M&E of SMS and Messaging Apps

About SMS and Messaging Apps

SMS and messaging apps (including WhatsApp, Viber, and Telegram) are phone-based mediums which can be used to send short text messages, hyperlinks, photos, and videos. SMS is largely restricted to text messages and hyperlinks, while messaging apps (which rely on Internet connection) are more reliable for visual media.

Mobile phones have very high penetration globally (7.1 billion worldwide in 2021). Even countries with very low penetration have more than 30 subscriptions per 100 inhabitants[1]. This gives SMS campaigns an access advantage over other tools, and although they can be integrated with Internet-based monitoring and messaging, they still have an offline utility.

Monitoring Metrics/Analytics

Campaigns using SMS and messengers can be monitored through built-in or add-on analytics. Built-in analytics for both types of tool can monitor successful delivery, open rates and click-through of hyperlinks (called 'conversion rates'). For SMS, this information can be gathered from the mobile network operator. Different messengers have their own performance analytics tools, such as WhatsApp Business or Facebook for Business, which serve the same purpose.

Geolocation (where the receiver is) can be monitored for messengers through the Internet provider (IP) address, but cannot be monitored for SMS alone. SMS receiver locations can be determined through an Application Programming Interface (API), but this requires an Internet connection.

Conversion rates can be measured through Google Analytics or an Urchin Tracking Module (UTM), which also give information about where the link was opened from (both geographically and in terms of platform). Again, this relies on an Internet connection.

Counting Beneficiaries

The minimum criteria for defining a beneficiary for this tool should be the number of devices which open and/or read the message. When EORE messages are split into multiple interactions, beneficiaries should be measured as number of devices as opening/reading all messages in a campaign. Some campaigns may give key messages on external pages or sites (if Internet allows). In these cases, beneficiaries should be counted by conversion rate.

Be aware that analytics for these tools often do not record age and gender data, and where they do it may be unreliable. This should be estimated based on other sources. Unique subscriber, mobile access, and SIM ownership can also vary; an individual may own multiple SIMs, or multiple people may have access to the same device, so there is not a one-for-one relationship. There is no effective way to measure this without conducting separate baseline assessments, so it is accepted that beneficiary counts in these campaigns are estimates.

Output Metrics to Track

- Delivery rates – number/percentage of messages successfully sent. Equivalent to Reach for social media platforms.
- Open rates – number/percentage of recipients opening/reading the message.
- Conversion rates – number/percentage of recipients using an external link.

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[1] [Mobile phone penetration worldwide 2020, by country | Statista](#)

Other metrics can apply to messengers, dependent on the type of content (such as time spent viewing a video). These are discussed in the guidance for M&E of social media.

Measuring Successful Engagement

Data from SMS marketing campaigns indicates an average SMS conversion rate of 29%[2]. Open rates can be as high as 99%, with many of these opened within three minutes of receipt[3]. These are much higher than for other mediums – average conversion rates for digital marketing are around 4% for Google Ads and around 9% for Facebook[4]. WhatsApp and Viber have similarly high open rates (averaging 99%), and 80% of WhatsApp messages are read within five minutes[5]. Businesses using WhatsApp had a 40% response rate to messages sent on the platform[6].

Messengers add even more potential for measuring engagement, through polls or chatbots (guidance on designing a WhatsApp chatbot is available here), and analytics about whether the content is viewed and how long for, or if it is shared or forwarded. All of these provide evidence of further engagement beyond the open/read rates.

Measuring Knowledge Change

Messengers have built-in automated functions to provide support, including chatbots, which can be pre-set to deliver responses. Offline equivalents are also available for mobile providers, through SMS-based autoresponders or call-based interactive voice response (IVR). All of these could be utilised in conducting surveys on knowledge change. While determining changes in knowledge would also require a baseline assessment, it could be delivered through the same tool by targeting the same device.

Messenger-based survey tools have not yet been used for evaluating EORE campaigns to our knowledge; however, there are examples from other sectors that could be easily applied; UNICEF have used the U-Report chatbot to promote engagement for COVID-19 awareness campaigns[7], and Viamo has used IVR surveys[8] to measure

knowledge increase after public health campaigns in Nigeria.

Measuring Behaviour Change

The tools discussed above could to a large extent be used to measure behaviour change as well. For example, a chatbot could ask a respondent whether they found messages in a campaign useful, and whether and how they have changed their behaviour. However, the assessment of behaviour is often assumed to require more qualitative assessment than knowledge alone, and in these contexts other tools might have benefits.

A comparative example was BBC Media Action's EORE radio and TV campaign in Afghanistan where a baseline and endline evaluation used a panel study of 400 incentivised participants (of mixed demographics) to measure both exposure to the radio and TV messages, and changes in knowledge, attitudes and practices[9]. This could easily be applied to SMS or messenger campaigns.

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[2] What Are SMS Marketing Conversion Rates? | SimpleTexting
[3] Is SMS Marketing Right For Your Brand? 6 Things to Consider - Salesforce Blog
[4] Conversion Rate Benchmarks: Find Out How YOUR Conversion Rate Compares (wordstream.com)
[5] GUEST OPINION WhatsApp Business: opening up new business messaging | Messaging & Engagement (telemediaonline.co.uk)

[6] Ibid.
[7] U-Report – COVID-19 outbreak response | UNICEF Office of Innovation
[8] CRUDAN COVID19 Baseline Survey – Combined Tree Results (votomobile.org)

[9] See Annex A

Standalone guidelines on panel studies are also available in this "M&E of DEORE" series.

Limitations

Audience outputs are relatively easy to measure through open rates, but there are limitations on measuring engagement, especially for SMS campaigns that do not use click-throughs. While this is manageable for Internet-based messengers, or SMS campaigns that can reliably integrate with Internet-based external sources, SMS as a standalone tool will be difficult to evaluate effectively beyond reach metrics.

For both tools, age and gender data is hard to reliably gather, as is location data for SMS. Outcome-level data, as discussed above, will largely rely on add-ons such as chatbots or other mobile-based services, or separate assessments such as panel surveys.

Summary and Conclusions

With its high penetration, good engagement rates, and the lack of a need for Internet, SMS can reach large numbers in a short space of time. Messengers like WhatsApp, Viber and Facebook Messenger have similar benefits, although they are restricted by their reliance on Internet coverage.

These tools have several M&E limitations, especially for the outcome-level results of knowledge and behaviour change; however, robust M&E is not the highest priority in every context, and SMS/messenger campaigns would be suitable for emergency EORE in situations of conflict or displacement.

M&E plans for SMS campaigns should aim to incorporate other data collection tools, including surveys by phone or in person. Messengers should make use of their built-in or Internet-based analytics tools (including chatbots, which could be used to collect knowledge increase/behaviour change surveys), while also incorporating call-based or in-person mediums where necessary.

Annex A: Sample Survey/Tool/Questions, etc.

The table below lists questions used in the BBC Media Action endline survey for the BBC's 2020 TV and radio EORE campaign in Afghanistan. For convenience, additional columns on expected response, value codes, and notes on local language have been cut. A version containing these columns can be found in the DEORE Resource Centre, as can the baseline survey.

Question	Labels/codes
Survey code	Text
Telephone number (do not ask)	Text
What are you and your family most concerned about these days?	War and security
	Lack of employment
	Health issues
	Increase in prices of goods
	Lack of food supplies
	Women not being able to work
	Girls not being able to go to school
	Cut of international funding
	Displacement
	Uncertain political situation
	Drought
	EO/ERWs
	None of these

	Don't know
	Refused
	Other (specify)
To what extent do you feel people in your neighbourhood are concerned about EO/ERWs?	Not concerned at all
	A bit concerned
	Totally concerned
	Don't know
	Refused
How informed do you feel you are about dangers of EO/ERWs?	Not informed at all
	Uninformed
	Informed
	Totally informed
	Don't know
	Refused
4a. Can you tell me what which of these items are EO/ERW?	Scrap metal
	Gun powder
	Anti-personnel landmines
	Anti-vehicle landmines
	Grenades
	Bullets of guns
	Bullets of rockets and missiles
	Empty bullet shells
	Fuses
	Improvised explosive devices and booby traps
On your way to home you see an item. You haven't seen it before. What would you do?	Explode the item
	Try to move it out of the way
	Will not touch it - avoid the item
	Carry the item to safe place
	Inform friends and played with the item
	Collect the item and sell it
	Do not do anything - leave the area
	Report to a community elder
	Report to authorities
	Call demining hotline - 0708606060
	Other (specify)
Now, I am reading out some statements of what people think about EO/ERW. Can you tell if you agree or disagree with these statements?	People can earn money by collecting these and selling these items as long as they are careful
	Its normal for kids to play with small explosives
	It is never safe to touch EOs
	Small arms are safe to have at home
	It is ok safe to do fishing with grenade
	It is okay to use gunpowder to mine rocks in the mountain
	It is safe to use EO/ERW for digging well
	These items can be found in farm lands
	These items can only be found in the mountains
	Shells with thick skins such as projectiles and hand grenades are too tough to explode without touching their fuses
	If sheep have grazed in an area, there can't be any mines there
	If you drive over a landmine at 130mph, you will not be hurt even if it explodes
If you saw someone in an area contaminated by EO, what would you do to help them evacuate safely?	Text
Do you know where individuals who are injured due to EO can get support? (Prob: which organization /services).	Text

How to take care of EO victim (how to stop bleeding)?	Text
Do you know which of these signs/clues indicate existence of EO/ERW in an area?	Red stones - dangerous areas
	Blue stones - existence of EO/ERW
	White stones - demined areas
	Wooden cross
	Destroyed areas due to war
	Small circles of rocks
	Visible mines, ERW and IEDs
	Signs of fighting or military activity
	Signs in the environment, dead animals, unusual objects
When a person sees signs of EO/ERW, what should they do?	The person should ignore these and continue whatever they were doing
	The person should tell his family or friends about the signs
	The person should try to understand the signs through searching in internet
	The person should inform police or authorities
	The person should search the area and find out what is in there
	The person should leave that area
	Other (specify)
In the last three months, have you discussed about EO/ERW and their signs with anyone?	Yes
	No
If yes, who did you discuss with?	Children in my family
	Other children (in my neighborhood)
	Family members
	Community members
	Friends
	Colleagues
	Classmates
	Community elders
	Authorities
	Other (specify)
[if yes in Q…] **What did you discuss about?**	Existence of EO/ERW in my area
	Dangers of EO/ERW
	An incident
	How to avoid EO/ERW
	Signs of EO/ERW
	Risky areas
	Risk to children
	Other (specify)
[if no in Q….] **Why have not you discussed about EO/ERW and their signs with someone?**	I think everyone knows this
	I don't feel confident/I don't have enough information to discuss about EO/ERW and their signs with someone
	People do not take these seriously
	There is no EO/ERW in my local area
	Other (specify)
If you come to know that there is an EO/ERW in your local area, who would tell about it?	Children in my family
	Other children (in my neighborhood)
	Family members
	Community members
	Friends
	Classmates
	Community elders
	Authorities
	Other (specify)
[if yes in Q…] **What would you tell them?**	Text
Now, I am reading out some statements. Can you tell if you	If I am a parent, it is my responsibility to educate my children about EOs
	Teachers should educate children about EOs, it is not my responsibility

agree or disagree with these statements?	Everyone in a community has responsibility for reporting EOs if they see them