedback tool in the same way as in Western culture and expecting the same results won't work. Let's look into this!

Daily: exit slip

Current situation

In Tanzania, an **exit slip** is filled out by the trainees after each day of training. The exit slip is anonymous, and the questions change daily. The content is heavily focused on self-reflection by the trainees and aims to measure their understanding of the topics. An example:

- 1 question I still have
- 2 things I will work on during the training
- 3 new techniques I have learned today

If there is feedback on the training itself, it is more focused on: "We want more practice time and less theory", or "We want the course to be 7 days so we can practice more".

In Rwanda, an exit slip is also provided, but it doesn't rotate every day. The questions are quite general, for example: "Were the instructors well prepared for the course?", so deriving actionable feedback isn't easy.

Possible improvements

As only a small percentage of volunteers have smartphones (especially in the rural areas), **digitalizing** the exit slip to an online form on their phones is not yet attainable in the near future. As technology (laptop, beamer,…) is mostly used as an extra if available (extra video material,…) instead of a central

[1] https://www.productplan.com/glossary/moscow-prioritization/?ref=https%3A%2F%2Fproductframeworks.com
[2] https://www.agilebusiness.org/page/ProjectFramework_10_MoSCoWPrioritisation

part of the training material, it wouldn't be efficient to transfer the feedback to a digital method for the time being. When digital feedback becomes an option, apps like Kahoot[3] can enable interactive feedback.

So, if digitalizing isn't an option yet, how can the paper version of the exit slip be improved? The following changes could be a start:

Promoting the feedback mindset in the ToT

When you ask trainers: "Do you ask for feedback?", they interpret this as feedback on what the trainees have learned, instead of also using this as a feedback mechanism for themselves and a possibility to grow as a trainer. This mindset should be changed in the ToT, which will be discussed later.

Focus on facilitation skills of trainer

Focus not only on the learning process and understanding of the trainee:

"What topics did you find difficult today?",

but also, on the facilitation skills of the trainer:

"How did the trainer react to questions from the trainees?".

The **competence profile for trainers** is very well structured and has all the necessary didactical components. The content should be used as a guide to improve exit slip. Specific questions should be included on the following competences: planner-organizer, strong communicator, effective trainer, active listener, adaptability and empathy. When these questions are included in the exit slip, this could be an accessible self-reflection tool for the trainer.

Open questions

To achieve this self-reflection, the questions must be formulated so they require an in-depth answer. Avoid closed-ended questions:

Bad examples taken from the exit slips:

- *"Do you have any improvements?"* (a quick "no" is easily written)
- "*Rate teaching/facilitation skills* (rate 1-5)" (you can't really reflect on a number)

Good examples:

- *"Write down one way in which the trainer could improve her teaching methods"*
- *"Write down one way in which the trainer could improve the classroom set-up"*
- *"Does the trainer notice when a trainee falls behind and do they give extra support?"* (rate 1-5 + also give example)

This way, you avoid general, broad, positive answers, which won't give the trainer any actionable feedback to grow in their facilitating skills.

Daily: Feedback from master trainer

Current situation

In Tanzania, master trainers are, up to now, always there to supervise during a training and give feedback to the co-trainers and to the First Aid PM Kheri Issa. They use the "competence for trainers" profile to evaluate the trainer.

In Rwanda, once a trainer is perceived as competent, they are no longer observed by a master trainer, so they don't receive regular feedback from someone with didactical training.

[3] https://kahoot.com/

Possible improvements

The system in Tanzania (co-teaching with two trainers and a supervising master trainer) allows for a very impactful learning environment, where close monitoring provides a lot of growing opportunities for the trainers. In Rwanda, the trainers don't get as much feedback from the master trainer and have less guidance through a lesson plan. The lack of a detailed lesson plan causes the quality of the training to rely on the quality of the trainer, but he doesn't get monitored on a regular basis. If a trainer is a bit insecure or set in his ways, this is a negative spiral. It would be our advice to implement a solid monitoring system based on the Tanzanian model. If there is no capacity for such intense monitoring, standardize a system where, for example, the master trainer is present during 1 in every 4 trainings and gives critical, actionable feedback to the trainer.

Here are a few roadblocks to consider:

- It can be difficult for an older trainer to accept the authority of a younger master trainer.

This is a **mindset shift**: feedback is given to make you better, not to criticize you as a person. Also, age doesn't mean authority, master trainers follow different courses to assist you in becoming a better trainer. This mindset must be created from the start when they become a volunteer. Moreover, it must be one of the key messages during the ToT.

- The quality of conversations between master trainer and trainer.

Conversations are difficult to monitor and depend on the attitude of the master trainer. Do they use a directive feedback style? Or do they provide a mirror and a sounding board for the trainer? The debrief and discussion between master trainer and trainers after each day can be valuable and wouldn't work as well when it would be formalized into a standardized form. However, to assure the trainer learns from it, these preconditions need to be in place:

- **Psychological safety:** the co-trainers and master trainers must feel safe to speak their mind and be vulnerable in front of each other. This can only happen if the master trainer leads by example and talks about his own insecurities and mistakes during trainings and how he worked on them.
- **Give feedback on behavior and not on the person.** This seems evident, but reality shows that often people forget these guidelines during hard conversations.

Content of the conversation between master trainer and trainer:

- **First**, ask for **self-reflection** from the trainer: what did you think of the session? What went well and what could've gone better? Do you see any reasons for the latter? Clearly define what is inside and outside the control of the facilitator and how to deal with both categories of situations. Was it a factor you as a facilitator could control? What could you do in the future to limit chances of this situation reoccurring?
- **Second,** go over the (improved) **exit slips from the trainees.**
- **Third,** give feedback from the point of view of the **mentor**. Use the competence profile of trainers as a guide. Together, go over each competence, say what goes well and what could be improved, accompany this with actionable advice. Write down a summary of 3 take-aways, which will be evaluated after the next training day.
- **Lastly, compare the results from** self-reflection, feedback from trainees and feedback from the master trainer. What are similarities? What feedback is different or even contradictive? What does that teach you? Do we need to change or add any take-aways? End the conversation with key take-aways and goals for the facilitation of the next training. By basing the feedback tools for both master trainers and trainees on the same source (competence profile of trainers) and adding self-reflection, it truly becomes 360° feedback.

After course: Feedback form at the end of the course by trainees

Current situation

In both countries, there is also a "**course evaluation form**" at the end of the training which asks general questions. This makes it difficult for the participants to give critical, actionable feedback to the trainers.

Possible improvements

Same suggestions as for exit slip.

After course: Training report by master trainer

Current situation

In both countries, after the training is done, the master trainer writes a training report, which is submitted to the PM at HQ level.

In Tanzania, this digital report focuses on the numerical data: how many participants, results of the post-test and the success rate. A short summary of the feedback slips is also included, but in general the report contains very little qualitative data about trainees and trainer.

In Rwanda, the training report is not yet digitalized, and includes very little data: location, date, amount of male and female participants, results, and a short summary of the observation. This report includes less data on the training, and no summary of the feedback given by the trainees.

Possible improvements

To give more depth to the report, it would be beneficial to use the numerical data as a starting point to formulate clear next steps. The following examples are focused on the Tanzanian training report (Kigoma, 2019) because it's the most elaborate to give feedback on.

Trainees who passed but didn't score well on certain topics

Some master trainers are in contact with the branches to talk about the progress of the trainees, but the initiatives are not standardized. It depends on the (master) trainer how closely you are being monitored. A framework could be set up where a message is sent to the branch with areas of improvement. As a follow up, every trimester the branch sends a form with the progress (worked on weaknesses or not) and status of the volunteers (active/not active,…) to HQ.

Results of exit slips and next steps

Instead of only including a summary of the exit slips of the trainees, also include which actions were taken in response. When certain suggestions weren't possible to process, explain why.

Example from report: *"The identified concerns were taken care of accordingly"*. This doesn't teach us anything about the alterations made or how to improve future sessions in general.

Improve the segment 'challenges'

Because this is so broad, it makes it difficult for the master trainer to give in-depth feedback. It would be better to make subcategories:

- Challenges because of practical preconditions (electricity, didactical materials like mannequins…)
- Challenges because of facilitation (adaptability of trainer, capturing attention…)
- Challenges because of volunteers (big differences in educational level...)
- …

These three recommendations were given as examples to show how the general report could provide more qualitative data. However, these recommendations were based on a specific report from the observed training in Kigoma, Tanzania. The digital Tanzanian report is already more elaborate than what is used in Rwanda. The Rwandan First Aid PM's could take the training report format from

Tanzania as an inspiration and add the suggestions made here, to enhance their current training report.

FABL course

In the FABL course, the exit slip and training report are similar to the ones used in the classic First Aid training. The same suggestions apply. Here, only the extra tools will be discussed.

Online feedback form about FABL project

Current situation

General digital form to get feedback on the pilot in Rwanda. It is processed by BRC-Fl and is not directed at collecting feedback on the trainer.

There were some **problems with the form** in the observed session:

- **Not up to date:** you had to choose the name of your trainer, but the list wasn't complete (only had one name in it). A lot of trainees saw that as a barrier and didn't fill in the form.
- **Timing**: trainees were encouraged to fill it in right before their exam. Because they were focused on that, a lot of trainees didn't complete the form.

Possible improvements

- **Update the form**: remove the mistakes mentioned (right trainer couldn't be selected).
- **Make the form mandatory but change the timing**: let them fill it in when they are done with their exam, while their peers are still completing their exam.
- **Digitalize the feedback collection**: As the audience of the FABL trainings are digitally literate and have smartphones, it would be a good pilot group to digitalize the feedback collection that is now captured through written forms. Creating digital feedback forms will make the feedback easier to read, process and report on. In the future, this could also be integrated in the Membership Management System that is being built, or in a Learning Management System which will be discussed later.

Training of Trainers

Current practice & Possible improvements

Currently, the feedback mechanisms during and after a ToT are very similar. However, there was no ToT organized during the field visit, so only general recommendations can be made. Because of the lack of understanding of the concept of feedback by the trainers, this will be discussed further in the segment "3.7 Improving the program design".

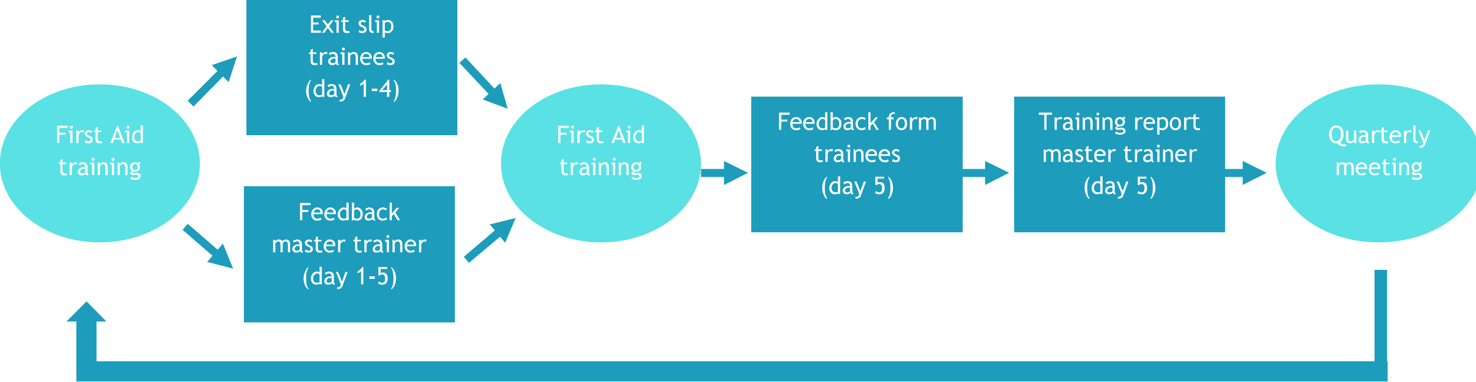
	Current situation	Explanation
Tanzania	Very good	The competence profile is very well structured and has all the didactical components so this can be used as a base to develop feedback tools. A lot of feedback loops are already in place (feedback forms, co-teachers and master trainers), but sometimes the quality of them could be optimized.
Rwanda	insufficient	Too little feedback loops are in place (no co-teaching nor long-term mentoring by master trainer) and the feedback forms rarely lead to actionable qualitative feedback.
FABL	Partially OK	Online form focused on the online component of the track, processed by the FABL project team, not by the RRCS. This form wasn't optimized. Apart from the form, same problems apply as to the classic First Aid training in Rwanda.

3.2 Close the feedback loop: implement the feedback into the project

Here the evaluation will be done per country as the feedback chain in Tanzania looks quite different than the one in Rwanda.

Feedback chain in Tanzania

Current situation



In Tanzania, at the end of each training day, the two co-teachers and the master trainer discuss the day, the exit slips and the master trainer can also give additional feedback. Together, they summarize the exit slips and identify take-aways for the next day. The next training day starts with the summary of the exit slips and what actions will follow. If a topic was not completely understood by the trainees, this can be refreshed or explained more in detail. If the pace was too slow or too fast, it can be adjusted. If the didactical methods didn't work for the group they can be changed.

After the complete course, the trainees fill in a feedback form, which gets processed by trainers and master trainers. The master trainer writes the training report, which is focused on quantitative data but also contains a short summary of the exit slips. If the changes in the 4 feedback tools (exit slip, feedback master trainer, feedback form and training report) are made, standardized and qualitative feedback will be collected and distributed through the feedback chain. The last stop in the feedback chain is the PM who processes all the training reports and has a database with all the training reports. The analysis of these reports and the results get discussed during the quarterly meeting.

However, the quarterly meeting, where all trainers, master trainers and the PM come together and discuss results, isn't a future-proof solution for a few reasons:

- Currently, there are less than 100 trainers, but Tanzania wants to increase this to 260. This will make it **very costly and not feasible** to fly them all to HQ, provide accommodation and an allowance.
- The PM uses this meeting to ask feedback from the trainers about the differences in pass rates and general results. However, **more qualitative feedback should be included in the feedback tools**, as explained.
- **Feedback works best if it is asked and given immediately.** Asking the trainers about trainings that happened 2 or 3 months ago won't give you the most accurate information.
- **Often, the PM must wait for the info on quarterly meetings** to take action. He would prefer a real-time alternative to discuss and act on data, and for the (master) trainers to also have access to the database.

Possible improvements

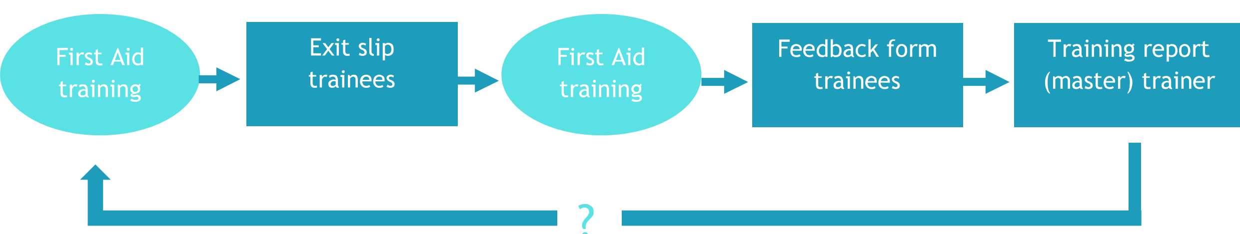
In segment "3.1 Improving the capturing of feedback", possible improvements to the 4 feedback tools are discussed. This will lead to more qualitative feedback, but this feedback still needs to be

processed and implemented back into the project. As a future alternative of the quarterly meeting, the data and feedback processing could be digitalized. There are two options:

- **Integrate it in the membership management system** that is currently being built by the TRCS IT team.
- **(Open source) Learning Management System** that could facilitate the necessary processes. This will be further explained in segment “3.3 Accelerate digitalization”.

Feedback chain in Rwanda

Current situation



Often there is no master trainer supervising during the basic First Aid training. It is questionable if the trainer has enough self-reflective skills to process and implement this feedback back into his own training without guidance and on top of that, escalate this to the PM to improve the program design. When there is no master trainer involved, the PM directly processes the exit slips and the feedback form. However, this is difficult without extra information on the course of the training.

Possible Improvements

First, a standardized monitoring system would significantly improve overall quality of the facilitation of the training. In addition, a platform to process and discuss the results and feedback is missing. As the Tanzanian example shows, a quarterly meeting can be a great interactive platform to do this, but it is not “future proof” as the number of trainers grows. Because Rwanda is a much smaller country, a quarterly meeting might be a solution until an online platform is set up.

	Current situation	Explanation
Tanzania	Good	Discussions between master trainers & co-teachers on site and formal quarterly meeting are a good system but aren’t future proof as the number of trainers keeps growing and doesn’t allow for the feedback to be processed in real-time.
Rwanda	Insufficient	The training reports are delivered to the PM but there isn’t a clear loop in place how this feedback is processed. Contrary to Tanzania, there wasn’t a clear vision on how to handle feedback and what could be improved in the feedback process.
FABL	/	Feedback processing of the extra form is done in Belgium and rest of feedback collection was the same as the Rwandan system.

3.3 Accelerate digitalization

Current situation

In general, all master trainers and almost all trainers have a smartphone. Among the volunteers, the percentage that has access to a digital device is dependent on the region (urban vs. rural).

A few digital initiatives are already in place:

FABL app (pilot in Rwanda)

The app receives very positive feedback from trainees, (master) trainers and PM's. Not only does the app run very smoothly, the digital learning component is a real motivator. A lot of trainees also regularly check the app, which keeps their knowledge up to date. Also, the app can cause a pull effect because it generates "brand awareness" for the commercial First Aid in general. Even though blended learning[4] is the future, currently, not enough people have a smartphone (especially in rural areas) to make blended learning as a mandatory learning activity inclusive.

First Aid app by TRCS

The basic First Aid materials are being adapted from the international First Aid app specifically for TRCS. A few functionalities are the AFAM course materials and a pop quiz.

Membership platform by TRCS

This will include a database of First Aid volunteers, notifications to volunteers... The go live is planned March 2020.

WhatsApp group by TRCS

There is a WhatsApp group for management and (master) trainers where people can ask questions, talk about updates of the AFAM and keep each other involved. Some trainers have a similar group which they started themselves to keep in touch with their volunteers.

Digital refreshers by Belgian master trainers (TRCS)[5]

Belgian master trainer Anke made a pilot of two topic-focused refreshers for the volunteers. These are Google Forms which start with a video (from YouTube) and ask some knowledge questions at the end. This is a great grassroots initiative but lacks sustainability because they are made from outside TRCS, there is no one checking the quality and the PM indicated that he doesn't process and evaluate the results, so no reporting is done. As long as there is no general platform that can host digital refreshers and provide reporting, the Google Forms are a good alternative but if digitalization is really a priority, TRCS should set up a digital structure that encompasses and enriches the current initiatives.

Possible improvements

The specific context in the branches limits the possibilities; some locations where trainings are held, don't have power or internet, so digital devices are used as a bonus, not in the standard protocol. These current constraints were kept in mind while formulating the possible improvements. First, the "quick wins" are explained, the possible improvements that are actionable right now without major upgrades to the IT infrastructure. When you go down the list, you will see the suggestions get more ambitious. These are explained to shine a light on what could be possible in the future, if the IT structure is upgraded, and as the average digital literacy and ownership of digital devices increases in Tanzania and Rwanda.

[4] Graham, C. R. (2013). Emerging practice and research in blended learning. *Handbook of distance education*, 3, 333-350.

[5] https://docs.google.com/forms/d/e/1First AidIpQLSeqms43C7skiXsHDT-4AKYIBIByU872eoAVXOF1rlGd7pBvDA/viewform

WhatsApp groups

Standardized WhatsApp group for every group of trainees. As the grassroots initiatives prove, it is a great way to keep everyone involved and up to date. This would require a trainer and one motivated volunteer to be the administrators and monitor the questions and discussions. In this format, volunteers could be paired in duo's during the training so they have a "buddy" to connect with after every intervention through WhatsApp or different social media.

Mobile cinema

Include mobile cinema in the First Aid project in the communities. As observed in the WASH project, it is a very powerful tool that can reach a lot of people at once. Within the WASH project, mobile cinema is used as an education tool but within the First Aid project, this tool could target the beneficiaries and be used foremost to create awareness and second to share some key principles with the community members who are maybe not motivated or suited to follow the First Aid course.

- Who is your local First Aid volunteer in your community? He or she can play a part in moderating the mobile cinema.
- What training do volunteers get?
- How can they help your community and your household?
- What questions can you ask them?
- A few key First Aid principles
  - what to do in case of __ (most prevalent accidents, the x-most important steps)

This can lead to more exposure and recognition for the work that volunteers do, while educating the beneficiaries on some basic FA principles, at a reasonable cost.

Blended refresher

The blended (part offline, part online) knowledge and skills refresher is explained on page 16. However, it is mentioned here, because it could be a future proof way to accelerate digitalization.

Onboarding of volunteers and trainers through a-day-in-the-life vlog series

The last decade, vlogging and broadcasting your own videos on platforms like YouTube got increasingly more popular[6]. What started as a trend in youth culture rapidly expanded to also companies using this delivery method to connect with their audience on a personal level. Within the First Aid program, this medium could be used as the onboarding tool for new volunteers and trainers.

An example: follow along a volunteer or trainer (dependent on their own future role) throughout a day-in-the-life. Ideally, the vlogger filming their day is someone they can identify with or someone with prestige in the community. This medium has a few advantages. First, as it is an authentic experience of a peer, it will have a pull effect to feel connected to the HNS and will function as a teaser/trigger. Second, the platform (YouTube) is already used for entertainment by a lot of volunteers and trainers, blurring the line between formal and informal learning. Third, it requires little resources, the "rawness" of the video and editing style is what makes the video relatable and the only resources you need are a handheld camera and editing software. You can find two examples in the footnote, one of a first aid volunteer at an event, one of a more highly produced day-in-the-life at work video.[7] [8]

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[6] Combe, C., & Codreanu, T. (2016). Vlogging: A New Channel for Language Learning and Intercultural Exchanges. *Research-publishing.* Net.

[7] First Aid volunteer: https://www.youtube.com/watch?v=zwACpvAOVJY

[8] More produced video: https://www.youtube.com/watch?v=5loNViiBUPQ

Learning Management system

An **(open source) Learning Management System** could function as one general platform where the, currently scattered, digital initiatives are standardized, upscaled and managed. A few examples would be the digital refreshers like the ones made by the Belgian master trainer and the creation and sharing of learning materials that is currently managed on a google drive by TRCS. Of course, a lot of extra functionalities could be developed.

- (master) trainer inserts **training data** from traditional classroom trainings
  - Registration
  - Attendance list
  - Results from assessments
  - Feedback from trainees and (master) trainers
  - …
- **Document management**: within TRCS, a Google Drive is used by master trainers to manage training materials. This should be included in the online platform that is chosen. Also, a permission structure should be set up, so the trainers also have access to certain resources.
- **Connected to FABL app/First Aid app/membership management system:** some LMS systems allow connections with different applications so the data can be automatically and in real-time transferred and processed.
- **PM can report on the data** inserted at branch level
  - Standard reports that can be generated periodically
  - A dashboard that clearly visualizes key results
- **Reports can be shared with the necessary stakeholders**
- **Social platform**
  - Where training data and feedback can be discussed between HQ staff and local (master) trainers
- In a next phase, when the system is fully implemented for staff and (master) trainers, it could also be introduced to volunteers and trainees. However, this should happen further down the road when "phase 1" is firmly in place.
  - Add training courses with digital refreshers
  - Add training courses with blended (re)certifications

Another option would be to integrate these functionalities in the membership management system, but this would require a lot of customization which would be hard to maintain up to date.

Simulation serious game in VR

As organizing real simulations is expensive and not always practical, a serious game in VR could fulfill (part of) this need. This serious game could be developed by a gaming company[9] or by a company that specializes in VR training in companies[10][11][12]. VR still seems far away as a practical and accessible tool, but there are already a lot of examples out there. The initial investment in developing the emergency simulation game might be high but it can be used across multiple countries and there is hardly any additional cost per use. It is not necessary to invest in VR glasses which would only be used for this application. There are a lot of VR glasses on the market which are affordable and compatible with a standard smartphone[13][14]. The game can be published as an app, and this can be played on the smartphone, which is inserted in the VR headset. You can develop a straightforward

[9] https://www.affinityvr.com/the-8-biggest-vr-gaming-companies/

[10] https://www.viar360.com/companies-using-virtual-reality-employee-training/
[11] https://www.strivr.com/
[12] http://abilitee.io/
[13] https://www.androidauthority.com/mobile-vr-803034/
[14] https://www.orange.be/nl/blog/getest-en-goed-bevonden-de-orange-virtual-reality-headset-vr2

game or go more technologically complex and incorporate voice recognition and so on. The serious game will allow the volunteers and trainers to increase their hours of authentic practice, it will keep their skills up-to-date, and test them in challenging conditions which are difficult to stage in real life. Also, the volunteer or trainer can practice individually when needed. A meta study on this subject concludes "serious gaming technology represents a useful training technology for health profession and health related education"[15].

	Current situation	Explanation
Tanzania	Partially OK	Efforts have been made to digitalize (WhatsApp groups, online refresher, google drive with teaching materials,…) but, at the time of the field visit, the overarching architecture and management was lacking (IT system in development).
Rwanda	Absent	During the field visit, no digital initiatives or digital documentation of teaching materials were observed.
FABL	Good	The set-up of the digital part of the FABL project and the lesson plans for the F2F (face to face) session were elaborate and well made. Point of improvement: lack of guidance of trainers who are new to teaching FABL. However, this could be more a characteristic of the context than of the FABL project.

3.4 Add follow-up moments

Current situation

Quarterly meeting (TRCS)

The quarterly meeting is focused more on planning and management than on the content or didactics of the First Aid training. This is problematic as PM's and master trainers view this as the refresher for the trainers. During the last quarterly meeting, a refresher on a specific topic was added which is a great improvement. Let's look at the pro's and contra's:

Pro:

- Planning and management issues can be discussed.
- Communicate updates and changes (AFAM,…).
- Keeps trainers involved: socializing and peer learning.

Contra:

- Not future proof (as mentioned).
- Little focus on practicing skills, which is a missed opportunity.
- The goal must be clearly defined: process optimizing & planning AND/OR a knowledge and skills refresher. Now, trainers think they are getting further training while it is more of a management meeting.

Online refreshers (pilot Tanzania)

As mentioned above.

Mandatory certification every 2 years

HQ keeps data on all the volunteers & trainers. When the certificate almost expires after 2 years, HQ sends the trainers and volunteers a reminder. The regions organize the recertification themselves, but HQ can provide support and make it more cost-efficient. The PM at HQ only coordinates. Last year in Tanzania, the trainers got the first refresher with the following topics:

[15] Ricciardi, F., & De Paolis, L. T. (2014). A comprehensive review of serious games in health professions. *International Journal of Computer Games Technology*, *2014*.

Lesson plan experience sharing – Illiteracy – Drowning - Pocket mask + QCPR (new mannequins) - Practice CPR - Using stretcher - Refresher of basic first aid knowledge and skills

This year, the first batch of volunteers that were trained in 2018 are getting the same refresher without the topics specifically for trainers (lesson plan experience sharing and illiteracy).

Informal follow up (grassroots initiatives, TRCS)

Testimony from trainer:

"I call my volunteers every 3 months to see how they are doing and if they have practiced their skills. Also, this gives me the opportunity to pass on the info from the quarterly meeting. If I go practice First Aid with them at an event or something, I gather them beforehand to practice and refresh the skills."

This is a great example of an involved trainer who keeps in contact with his trainees. However, if the number of trainees per trainer grows, this won't be sustainable. Also, not every trainer is this involved with his students, which in time would also impact the quality of the knowledge and skills of the volunteers.

Possible improvements

An elective blended refresher course[16]

Why is a refresher in between the recertification courses necessary? Because the Forgetting Curve of Ebbinghaus[17] shows us that learning something once, or every two years in the case of First Aid, won't yield high retention rates. As the First Aid knowledge needs to be top-of-mind, extra interventions need to be added. However, **to not put too much pressure on the volunteers, the refresher course shouldn't be mandatory**. If you structure it as an elective component: volunteers with the time (to take of work for the face-to-face component) and money (to commute to the regional branch,…) can follow the refresher, but you don't lose the volunteers who can't make that commitment more than once every 2 years.

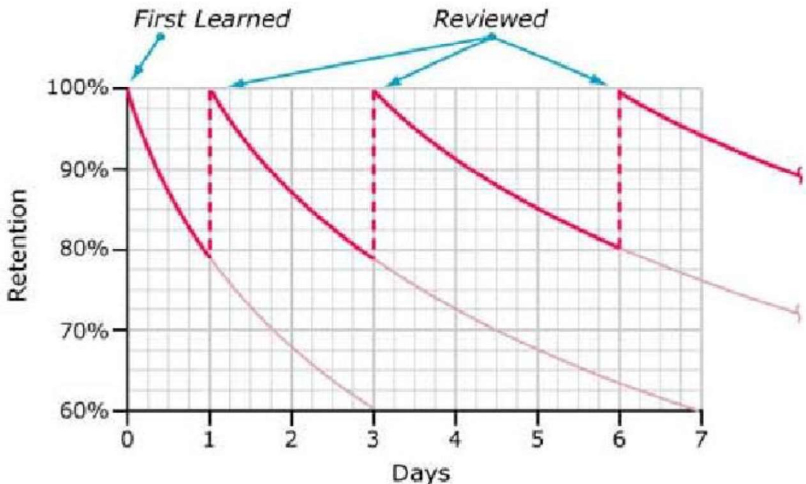
A **completely offline refresher** would be great to practice skills and improve confidence through simulations. However, the financial and logistical capacity are often not present to organize this for all the volunteers. Also, one offline elective refresher every year won't provide micro-learning and true spaced repetition.

A **completely online refresher** (through FABL First Aid app or LMS platform) would be easily scalable, but it would be difficult to work on your skills and confidence.

The solution to the shortcomings of both the offline and online refresher course, would be to organize a **blended refresher course**. You are not excluding people without a smartphone from becoming a volunteer, because it is not mandatory. You get all the benefits from a scalable solution and you can build your digital learning expertise for the future. However, it is important to note, that, digital literacy is a prerequisite for volunteers to be effective in learning in a blended learning environment[18].

[16] https://doi.org/10.1016/j.resuscitation.2016.07.145
[17] Ebbinghaus, H. 1964. *Memory: A contribution to experimental psychology*. Oxford, England: Dover
[18] Tang, C. M., & Chaw, L. Y. (2016). *Digital Literacy: A Prerequisite for Effective Learning in a Blended Learning Environment?* Electronic Journal of E-learning, 14(1), 54-65.

Online component through FABL/First Aid app or through app from LMS:



The format could be **microlearning** focused on knowledge. To assure retention, the refresher would follow the principle of **spaced repetition**. This technique combats the forgetting curve from Ebbinghaus[19][20].

- **A weekly push notification** with bite-sized learning
- The content could be **customized** based on a **few parameters:**
  - Urban (more accidents: broken bones, bleeding,…) vs. rural
  - Region: different rates of diseases,…
  - The season: rain vs. dry season
  - Current threats (linked to disaster preparedness)
- **Different learning activities**
  - Pop quiz on one topic: check in, accuracy of my knowledge?
  - Short video: multiple choice: what went wrong in this intervention?
- In a later stage the refreshers could also be **branched**: adapted to the current level of understanding of the trainee (level of reasoning, in-depth knowledge) or focused on the topic that he struggles with (different domains, broadness).
- In a later stage, this digital tool could also provide a lot of **data** on the volunteers. Who is keeping their knowledge up to date? Which volunteers are losing touch with the organization? With this specific data, a protocol could be in place to reach out to volunteers who are struggling. In this way, the turn-over in volunteers could be reduced.

Offline component

- **Practicing skills at the branch level office**

Currently, some volunteers go to the regional branch office to practice skills like CPR with the mannequin and the app. This is a great grassroots initiative that could be standardized. For example, organize one day every 2 months where all the materials are available and someone nearby to give feedback. In this "informal" setting, volunteers and trainers can stay confident in their skills without having to organize a complete training. This could be organized for trainers, with a master trainer supervising, and for volunteers with a trainer who is supervising.

[19] https://dl.acm.org/doi/pdf/10.1145/3178158.3178206

[20] Schimanke, F., Mertens, R., & Vornberger, O. (2014). Spaced repetition learning games on mobile devices. Interactive Technology and Smart Education, 11(3), 201-222.

- **Simulations**

Requires more resources but is a great way to practice in an authentic setting and test the confidence and reactions of volunteers under pressure. These are used frequently in commercial First Aid in Rwanda. Not every commercial First Aid training has a simulation but if there are more than 12 people, there are 2 trainers and one will be the simulator. This should be integrated more into community First Aid and into the entire TRCS First Aid program as well. Also, simulations for community First Aid could be funded by commercializing simulation practice sessions for companies.

3.5 Ensuring behavior change through learning

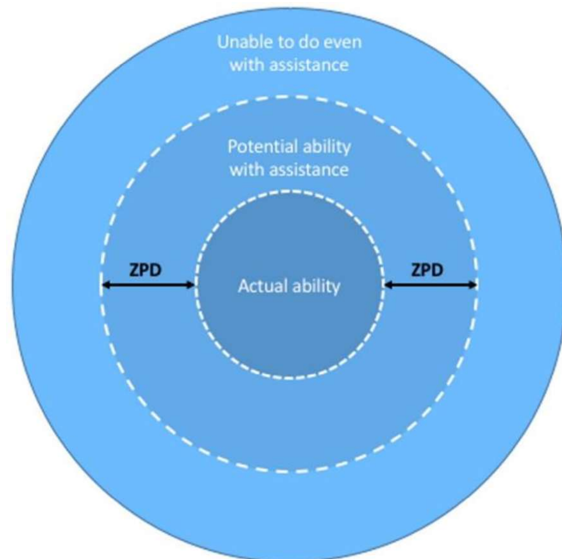
A volunteer having the knowledge and skills is not enough, he also needs the right attitude and the confidence to practice First Aid in real-life emergencies. But how can we measure if this is really the case? And if this is difficult to measure, how can we assure this competence and confidence in training regardless?

Improvements during training

Authentic practice[21]

Practicing the Heimlich Maneuver (abdominal thrusts) on your friends in class, compared to your mother who is choking in real life is of course a very different experience. As mentioned, simulation (with make-up, trained simulators) would be very beneficial in every First Aid training.

The Zone of Proximal Development[22] and Scaffolding[23]

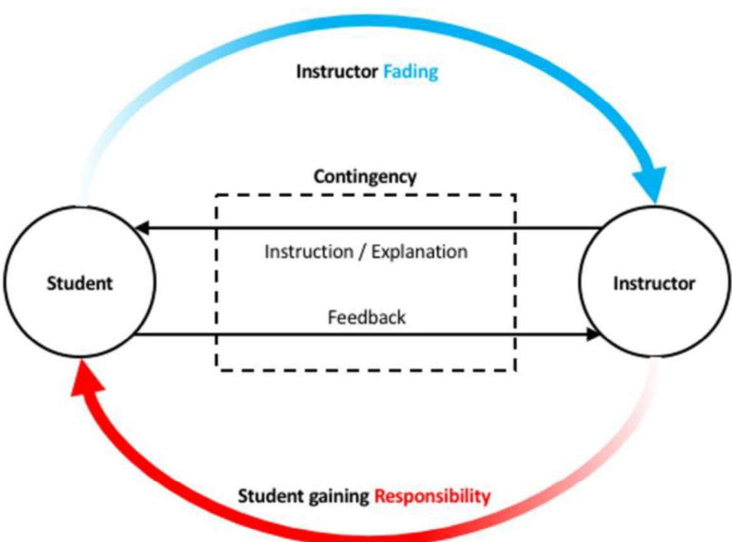


Initially developed by Vygotsky, the concept "Zone of Proximal Development" (ZPD) shows the potential ability of a trainee when assistance is provided. This seems like an obvious concept, but it has some interesting implications when we try to achieve behavior change.

To summarize in short: "Don't let your trainees run before they can walk, but do in fact, let them walk". It asks a lot from a trainer to provide the right amount of support, so the trainee feels **confident and safe** to try new skills and techniques while **also being challenged**. To find that balance, and to achieve ZPD for each student is a big challenge for every trainer. One can question, if this is possible for one facilitator to achieve with a whole classroom. This is why co-teaching and supervision by a master trainer contributes so much to the learning impact in Tanzania.

[21] Dochy, Filip, Berghmans, Inneke, Koenen, Anne-Katrien, & Segers, Mien. (2015). *Bouwstenen voor high impact learning: Het leren van de toekomst in onderwijs en organisaties.* Amsterdam: Boom Lemma uitgevers.
[22] Chaiklin, S. (2003). The zone of proximal development in Vygotsky's analysis of learning and instruction. *Vygotsky's educational theory in cultural context*, *1*, 39-64.
[23] Shoaib Ahmed Malik | Alexander W. Wiseman (Reviewing Editor) (2017) Revisiting and re-representing scaffolding: The two gradient model, Cogent Education, 4:1, DOI: 10.1080/2331186X.2017.1331533

The instructional technique for achieving this ZPD is called "scaffolding" or "fading": provide the right amount of support in every situation, and gradually decrease this support until the trainee feels completely confident and safe to independently perform the skill/behavior. At this point, you can move on to the next challenge!



To go back to our Heimlich Maneuver (abdominal thrusts): if a volunteer has never practiced this skill in an authentic setting, and suddenly, he needs to perform it to save a life, it will be overwhelming. However, if the training started with instruction, followed by practicing on peers, followed by a simulation with trained simulators, to then revisit the topic in a refresher, your chances of a successful intervention in the field are increasing immensely.

Learner agency[24]

We have a sense of "learner agency"[25] when we feel in control of our own learning process. It is important for volunteers to have this sense of control of their own learning of First Aid knowledge and skills to feel competent and confident when they must perform First Aid in real life. If their learning is trainee-driven, they will always have the fitting and up-to-date knowledge. They will actively seek or adjust knowledge:

- When they are able to detect when they need extra, specific, knowledge.
  Dependent on the region they live in, urban or rural,…
- When they need to unlearn what will no longer serve them.
  When the AFAM gets updated.
- When they need to relearn what they need to be successful.
  Different skills which are hard to practice in real life (CPR,…)

Assessment-as-learning[26]

Traditional courses with one big exam at the end of the training, hardly achieve any further understanding with the assessment. It can be a big confidence boost if you have a high score, but if you score low or average, it can really make you lose confidence, with no time left to practice with an expert close-by.

The First Aid trainings (both ToT and Basic First Aid) in Tanzania score well on this, as there is a pre-test which gives the trainees a good insight in their knowledge and skills. In Rwanda, no pre-test is in place. The pre-test turns an assessment into a learning activity: it can be a confidence boost for insecure volunteers, but it can also be a reality check for someone who believes they are already an expert. However, throughout the training more informal assessment-as-learning moments could be built in. For example, in group discussions, not everyone participates and especially the people who are insecure about their knowledge will stay in the background. Using different methodologies like:

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[24] Dochy, Filip, Berghmans, Inneke, Koenen, Anne-Katrien, & Segers, Mien. (2015). *Bouwstenen voor high impact learning: Het leren van de toekomst in onderwijs en organisaties.* Amsterdam: Boom Lemma uitgevers.
[25] http://cambridgecol.weebly.com/uploads/5/4/9/8/54987863/btrenwith_choice_voice_and_agency.pdf
[26] Dochy, Filip, Berghmans, Inneke, Koenen, Anne-Katrien, & Segers, Mien. (2015). *Bouwstenen voor high impact learning: Het leren van de toekomst in onderwijs en organisaties.* Amsterdam: Boom Lemma uitgevers.

- **Multiple choice:** Kahoot (digital) or using differently colored post-its (non-digital). This is already used in the ToT but could be used in the basic First Aid course as well.
- **Peer simulations:** use card deck which gives the "peer simulator" the condition, symptoms but also the right actions that the trainee must perform. If the trainee doesn't handle the emergency correctly, the simulator must worsen his condition. This way, every trainee gets direct feedback during the simulation, instead of only getting feedback if the trainer passes their practice station.

Using these methods, you get and give feedback on every individual while being in a group setting.

Improvements during follow up

Follow up on insecure future volunteers

If a future volunteer has the right attitude but lacks confidence or certain skills, the (master) trainer gives him/her an assignment to work on their confidence and competence in the field. For example, go practice First Aid at a playground,… The trainer follows up by asking feedback from the local leader of the TRCS. Only when this is positive, the certificate will be obtained.

Involve all new volunteers in interventions

When the Red Cross gets asked to provide First Aid services at an event, they try to involve the new volunteers so they can get confident with practicing their skills.

Data collection on interventions and following up on trainers and volunteers

Tanzania: some regions collect data on how many interventions are done but not all of them, so it is difficult to get a clear overview. Previously, there was no First Aid project running in Tanzania, the funds for this project were invested in setting up a training structure, buying equipment and translating training materials to Swahili. However, in a later stage, more budget should also be invested in following up on trainers and volunteers.

Rwanda: The First Aid program has existed for a longer period, so they should be ready to invest more time and resources in following up on trainers and volunteers.

However, there are two roadblocks:

- The idea of coaching and lifelong learning is not yet common in Africa.

For example, trainers can find it quite patronizing that there is often a master trainer observing. They might see it as a lack of confidence in their capability. This mindset shift must be one of the key messages in the ToT.

- Community First Aid volunteers get to practice their skills in the field. Commercial First Aid trainees usually don't volunteer at events.

They have the knowledge and skills, but they will be shaky the first time. Volunteers practice at events and interventions, but people who follow a commercial Firs Aid training don't practice their skills regularly. Therefore **simulations** are so important, especially for commercial First Aid participants. At first they might panic but then they will grow and learn to handle the situation.

Blended refreshers on knowledge and skills

The possible structure is already explained in segment 3.4.

	Current situation	Explanation
Tanzania	Good	The quarterly meetings and recertification process together provide multiple contact points for the trainers. However, there should be more focus on refreshing knowledge and especially skills.
Rwanda	Partially OK	A recertification process is in place, but no other initiatives were observed.
FABL	Good	The information is always at the fingertips of the volunteers. Point of improvement: more focus on spaced repetition build into the app and on practicing skills in the branches.

3.6 Adapt the curriculum to illiteracy

Current situation

Both Tanzania and Rwanda have a literacy rate of around 80%. In Rwanda, the current government is focused on free education, so the literacy rate of the people below 25 is rising quickly. Similarly, in Tanzania the most illiteracy is also found in the older demographics. Secondly, in urban areas, the literacy rates are much higher than in the rural areas.

In general, most volunteers can read and write, but the level of literacy fluctuates. For the pilot FABL course, only employees from larger companies or university students have been selected so no alterations were needed. Within commercial First Aid in general, most people are literate but on occasion, modifications have been necessary.

However, the most illiterate volunteers are found in community First Aid courses in rural areas. This creates a double challenge: the easiest alterations to make for an illiterate target group is add more videos to your training material, but often there is no access to internet, power and digital devices.

What is remarkable is the positive attitude from all the trainers towards illiterate students. The results from the questionnaire showed that they see it as their duty to be adaptable, and accommodate different target groups, even though the training material wasn't perfectly adapted for it. A few quotes:

"People that are illiterate practice way more, they try so hard and they are often the ones that succeed the most."

"We as trainers need to be adaptable because we have a lot of people with different levels of education and reasoning. At some geographical locations, you can't use projectors, but videos are great for illiterate people. If we don't have that, we can use more 3D objects to deliver the message."

"Illiterate people often feel inferior and they don't want to participate. You have to give them confidence, show them what they can do. The basic First Aid program can be a huge confidence boost, they leave motivated and invite others! They say: even If you can't read or write, you can learn a skill!"

Didactical methods

First of all, the material at trainer or volunteer level must always be available in the local language (Swahili, Kinyarwanda,…). Often, the level of English spoken and understood by the trainers is too low to understand First Aid knowledge. For the most part, everything has been translated and it is something a lot of resources of the program were invested in.

Good practices that were already observed or explained in the questionnaire:

- Focus on practicing, add more simulations
- 3D objects (to show umbilical cord, to show lung function,…)
- Oral Q&A
- Colored post its to answer questions
- Flip charts with drawings
- Posters
- Role play (instead of case studies on a written exam)
- Stories completely told by pictures
- Booklet translated to Swahili by trainers with short instructions and images. This could be improved by using only symbols and pictures.

Alterations that can be made if there are illiterate people in the training:

- Completely illiterate: verbal pre- and post-test.
- Low literacy skills: give them enough time to read and write so they can feel more confident.

We can conclude that a lot of great changes have been made within the boundaries of facilitating for a mixed group of trainees. The next step would be to completely transform the lesson plan to a tailor-made version for the target group of illiterate people.

In Rwanda, no basic First Aid course was observed, but as there is no lesson plan with specific didactic methods, it is harder to standardize these methods as all trainers have their own interpretation of the course.

In different African countries where BRC-Fl is active, there could be an evaluation to determine which target groups are most overlooked by the current standard First Aid training course. After this analysis, specific packages for certain target audiences could be developed. However, the regular First Aid structure must be firmly in place first. When this is the case, Belgian packages for these target audiences (if existing) could be modified to fit the African context and be translated to English/Swahili/Kinyarwanda,… A few possible target audiences are: illiterate people, youth, disabled people.

There is little research or online content on the teaching of skills (specifically First Aid) to an illiterate target group which digs deeper than the alterations mentioned above. To answer the question on a manual tailor-made for an illiterate target group, the knowledge can probably be found within other humanitarian organizations or NGO's.

	Current situation	Explanation
Tanzania	Very Good	Didactic methods are inclusive: use as little written text as possible. Survey for trainers revealed positive mindset and attitude around illiterate trainees.
Rwanda	Insufficient	As there is no standardized lesson plan, every trainer adapts to illiterate volunteers in their own way. This means no general quality can be assured as not every trainer is as resourceful or flexible.
FABL	Absent	Not in scope as of right now. FABL is targeted at people who own a smartphone or get one through work (urban areas, higher level of education), so target groups don't align.

3.7 Improving the program design

Structure

The general structure of the basic First Aid trainings is very different in Tanzania, Rwanda and Belgium. In Belgium the training takes 12-15 hours with a separate exam. In Tanzania the basic First Aid training takes 5 days and the ToT takes 10 days. In Rwanda, the basic First Aid takes 1 day, the standard First Aid 2 days and the ToT 5 days. For FABL, the training is the individually paced theory through the app, the classroom training is 1 day, and the extra ToT 3 days.

It seems unlikely that the same quality of volunteers and trainers can be achieved through such different trajectories. In Belgium the average level of schooling is significantly higher than in Tanzania and Rwanda. The First Aid course in Tanzania counteracts that by providing more time: to explore the theory, to adjust the pace to different levels within the group of trainees and to leave lots of room to practice. Most of the trainees have a very static educational background so it takes time to get used to the different didactical methods, thinking critically, working in groups,… There was no regular First Aid training in Rwanda during the field visit, so we can't give any specific feedback, but it seems unlikely that the basic/standard First Aid training of 1 or 2 days builds the same understanding, skills and confidence within the trainees as the 5-day training in Tanzania.

Didactical tools

Current practice in Tanzania

Didactical methods

- **Co-teaching:** promotes peer learning and peer collaboration
- Master trainer present as **supervisor**
  - Scaffolding/Fading
  - Just-in-time information to trainers
  - Give feedback and promote reflection

Didactical techniques

Lecture - simulation - Q&A - groupwork - statement games,… (more examples in lesson plan)

Didactical materials

- **Detailed lesson plan:** subject - learning goals - content - tools/materials - timing,… (English/Swahili)
- **Pictures and posters**
- Different **3D objects**
  - 2 bottles with cord to mimic umbilical cord
  - Paper tube with two balloons for inflating/deflating lungs
  - Severe bleeding: water in tomato,…
- **Poster wall**: every time a subject is finished, the key points are hung up for the rest of the training course as a "quick reference card". A lot of symbols are used to remain inclusive.
- **App to test CPR skills**: QCPR with digital mannequins (5: 3 adults, 1 child, 1 baby)
- **Videos** are not regularly used because the lesson plan is standardized and often there is no laptop/beamer/electricity. If conditions are good, they can add digital components as a bonus.
- **Parking lot:** if a volunteer has a question that is not relevant or possible to ask at that specific moment, they can put it on an note and put it in a basket on the wall (the parking lot). The trainer answers those questions at the end of the training day.
- Disinfectants, pillow to support mother that is pushing, towels, soap, water…

Feedback on observed First Aid training

The detailed lesson plan, the different didactical methods, techniques and materials made it into a very impactful learning process for the trainees. They were all very excited about the knowledge and skills they were learning. The teachers were competent, supported each other and listened to the input of the master trainer.

Possible improvements

- **Use more quizzes during the training (assessment-as-learning)** where the trainer could get feedback on the understanding of all the trainees (multiple choice through Kahoot or post-its…). Now, the same trainees were answering the questions, so the trainer couldn't get feedback from everyone.
- Use the **AFAM based checklist** as a tool to foster peer learning. Divide the classroom into groups of 4, let 2 volunteers practice techniques on each other and let the other two evaluate with the checklist. Afterwards, build in a short discussion moment so they can give feedback on the intervention.
- Use more **simulations** to create authentic learning activities for the trainees. Especially while co-teaching, there is room for using one of the trainers as a simulant.

Current practice in Rwanda

The comments described below are based on only one training that was observed. This is no criticism on the FABL concept in general, as the lesson plan was very well set up and had a big variety in didactical methods. However, based on the observation, the trainer didn't have the didactical skills and flexibility to facilitate the flipped classroom session. He tried to fit the FABL concept into a static format. Only one session was observed, so no conclusion can be made on quality of trainers in general.

Didactical methods

- **No co-teaching has consequences for the quality of the course**

Because there is only one trainer to supervise, when trainees practice a technique, one trainee is often practicing while the rest of the class observes. If co-teaching was implemented, the class could be divided in a few groups, which would give 1 trainee per group the chance to practice while 2 trainers walk through the room, give just-in-time information and let everyone practice. When you are teaching alone, it's difficult to divide the class in multiple groups and give in depth feedback to all of them. In Tanzania, 2 teachers co-teach 20 trainees together, and in Rwanda, 1 teacher has a group of 10 trainees. Switching to co-teaching would not cost RRCS more resources and would provide more flexibility during teaching.

- **Very little monitoring and intervention by master trainer**

Because the trainer wasn't experienced enough in FABL to give the training alone, a master trainer was there to observe. However, the master trainer didn't actively monitor by giving feedback or helping with the evaluation of the trainees as far as could be observed. During the observed session at TRCS, the monitoring master trainers were present for extra guidance. As the trainers were deemed competent, the master trainer only observed and gave feedback afterwards. However, during the FABL course, the master trainer was present because the trainer wasn't fully competent yet to facilitate a FABL session alone. In this case, the master trainer should've taken up the role as co-teacher where needed, following the principle of scaffolding discussed on page 18-19. In this situation; she could've assisted in more challenging parts of the facilitation, like the mass-evaluation, while stepping back and only observing throughout the exercises which were easier to facilitate. This way, you give the facilitator room to experiment while still providing support. In every session the new trainer is observed the master trainer should "fade" their interventions and support, until finally, when the new trainer is deemed as competent, they are only there to observe and give feedback afterwards.

Didactical techniques (FABL)

Lecture - simulation - groupwork - statement game - matrix: which cards (actions) fit which condition? - … (more examples in FABL manual)

Didactical materials (FABL)

- **Manual for in-class First Aid blended learning training:** Very detailed: timing – explanation of didactical methods – learning goals – do's and don'ts – tools/materials…
- **FABL app**
- **Pictures** with situations that the trainees must practice with their peers ("case study")
- **Checklist for observation (appendix of manual):** trainees in duo, one person does the CPR, the other one observes using a checklist. (included in manual).

What was **missing?**

- **Poster wall** and/or parking lot (explained on page 23)
- **The app of the CPR mannequins** wasn't used

The poster wall is a great tool to walk the students through synthesizing knowledge and have mental cues around the room of the different concepts and techniques. The CPR app helps the trainer to determine if the compressions are given with the right amount of pressure and rhythm. Especially in a training with only 1 trainer and trainees practicing simultaneously, this would be beneficial.

Feedback on observed training: FABL training in Kigali

- **Location**

The classroom was a small room with heavy desks lined up in an oval shape. This made it difficult to switch between didactical techniques (groupwork, simulation…) as the desks couldn't be moved. Automatically, the room lends itself to a static lecture style where the teacher is in front, and the trainees are sitting down and listening. Possible improvements would be:

  - **Change location** so there is more room to practice.
  - **Change lay-out of the classroom** so it is easier to interact with each other and make the situation more bi-directional (instead of teacher standing in front – trainees sitting and listening). When you can move desks around (or not have them at all), it allows you to be more creative with the space.

- **Transactional teaching style**

The FABL course that was observed during the field visit had a very traditional set-up, with the teacher in front, and the students often passively receiving knowledge. The trainer still asked a lot of knowledge questions and exercises and practice moments were very short. Especially techniques like CPR need more practice. Because of the teacher-directed teaching style, there was little informal interaction between students, so little peer-learning was taking place. The trainees also expected more hands-on practice and less theory because of the admission ticket. For example, the trainer always showed a skill and afterwards, if there was time left, he let one trainee demonstrate it to the group. It would be more valuable to let the trainees try out different things and let them make mistakes. Learning from your own mistakes is a very powerful learning method and this wasn't possible because of the facilitator.

The trainer also used closed-ended questions: the trainees mostly had to answer with one word. *"If someone has spinal injury and they are unconscious but breathing, you immobilize them and keep the airway…?" "open"*

Better would be: *"if we immobilize the person, what should we be careful of? What do we need to ensure?"*

Conclusion

TRCS has detailed lesson plans for the standard First Aid training, and the detailed lesson plan for the ToT is almost finished. RRCS, has a detailed lesson plan for FABL and the FABL ToT, but there is no lesson plan for the basic/standard First Aid trainings, not in community First Aid or commercial First Aid. The only guide that is used is "the basic first aid for Rwanda" manual but no lesson plan supports them with timing, didactical tools, didactical materials, didactical techniques or methods… Also, the TRCS lesson plans and the FABL lesson plans have all been checked and improved by didactical experts, to ensure quality and add a lot of interactive, different didactical techniques. You can't expect every individual trainer of RRCS to use as much creativity and out-of-the-box thinking for their individual trainings. Combined with the fact that no supportive didactical methods like co-teaching or monitoring by master trainer are implemented, a standardized level of quality can't be assured. The quality of the trainer completely determines the quality of the training, which causes the experience of the trainees to be drastically different depending on the trainer.

Evaluation tools

Current practice in Tanzania

- **Trainers** are evaluated by master trainer using **a competence profile** for trainers.
- **Volunteers** are evaluated by trainers using the **checklist AFAM based First Aid skills**:
    - **Pre-test for knowledge** (written form scored to 40) and skills
    - **Post-test for knowledge and skills** (mainly skill-focused)

Using the pre-test (after 2 days) as **assessment-as-learning** is a great didactical tool. Trainees can get a perspective on their learning process. Often, the trainees who think they are already fully competent (for example, with a medical background) realize they still have a lot to learn, and people who are maybe a bit insecure realize they are on the right track. As mentioned, even more assessment-as-learning could be added to the course.

Current practice in Rwanda

FABL

After digesting the **theory in the First Aid Blended Learning app** at their own pace, the trainees take an online **admission test** to obtain the admission ticket to the in-class training day.

After a day of classroom training, a practical test is conducted which tests three things: case study, recovery position and CPR. For the case study, the trainer takes the trainees outside one-by-one and shows them pictures of one case and asks them what they would do. In the meantime, the other trainees can practice their CPR and recovery position skills. However, in the training that was observed, most trainees didn't make use of this time and they were more engaged with their own phones to take this time to practice with peers. The master trainer was also present and didn't comment on this. After the case study, 10 people are divided into 4 groups, one group per corner: 2 groups for recovery position and 2 groups for CPR. Trainer walks around with checklist to evaluate 10 people at once. Also, because the app to monitor CPR compressions on the mannequins wasn't used, the trainer couldn't use this data to assist him in his evaluation. It is questionable if the trainer really could evaluate the CPR and recovery position skills of all 10 trainees in that short amount of time.

It wasn't clear if RRCS trainers use the **checklist AFAM based First Aid skills**: competence checklist for volunteers. If this isn't used yet, this could be the first step to a more standardized evaluation.

Commercial First Aid

Trainees don't like the **pretest** at first. They find it intimidating: "How can I already make a test when you didn't give me opportunity to learn?". So the trainer needs to frame it as a learning opportunity and not something they will be judged on.

If there are a lot of trainees in one training, a **group evaluation** is conducted. The trainees are evaluated one by one through a group exercise. They must work together in one emergency: one trainee ensures security, another trainee calls the ambulance,…

The topic of evaluation depends on which topics were included in the First Aid course. In commercial First Aid this can depend on the sector of the company (mining,…) but also the choice of the company (only AED, only First Aid kit,…).

Training of Trainers program

Current practice Tanzania

Future trainers are already volunteers, so they have their First Aid certificate. To ensure their knowledge and skills are up to date, Content Knowledge is also **integrated in the 10-day course**. During the course, you can't only learn how to teach the skills to the volunteers (Pedagogical Content Knowledge), but also refresh your own knowledge and skills again (Content Knowledge).

Most **lesson plans for the ToT** are ready, but some are still in development. Master trainer Jackie is working on a few last lesson plans for the didactics segment. She is waiting on input from BRC-Fl to finalize it. When all the lesson plans are done and checked by Belgian master trainers, they will be formalized and implemented.

Possible improvements

A suggestion is to let the future trainer **prepare an action plan** on how they will use their First Aid knowledge in their community. This is done in the RRCS ToT course and is a valuable self-reflection tool for the future trainers.

Current practice in Rwanda

Future trainers are already volunteers, so they have their First Aid certificate. Not only the First Aid training is shorter than in Tanzania (2 vs. 5 days), but also the ToT is shorter (5 vs. 10 days).

Didactical tools

Similar to the First Aid training, there is no training manual for the ToT. The AFAM is used as a Content Knowledge source, but there is no didactical guideline for master trainers: no timetable, no info on didactical methods or materials to use… This is even more crucial than the lesson plan for trainers. If you want trainers to facilitate interactive trainings that focus on skill and attitude building and use different didactical methods, you must practice what you preach and incorporate this in your ToT.

Evaluation tools

- **Theory test about First Aid**

The theory test is different from the one for volunteers, it is more complicated and detailed. However, the test is not standardized, the master trainer makes it from scratch every time. There should be a few standardized versions depending on what topics are included in the training. This is the only way that level of difficulty and quality of assessment can be assured.

- **Practice test**

Trainees show their First Aid skills (Content Knowledge), and **"micro teach" a topic** to show their Pedagogical Content Knowledge. They prepare a topic and teach it to the other students so the master trainer can evaluate.

Trainees prepare an action plan: how they will use their First Aid knowledge in their community.

Trainees only get their certificate after practice. A trainer needs to train at least 3 groups: school in the community,… They must report the interventions they did, the master trainer evaluates the results. Only when this is satisfactory, the trainer gets the certificate.

Possible improvements

More monitoring (by master trainer) and a clear lesson plan (with timetable, learning goals, didactical methods, training material needed,…) is needed to ensure standardization and quality across all trainings. Currently, you put all the responsibility on the trainer. The lesson plan made by TRCS (adapted to topics relevant for Rwanda) and the didactical manual (from BRC-Fl, translated to English for use in Tanzania) could be a start to coach the (master) trainers more in their Pedagogical Content Knowledge.

Suggestion: feedback as a topic in the ToT

When you ask trainers: do you ask for feedback? They interpret this as feedback on the understanding of the trainees, instead of using the feedback tools to reflect on themselves as well. In the ToT, one of the key messages should be about feedback: why is it important? On what topics can I ask feedback? How do I capture it? How can I grow as a facilitator when processing the feedback?

Why is feedback important?

Storytelling: use a few powerful examples on how feedback can change a situation. Creating a "sense of urgency" on why they should ask for feedback on themselves as facilitators, not only from the master trainers but also from the trainees, can increase their own skills and learning outcomes.

What can I ask feedback about?

Feedback is not only used to check-in on the learning process of the students! You can also ask feedback on: **practical preconditions** (training materials, venue,…), **didactical methods** used, **your facilitation skills** and so on.

How do I capture it?

Practice what you preach! It's important that the trainers experience good feedback collection during the ToT. This way, they understand that asking for feedback can make you grow as a trainer. Use different feedback tools (both formal and informal) throughout the ToT and show the trainers how you process the feedback in detail.

Formal: good quality exit slips and reports. Show them how you implement the feedback into your facilitation skills/didactical methods the next day.

Informal: ask feedback throughout the day, at the end of the day and at the end of the trajectory.

- **Group discussion**: in-depth conversations possible, but often it's the same people who participate.
- **Kahoot:** it can work as an energizer, everyone needs to get involved, you can see if there is a genuine consensus on certain questions and discuss why this is (not) the case.

More suggestions can be found in segment 3.1 "How can we capture feedback after training?".

Personal Development Plan (PDP) for every trainer

To put into practice the importance of giving and receiving feedback and how this can help you grow as a facilitator, a PDP for the trainers could be introduced as a tool. Ideally, this would only be implemented after the creation and standardization of certain didactical (lesson plan) and evaluation tools because then there is a "level playing field" for the trainers. This PDP could entail:

- **Results from their ToT with qualitative feedback** from the master trainer and peers
- **General areas of improvement** (determined by trainer and master trainer together)
    - Goal: what do I need to achieve/improve?
    - Action: What do I have to do in order to achieve the goal?
    - Resources: whose help and support do I need?
    - Criteria for success: How will I measure if I have reached my goal?
    - Target date: when (date/after how many facilitations) do I want to achieve my goal?
- **Short summary of every training**

- Feedback from (supervising) master trainer, co-teacher and trainees
- Summary of exit slips and feedback form
- “status update” on the general areas of improvement

Suggestion: Discuss CK, PK and PCK and why they are all important for a trainer[27] [28] [29]

- **Content Knowledge**

How important it is to be an expert in First Aid yourself. The trainers strongly believe in this, so no further action should be taken.

- **Pedagogical Knowledge**

General knowledge of how a lesson plan works, what different didactical methods are, and so on. As most trainers come from a very static educational background, it is very important to not only talk about, but also show the advantages of using these different methods. There are a lot of examples of exercises with closed/open-ended questions and so on to let them experience the difference when using them.

- **Pedagogical Content Knowledge**

Even if a detailed lesson plan is available where every topic comes with a set didactical method, it is important to teach the future trainers to think critically about the way their training is structured.

Suggestion: make a card deck with the different topics of the training and a card deck with different didactical methods (from very standard to out-of-the-box). Divide the trainers into small groups and let them pair the cards and discuss in their group why they would be a good match. After they come to a conclusion, make larger groups, let them discuss their results, and finally, come together with the whole classroom and discuss the different group results. It is important to show them that there is no “one right way” but that certain methods do fit certain knowledge/skills very well.

	Current situation	Explanation
Tanzania	Very good	Detailed lesson plan, currently a lesson plan for the ToT is being developed to the same high standards. A multitude of different didactical methods is used, feedback loops are in place.
Rwanda	insufficient	No substantial lesson plan is in place, every trainer develops its own materials so quality of the program design can’t be standardized or guaranteed.
FABL	Very good	Detailed lesson plan, multitude of didactical methods is used. Point of improvement: more guidance for the trainers. Static educational backgrounds, so teaching in a blended, flipped classroom setting doesn’t come natural as observed.

[27] Shulman, L.S. (1986b). Those who understand: Knowledge growth in teaching. *Educational Researcher*. 15(2), 4-14.
[28] Hill, H.C., Ball, D.L., & Schilling, S.G. (2008). Unpacking pedagogical content knowledge: Conceptualizing and measuring teachers' topic-specific knowledge of students. *Journal for research in mathematics education*, 372-400.
[29] https://doi.org/10.1016/j.tate.2004.04.006

4. ARE ALL THE LEARNING NEEDS COVERED?[30]

There are 5 moments of need, when (master) trainers and volunteers in the workflow will need to learn. This approach to learning is different from the standard classroom training that expects trainees to follow one training and learn all necessary knowledge, skills and attitudes at once, to then remember them forever. As mentioned in this report, learning can't be a 'one-time-thing'. If you want real retention and behavioral change, constant performance support is necessary. Let's look at these 5 crucial moments in the workflow:

NEW. Learning for the first time: When learning a big chunk of knowledge, skills and attitudes, Instructor Led Training (ILT) is still one of the most used practices.

MORE. Learning more: When expanding existing knowledge, scenario-based learning can teach people to position their knowledge in different contexts.

APPLY. Applying what you've learned: How are the learners supported when they are applying their new knowledge in reality? Quick Reference Cards, FAQ's,…

PROBLEM SOLVING. When things go wrong: When learners face problems while applying what they have learnt, where can they find support? Through a social platform and peer learning? Through instruction videos? Learning problem solving strategies in a training can feel quite artificial and difficult to remember. This is why just-in-time information from a mentor, (master) trainer can be vital in such a situation.

CHANGE. When things change: Minimizing resistance when things change by providing clear and just-in-time information: newsletters, peer-to-peer information exchange, extra ILT, and so on.

4.1 Master trainers

Learning for the first time

Becoming a master trainer starts with **Instructor Led Training:** a ToT by (Belgian) Master Trainers. What extra training is provided above the ToT isn't clear.

Possible improvements

The ToT wasn't observed so no suggestions can be made.

Learning more

In Tanzania the **quarterly meetings** and **Google Drive** with documentation provide extra learning opportunities.

In Rwanda, there was **no clear mechanism** observed to give support in this moment of need.

Possible improvements

A **digital platform** (LMS or membership platform) could be used to manage documentation and distribute extra information specifically to the target group (different info pushed to master trainers and trainers).

Examples: How to draft a PDP for your trainers, or quick reference cards (rules of feedback,…).

[30] Gottfredson, Conrad, & Mosher, Bob. (2011). *Innovative performance support: Strategies and practices for learning in the workflow.* New York: McGraw-Hill.

Applying what you've learned

Teaching ToT

Available formal resources: lesson plan - competence profile of trainers - training materials - didactical guide. Additional to the material resources, peer learning between co-teachers (Is the ToT also following the co-teaching format?) also provides support.

Monitoring trainers

When a master trainer is monitoring a First Aid training, the **lesson plan of the First Aid course** can be used to check if the trainer follows the lesson plan, if he achieves the learning goals, if he is flexible and so on. Also, the master trainer can use the **competence profile of trainers** as guide.

Possible improvements

As mentioned, RRCS could use and adapt some of the tools (lesson plans,…) from TRCS.

When things go wrong

WhatsApp group where management, master trainers and trainers are active. However, it is a big group (almost 50 members) so it can be quite intimidating to ask questions in the group.

Possible improvements

A separate social platform for master trainers where they can learn from each other (chat/forum integrated in the LMS system)

When things change

In Tanzania, the **quarterly meetings** are in place to discuss the way of working and to discuss possible changes and improvements to it. During this meeting, the PM gets feedback from the trainers and master trainers and the PM shares the current situation and results of the last quarter. Also, updates on the AFAM can be discussed and so on. However, as mentioned this is not a future-proof solution.

In Rwanda, there was **no clear mechanism** observed to give support in this moment of need.

Possible improvements

For **changing Content Knowledge**: push notifications through the **First Aid app**, combined with pop quizzes to test your knowledge of the changes.

For **changing Pedagogical Content Knowledge**: **digital platform** (LMS or membership platform) to distribute changing information specifically to the master trainers: certain changes in didactical guidelines, videos from classroom situations,…

4.2 Trainers

Learning for the first time

Becoming a trainer starts with **Instructor Led Training:** a ToT by (Belgian) Master Trainers.

Possible improvements

The ToT wasn't observed so no suggestions can be made.

Learning more

In Tanzania the **quarterly meetings** provide extra learning opportunities.

In Rwanda, there was **no clear mechanism** observed to give support in this moment of need.

Possible improvements

A **digital platform** (LMS/membership platform, First Aid app) could be used to manage documentation and distribute extra information specifically to the trainers.

Examples: How to use your lesson plan, videos of didactical methods,…

Applying what you've learned

Facilitating trainings

Available formal resources: lesson plan - AFAM competence check list for volunteers - training materials - didactical guide.

Additional didactical methods: peer learning between co-teachers and monitoring by the master trainer.

Following up on volunteers

No standardized protocol, so depends on the trainers confidence, involvement and time available.

Possible improvements

As mentioned in this report, RRCS could use and adapt some of the tools (lesson plans,…) from TRCS.

There could be a standardized format to follow up on volunteers: newsletter, periodic call,… which could give the trainers some structure.

When things go wrong

Tanzania: Monitoring master training can provide just-in-time information and the co-trainer can also give feedback so there are lots of opportunities for peer learning. On top of this, there is the WhatsApp group to ask questions.

In Rwanda, there was **no clear mechanism** observed to give support in this moment of need.

Possible improvements

As mentioned in this report, RRCS could implement co-teaching and/or supervising master trainers.

When things change

In Tanzania, the **quarterly meetings** are in place to distribute updates from the AFAM, talk about the results from the trainings and so on. However, as mentioned this is not a future-proof solution.

In Rwanda, there was **no clear mechanism** observed to give support in this moment of need.

Possible improvements

For **changing Content Knowledge**: push notifications through the **First Aid app**, combined with pop quizzes to test your knowledge of the changes.

For **changing Pedagogical Content Knowledge**: **digital platform** (LMS or membership platform) to distribute changing information specifically to the trainers: certain changes in didactical guidelines, videos from classroom situations,…

4.3 Trainees

Learning for the first time

Becoming a volunteer starts with **Instructor Led Training** by a trainer. However, the FABL pilot in Rwanda is changing that and offering the first blended alternative.

Possible improvements

These were discussed in more detail throughout the report.

Learning more

Through the First Aid app (launched in March 2020 in Tanzania) or through the FABL app. However, this is not inclusive as not all volunteers have a smartphone yet. These volunteers are dependent on their trainers to provide information.

Possible improvements

To add more “refresher trajectories” in the app, as discussed in the report.

Applying what you’ve learned

Volunteers apply their knowledge and skills by performing interventions in the field, monitored by a trainer. However, employees who follow a commercial First Aid training, don’t have these opportunities.

Possible improvements

Market the simulation refreshers to companies who followed the training, to start a long-term customer relationship with them.

When things go wrong

Often, the group of trainees have their own WhatsApp group with their trainer where they can ask questions. They can also contact their trainer.

Possible improvements

Should be more standardized so they know exactly who their point of contact is.

When things change

Only if they have a committed trainer who passes all the info along in the branch.

Possible improvements

Should be more standardized so the message that gets distributed is clear and timely (maybe through a quarterly newsletter).

5. DO ALL LEARNING INTERVENTIONS GENERATE IMPACT?[31]

Planning the fitting learning interventions that generate impact can be a challenge. There are so many different criteria, “best practices”, principles, that it can be difficult to keep an overview. However, the High Impact Learning that Lasts model (HILL) created by Dochy and colleagues, can provide a clear overview to look at the learning interventions in the First Aid project.

5.1 Urgency

Learners must experience that they absolutely need this specific knowledge, at this specific time.

Current practice

Volunteering gives community members a few advantages:

- Per diem (in countries where unemployment rates are high, this is important)
- Status (Red Cross jacket)
- Education (training days)

Because of these advantages, there is no shortage of potential volunteers, which is great. However, it is very important that the future volunteers see and experience why this training is so important. Like it was given at a convention: the woman in the convention that “fainted” on stage to stress the importance of knowing First Aid. Those moments really create awareness and urgency. The feeling of inability, of not being able to help, shows people the gap they need to bridge.

Possible improvements

Start the course with a short simulation

Simulation is already used at the end of the Commercial First Aid training in Rwanda. Doing a short simulation at the beginning of the training could really show the trainees **why they are doing this** training and **why this is so important.** This shows them the gap between where they are now (panicking, not knowing how to react) and where they should be at the end of the training: confident First Aiders who know what to do.

Use the experience from the volunteers

One of the key principles of adult learning, is using people’s experiences. Adults are no blank slates, they have their past experiences, habits and beliefs. It is important that they use them, so they tap into their own frame of reference, and use it to attach new knowledge, skills and attitudes to it. So to create urgency: you can ask the volunteers when they have needed First Aid in their lives, if they have seen someone die or get badly injured, what happened, if there was someone to help and so on,… Use these testimonials to conclude the importance of First Aid, but also reference back to them throughout the training to connect the stories to the knowledge and skills you are teaching.

[31] Dochy, Filip, Berghmans, Inneke, Koenen, Anne-Katrien, & Segers, Mien. (2015). *Bouwstenen voor high impact learning: Het leren van de toekomst in onderwijs en organisaties.* Amsterdam: Boom Lemma uitgevers.

5.2 Learner agency

We must give ownership of the learning process to the trainee so he or she feels in charge.

Current practice

The FABL course puts the learner in charge: he can learn when and where he wants, use microlearning if he wants, or go through all the theory in one go. This feeling of agency helps him to think critically and feel more in charge of his learning process and progress.

Recommendations

Add more feedback moments and make the feedback tools more in-depth, as mentioned in the report.

Provide **Personal Development Plans for trainers** so they take an active role in their own development: what are my areas of improvement and how do I progress in them?

As a (master) trainer, show **self-reflective skills**, share First Aid failure stories or insecurities, and show that it is okay to make mistakes and learn from them.

5.3 Action & sharing

The more we learn by doing and share knowledge between peers, the stronger the impact.

Current practice

Through co-teaching, **trainers** share knowledge, best practices and just-in-time information with each other. **Trainees** work on case studies together and learn how to work together in an emergency.

Recommendations

Sharing past experiences

As the trainees are adults, most of them will have come in contact with First Aid at certain points in their lives. Use these experiences as examples to keep people engaged.

Authentic practice

Trainees develop contextualized problem-solving strategies during simulations which will help them in the field.

Let trainees make mistakes to create powerful learning situations

During the observation of the trainings, trainees were stopped when they were on the wrong track before they could make a mistake. However, making mistakes, understanding where you went wrong and learning from it creates impactful learning.

5.4 Collaboration & coaching

If we work together in small teams and we have a competent coach who monitors the whole process, the stronger the learning impact will be.

Current practice

The trainer has a peer and a master trainer available to scaffold and provide just-in-time information.

Recommendations

Implement the same principles within RRCS.

5.5 Hybrid learning

Mixing online and offline learning where possible will increase impact and will put resources more efficiently to use.

Current practice

FABL project. The observations showed that the pilot is going great as far as the structure and the didactical materials: the app, lesson plan and so on. The only aspect that could be improved was the quality of facilitation. As mentioned before, hybrid/blended learning is a great way to offer efficient and hands-on First Aid learning but isn't ready to be implemented in community First Aid because it wouldn't be inclusive.

Recommendations

More training for the facilitators to really get them on board with the flipped classroom principle.

5.6 Flexibility

Mixing formal and informal learning to increase learning moments without increasing resources.

Current practice

In the First Aid training in Tanzania, didactic methods are used to make the training more flexible. For example, the parking lot is a box where people can drop questions unrelated to the current topic, so they can all be answered at the end of the day. Another example is the fact that the training day can always be altered based on the exit slips from the previous day.

Recommendations

To first implement a standardized lesson plan in all courses, so trainers have a set structure and timetable to start from. This gives them a clear idea of what should be covered, so they can also be flexible with it. When a trainer prepares the whole lesson plan by himself, this puts a lot of pressure on him, and it is likely that he will follow the plan rigorously.

5.7 Assessment as learning

Give a lot of feedback and feedforward throughout the learning process. Use pre-tests to see where the gaps in knowledge are and evaluate constantly. Use assessment tools as learning opportunities instead of a pass/fail experience.

Current practice

The basic First Aid and the FABL course both start with a pre-test. The case studies and simulations during the training can also function as assessment-as-learning.

Recommendations

More (informal) assessment-as-learning moments can be added through multiple choice with different colored post-its or digitally through apps like Kahoot. Earlier in the report, the benefits of this were already discussed.

6. ROADMAP WITH POSSIBLE IMPROVEMENTS

Throughout this document, a number of recommendations, big and small, are made per topic. This “roadmap” will give you a clear overview what The Learning Hub considers as the optimal order in which changes can be made. This list is based on two parameters: what is most urgent and what is most feasible to change.

To give an indication about cost effectiveness, the cost (perceived as direct monetary cost and/or work hours) and the impact of the improvement on the overall project are combined. The **cost** is coded: **low - medium - high**. The **impact** is coded: **medium - high - very high**, as “low impact” improvements aren’t included in the road map. It is important to note that this division is solely an indicator, based on what was observed in the field visit. As an external company, TLH can’t exactly estimate how expensive some interventions would be. The estimate of **cost effectiveness** is color-coded:

Cost: high Impact: medium	Cost: medium Impact: medium OR Cost: high Impact: high	Cost: medium Impact: high OR Cost: low Impact: medium OR Cost: high Impact: very high	Cost: low Impact: high OR Cost: medium Impact: very high	Cost: low Impact: very high

Not all recommendations are listed in this roadmap to keep it actionable but do consult the other possible improvements in this document.

Possible improvements	Country	Objective	Explanation	Cost effectiveness	
Start with improving the program design where needed.					
Standardize lesson plan and training materials	Rwanda	Improve program design	Quality of training is entirely dependent on quality and creativity of the trainer. By standardizing the lesson plan (which includes didactical methods, room set up, training materials, etc.) you relieve some of the responsibility of the trainer and it is the first step to standardize the quality of the training the volunteers receive. Use the lesson plans of TRCS as "good practice".	Cost: medium	Impact: very high
Co-teaching and monitoring by master trainer	Rwanda	Improve program design	By using co-teaching, you can differentiate between different levels of trainees: one trainer keeps the overview while the other trainer walks around and helps volunteers with questions. You can also be more creative with your session: you can divide the volunteers in different sized groups, can demonstrate in duo,… Plus, it would make evaluation easier. The ratio trainer - trainee (1/10 → 2/20) stays the same so the switch doesn't require more budget. By implementing more monitoring by a master trainer, you provide extra guidance and an extra feedback source to improve and standardize the quality of facilitation. Use system of co-teaching and monitoring from TRCS as "good practice".	Cost: medium	Impact: very high
Standardize evaluation	Rwanda	Improve program design	Use checklist AFAM based First Aid skills, as a tool to standardize the evaluation of trainees, use the tool from TRCS as "good practice".	Cost: low	Impact: medium
Checklist during simulations to score peers	Both	Improve program design	As seen in the FABL course: let the trainees "score" each other, what did they do well in the simulation? What did they forget? It gets the other trainees involved while one is practicing the technique and it urges them to think critically.	Cost: low	Impact: medium
Feedback as a separate topic in the ToT	Both	Improve program design	To anchor a feedback culture in an organization, it is important to start with the soon-to-be-trainers so they can pass this on in their courses. A few suggestions are made on page 28-29.	Cost: low	Impact: high

Once changes are made to the program design, the feedback collection can be optimized.					
Broaden the scope of feedback	Both	Improve capturing of feedback	• Broaden focus of feedback to facilitation skills of trainer (instead of only on understanding of trainee) use the competence profile of trainer to formulate questions. • Ask open questions and use prompts (more info on page 6). • Implement this in daily exit slip and in course evaluation form.	Cost: low	Impact: high
Use different feedback sources	Rwanda	Improve capturing of feedback	• Implement regular co-teaching and monitoring by master trainer (use set-up of Tanzania as “good practice”). • For this to work, ToT must focus on why this feedback mindset is vital (to mitigate polite culture).	Cost: low	Impact: high
Once the content of the feedback collection is optimized, digitalization can help close the feedback loop and streamline the way-of-working.					
Implement LMS (Learning Management System) or develop the functionalities for the membership management system.	Both	Closing the feedback loop Accelerate digitalization	**Report on training data** • Follow up on which branches organize trainings when, where and how many participants passed the evaluation with which score. • Reports can be easily shared with stakeholders within the HNS and outside. **Digitalize the feedback loop** • (Master)trainer can communicate the feedback from a training immediately from the local branch to the PM at HQ. (real-time instead of quarterly meeting). • PM can collect all the feedback through the system, analyze it, use it to synthesize possible improvements (specific to a branch and nationwide) and communicate the general findings and next steps back to the branches.	Cost: high	Impact: very high

			Document management • Tanzania: currently a google drive is used but it is only accessible for master trainers. • In Rwanda, as there is no general lesson plan or training materials, no digital platform is currently used. • The LMS could host all the needed training materials, structured per course, with a permission structure so only people with specific job roles can access and/or update and/or remove the materials. This way, everyone can access the latest version of the materials, and the PM has more control on what material is used in the branches. **Future** In the first phase, only management and (master) trainers could have an account. However, it leaves a lot of possibilities for the future to use this platform for training and check-ins with volunteers. Implementing an LMS or altering the member management system might require a substantial investment cost at first but will help the organizations in the long term to manage and improve their way-of-working.		
When the current structure is improved, standardized, and digitalized; there is room for additions to the program to increase the impact.					
Standardize POC (Point Of Contact)	Both	Accelerate digitalization	The WhatsApp groups that are spontaneously moderated by some trainers, should be part of the standard protocol. It provides an easy platform for the volunteers to stay connected to each other and to the Red Cross, ask questions and feel supported. This should be monitored by the trainer, and one master trainer if the trainer isn't experienced yet. Social media could also be used as the start of a buddy system where volunteers support each other but also keep each other accountable.	Cost: low	Impact: high

Use mobile cinema in the communities	Both	Accelerate digitalization	This tool could be used foremost to create awareness: • Who is your local FA volunteer in your community? • What training did they get? • How can they help your community and your household? • What questions can you ask them? This leads to more exposure and recognition for the work that volunteers do, while educating the beneficiaries on some basic FA principles.	Cost: medium	Impact: high
Create blended refresher course	Both	Accelerate digitalization Add follow-up moments	**Online segment** Through First Aid app with spaced repetition and different learning activities (more info on page 16). **Offline segment** Periodically (for example, quarterly) organize a practice session in all the branches, where materials like mannequins are available as well as one trainer to lead the practice sessions.	Cost: high	Impact: high
Add more authentic practice in real life	Both	Ensuring behavior change through learning	Simulations with trained simulators and make up might not be cheap, but they are a great way to test the trainees in stressful conditions, to see how they react in a crisis and where they still have room for improvement as a volunteer. If possible, this would be a great addition to the offline part of the refresher. Another way to involve the volunteers in more authentic practice is by involving them in more active volunteering (events where Red Cross is standby…).	Cost: medium	Impact: high
Add more authentic practice through a VR simulation game	Both	Accelerate digitalization Ensuring behavior change through learning	The initial investment in developing the emergency simulation game might be high but it can be used across multiple countries and there is hardly any additional cost per use. VR glasses compatible with a standard smartphone would reduce the cost further. It is an opportunity for volunteers and trainers to increase their hours of authentic practice, keep their skills up-to-date, and test them in challenging conditions which are hard to stager in real life. Also, the volunteer or trainer can practice individually when needed. More information on page 14.	Cost: High	Impact: high

Onboarding for volunteers and trainers through a day-in-the-life vlog series	Both	Accelerate digitalization Improve program design	Follow along a volunteer or trainer (dependent on their own future role) throughout a day-in-the-life. Ideally, the vlogger filming their day is someone they can identify with or someone with prestige in the community. Advantages: • An authentic experience, pull effect to feel connected to the HNS and will function as a teaser/trigger. • Platform (YouTube) is already used for entertainment. • Blurring the line between formal and informal learning. • Requires little resources, the “rawness” of the video and editing style is what makes the video relatable and the only resources you need are a handheld camera and editing software. More information on page 13.	Cost: Low	Impact: high

7. GENERAL CONCLUSION

BRC-FL and the National Societies are currently implementing a five-year Development Programme (Action Plan) *"Rode Kruis Vlaanderen helpt helpen: duurzame impact door inzet op zelfredzaamheid"* (2017-2021), financed by the Belgian government in Rwanda and Tanzania.

The Mid Term Evaluation of (the First Aid project within) this action plan was conducted from an educational point of view. It analyses the structure of the project, the differences between the implementation in Tanzania and Rwanda, and where there is room for growth. Both host National Societies have a different history which still influences their way of working today.

In Tanzania, the project was the start of First Aid courses, so the clean slate made it easier to introduce a new way of working by implementing not only didactical and evaluation tools but also didactic methods like co-teaching and monitoring. In Rwanda, there was already a structure of First Aid courses in place, which made drastic changes more difficult. This is apparent throughout the report.

After the introduction, all the observations and interviews were listed in chapter 2.

In chapter 3, the objectives determined after the workshop, are explored. First, improvements on the feedback collection are discussed. **This can be achieved by using it as a tool for the trainer to grow as a facilitator**, instead of only analyzing the learning process of the trainees. Furthermore, a **digital system is suggested to process feedback and implement it back into the project in real-time**. This digital platform (which could be an add-on to the Membership Management System or a separate Learning Management System) can be implemented in two phases. In phase 1 only for management, master trainers and trainers, and in phase 2, while digitalization spreads further in Tanzania & Rwanda, also for the volunteers so they can directly access course information. Also, investing in mobile cinema as an awareness tool can be a very efficient way of reaching the communities and keeping them involved. Another suggestion is adding an **elective blended follow-up/refresher** between recertifications. Next, using the concepts of **"zone of proximal development" and "scaffolding"** it is explained how **behavior change can be assured** by going from a safe learning environment to an authentic simulation. Afterwards, the curriculum is screened on its adaptations for the illiterate population. There are already a lot of great initiatives, the next step would be to make a separate, tailor-made lesson plan for the target group of illiterate volunteers. Finally, the program design was analyzed through the didactical and evaluation tools. Recommendations were made for RRCS to standardize their tools to improve quality. For TRCS, some minor improvements were suggested, for example to include more assessment-as-learning.

In chapter 4, the 5 moments of need were applied to the master trainers, trainers and volunteers to check if all the learning needs were fulfilled by the program design. **Most recommendations made were digital alternatives for learning needs that are difficult to fulfill from a remote location**.

In chapter 5, the program design was challenged by the building blocks of impactful learning. A lot of the building blocks were already applied to the training and some extra recommendations were made. Most recommendations were based on **using the experiences of adult learners as an extra educational tool in your training** and to **increase authenticity by encouraging volunteers to take charge of their own learning process**.

In chapter 6, a roadmap gives an overview of the most impactful possible improvements. They are in a logical chronological order, with an indication on cost effectiveness. Start with **improving the program design** where needed. Next, the **feedback collection** can be optimized. After that, **digitalization** can help **close the feedback loop and streamline the way-of-working**. When the current structure is improved, standardized, and digitalized; there is room for **additions to the program** to create even more impact with the project.