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Literacy Promotion through Mobile Phones

Project Brief Paper

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Abstract

There are about 60 million illiterates in Pakistan. Like other countries with very low rates of literacy, the reasons for the prevailing situation in Pakistan are complex. One main reason is the difficulty of retaining literacy skills of the new literates. Graduating the basic literacy courses, the new literates easily slip into a non-literate environment and it is extremely difficult to keep them motivated to make a conscious effort by themselves to keep up with their newly acquired literacy skills

The pilot project is concerned particularly with the literacy retention problem among the youth and the problem of keeping them motivated to further consolidate their literacy skills. It found a solution in mobile phones, which have become the most desired daily means of communication among the young people.

Learners (semi literate) were given mobile handsets to receive SMS messages in Urdu day and night. Learners enjoyed reading messages and copying these messages on their working books. They also created and sent messages for 4 months. As a result, their literacy skills were remarkably improved and they became more confident in themselves.

There is large potential in promoting literacy through ICT. People, especially youths are in nature motivated to be connected, communicate with and obtain information from others. ICT devices do facilitate them to be literate and get empowered. To make this happen at a large scale, the cooperation among private sectors, public sectors, NGOs and UN is essential.

Table of Contents

Abstract
1. Literacy situation in Pakistan
2. Project rational
3. Learning process
4. Results of the project (pilot)
5. Difficulties and lessons learnt
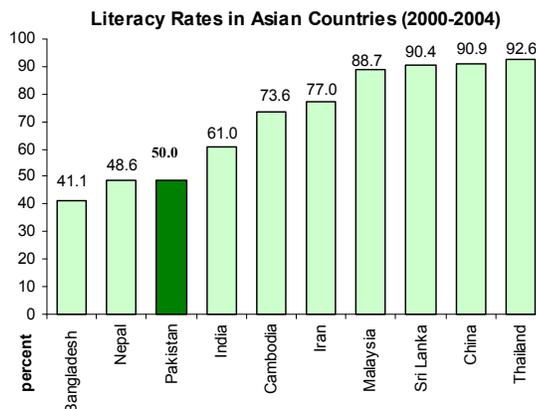6. Sustainability and expansion

Suggestion

Annex

Thanks

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1. Literacy situation in Pakistan

In the absence of a strong political commitment to literacy and given the lack of organizational structure and budget allocation, Pakistan is one of the least literate countries in Asia. Its literacy rate is 50 %, which means that more than 47 million Pakistanis are not literate. Non-literate population of Pakistan constitutes 6.2 % of that of the world. Pakistan is the fourth largest contributor to the world non-literate population. It is estimated that by 2015 the country's non-literate population will have become more than 55 million.

Literacy Rates in Asian Countries (2000-2004)

Country	percent
Bangladesh	41.1
Nepal	48.6
Pakistan	50.0
India	61.0
Cambodia	73.6
Iran	77.0
Malaysia	88.7
Sri Lanka	90.4
China	90.9
Thailand	92.6

According to a national survey in 2005,[1] the literacy rate for males is 63%, compared with only 36% for females. This gap between male and female is one of the widest even among South Asian countries. The figure for urban males is 78% while the figure for females in rural areas is only 29%. Disparities can also be observed among provinces: Punjab has the highest female literacy rate (44%) while Balochistan has the lowest (19%).

Promoting literacy in Pakistan faces a number of challenges. One of the main reasons for low literacy is that many new literates relapse into illiteracy several months after the basic literacy course. This is because of the difficulty to retain their interest in reading. In general, available reading materials are not well adapted to their daily lives in terms of contents and interests. Even when they are available and adapted, they are too difficult and not interesting for them to enjoy reading.

Various post-literacy, functional literacy and vocational training programmes have been provided, but with limited success to help the new literates keep up with their newly acquired literacy skills. Reading is simply the only way to retain acquired literacy skills. How to help the new literates, especially among the youth population, maintain a regular daily practice of reading remains a daunting challenge in most literacy programmes and initiatives.

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[1] Literacy rates (15+) Pakistan Social and Living Standards Measurement Survey (2004/05)

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2. Project Rational

The project aimed to address the literacy retention issues among the youth population. As a strategy to keep their interest in literacy, the project resorts to the idea that mobile phones are becoming an indispensable means of communication among youth everywhere in the world including Pakistan.

The key idea of the project is to use mobiles as a tool for delivering post-literacy materials to youth literates. Messages containing pedagogically correct, but fun and interesting, topics will be sent to post-literates. The messages will be formatted in such a way that the learners or receivers are invited to read and respond. Their participation in and skills improvement through the programme will also be monitored by using mobile phones.

The rationales of this mobile-based post-literacy programme are as follows.

First, the ubiquitous use of mobiles among youth and young adults in cities in Pakistan and other countries reveals the extent of their dependence on mobile phones as a means of accessing information, learning and communication. The pleasure young people derive from reading and sending messages and information via a mobile phone makes it a natural learning tool for them.

Second, a mobile-based post-literacy programme is compatible with all existing basic literacy programmes being implemented by government organizations and NGOs. Most of the basic literacy courses last about two to three months. In the last month of the basic course or when learners are already semi-literates, the learners would be provided with mobile phones and instructed how to use them to follow up on their post-literacy courses.

Third, a simple web-based system makes it relatively easy to send messages to learners and monitor the learners' participation in the mobile programme and their progress in retaining and consolidating their literacy skills. The new literates will respond to tests and the results of these tests can be summarized and recorded. When monitoring system is not established, learners are to report to literacy centers at regular bases to have weekly or monthly examinations.

Finally, the mobile phones that are purchased in the project can be used by the concerned literacy courses even after the project is over. They can be handed over to the next batch of new literates from the courses, while the graduates of the mobile literacy programme are likely to buy one mobile set of their own, after the programme, for their own use, which will further help maintain and consolidate their literacy skills that have already been well retained through the structured mobile programme.

3. Learning Process for 250 female learners in 3 districts in Punjab Province

Month	Activities
0	• Basic literacy course at literacy centers
1st	• Provision of Mobile phones and its orientation • Start receiving and sending messages • Work on workbook (copying messages by hand-writing) and read it out repeatedly
2nd	• Receive and send messages • Work on workbook (copying messages by hand-writing) and read it out repeatedly • Listening of teachers and writing
3rd	• Receive and send messages • Work on workbook (copying messages by hand-writing) and read it out repeatedly • Reply messages and answer questions
4th	• Receive and send messages • Work on workbook (copying messages by hand-writing) and read it out repeatedly • Reply messages and answer questions

3. Results of the Project

The cost of the mobile handset was US $33. Learners received about 600 messages during this learning course. Sending 600 messages to a learner is less than US$ 5. In order for the learner to send a message in Urdu, US$ 1.25 was given to the learner monthly.

Learners were very enthusiastic in learning with mobile phones. They enjoyed learning literacy wherever they were with the mobile phones and notebooks.

More importantly, 250 learners remarkably improved their literacy skills (please see the chart below. Usage of mobile phones for literacy programme was found effective and affordable in the pilot stage.

The three charts show learning improvement of 250 learners in 3 districts. There are 100 learners in Sialkot districts (semi-urban), 125 learners in Hafizabad(rural), and 25 learners in Lahore district(semi-urban).

Monthly examinations were given to learners at the learning centers located in their community. Score ranges are A (100-70), B (69-50), and C (50-0).

In Sialkot, there was no learners scored A at the beginning, there were 39 % of learners scored A at the end. Through 4 months, we can observe the transition that learners who scored C, became B and reached A or remained B. At the end, only 14% of learners scored C level.

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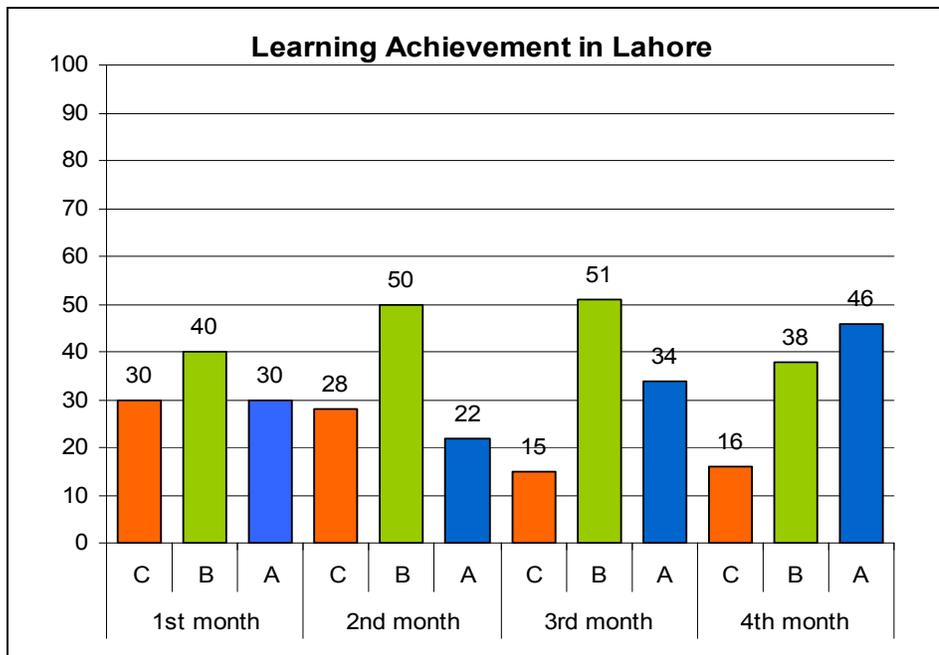
Learning Achievement in Sialkot
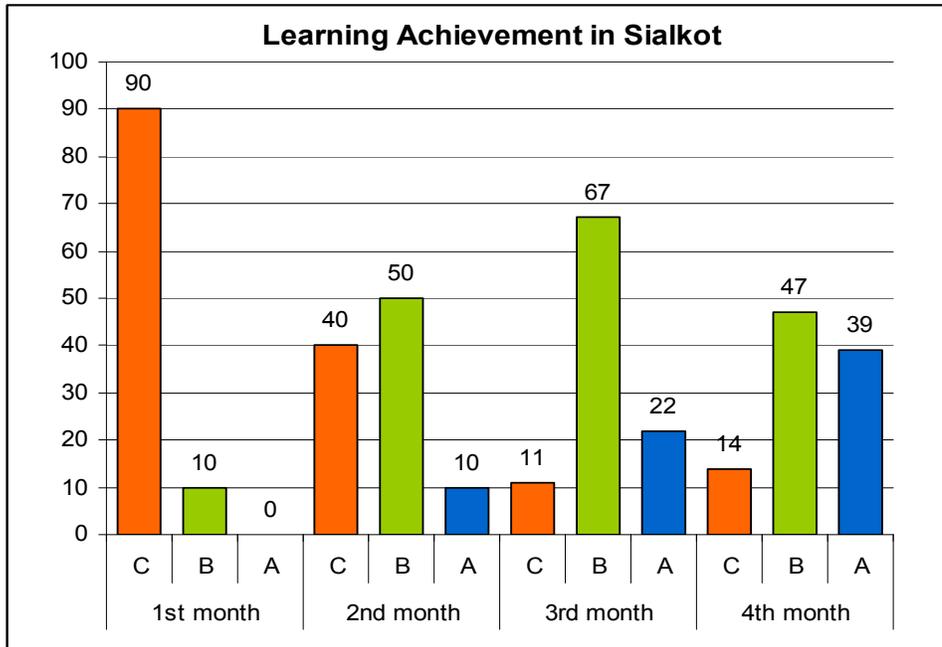
A (100-70), B (69-50), and C (50-0)   N=100

In Hafizabad, improvement is clearer at the end of the learning period. From the 2nd month to the 4th months, there is considerable transition from B level to A level. Learners who scored C level in the 1st month was 35% while it became 7% in the 4th month. Overall, it is remarkable that 78% of learners (125) reached to A level in the end. It is to be checked that 50% of A level became 15% from 1st month to 2nd month.

Learning Achievement in Hafizabad

A (100-70), B (69-50), and C (50-0)   N=125

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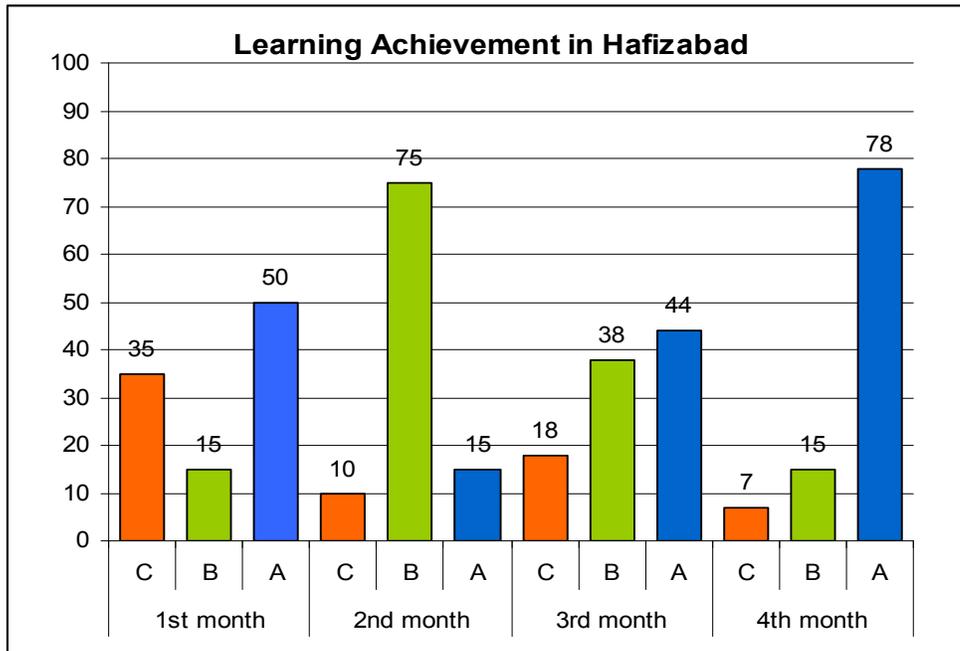
In Lahore, compared to other two districts, improvement is less remarkable. However, the portion of learners who scored C level gradually decreased from 30% to 16% in 4 months. The opposite trend is also observed in the increase of learners who scored A level.

Learning Achievement in Lahore

	C	B	A
1st month	30	40	30
2nd month	28	50	22
3rd month	15	51	34
4th month	16	38	46

A (100-70), B (69-50), and C (50-0)   N=25

The cost of the mobile handset was US $33 with SIM card US $3. Learners received about 600 messages during the literacy course. Its cost was about US$ 7.2. In addition, US$ 1.2 was monthly given to learners to send messages in Urdu. In addition, hiring a teacher at the literacy centre to support 25 learners for 5 months is US$ 180.

The total cost/ head is approximately US $57. If mobile phones are reused at least by three learners, the total cost per head is US $ 33. These costs could be further reduced when the project is carried out at a larger scale.

4. Difficulties and Lesson learnt

Gaining understanding of communities and family: Due to its uniqueness of the programme, 55.6 % of learners and family members were initially negative about the programme and disagreed that adolescents have mobile phones and doubted the effectiveness of the approach. However, in the end 87% of them were satisfied about the effectiveness of this approach.

It should have been more difficult to initiate this project if there were no trusts of community members on Bunyad (a local NGO partner)

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Security situation in the country: Security situations in Pakistan have been deteriorating. A number of bomb attacks from the extremist group took place in the vicinity of UN offices and partners. UN was unfortunately targeted in Oct 09. The UN offices had to be closed several times in 2008 and 2009. Extremists have been against girl's education and destroyed hundreds of girl's schools in NWFP.

Limitation of SMS: SMS can carry only 160 scripts. When a message was long, we had to separate the message into 2 or 3 SMS.

Difficult Urdu typing: Typing Urdu with the keys on the mobile phone is not easy and time taking. Therefore, learners were occasionally using English alphabet to send messages. Using English alphabet was forbidden during the literacy course in order to familiarize more how to write Urdu

Habit of communication with written media: Among learners the habit of communication on written media has been made. They enjoyed learning and exchanged messages among them. One learner informed us that she sends at least 50 messages to other learners everyday.

Confidence of learners: During my visits to learning centers, learners showed enthusiasm and strong confidence in their literacy skills. It was observed that confidence was created through becoming literate as well as being connected to other learners and information sources.

Security of adolescent girls: Learners felt secured when they have mobile phones with them. Whenever an emergency situation happens, they can communicate with family or relatives through mobile phones. This aspect was not anticipated when the project was designed. Though not reported by the learners, there could be risks of thefts, assaults and threats against their possession of mobile phones

Sharing learning and lessons with family members: Learners shared information and lessons with family members, such as younger daughters and mothers. In some cases, mothers even started to come to the learning centers with their daughter to learn literacy.

5. Sustainability and Expansion

Learners wished to continue the learning programme after 4 month pilot project is completed. After discussion of the local partner (Bunyad), it was decided that a learner is to contribute US$ 6 to continue learning with mobile phones. This contribution is saved for Bunyad to keep developing and sending messages. By continuing communicating with others, their literacy skills become more sustainable and improved. By sharing the cost of the programme, the ownership of learners on the programme is more enhanced, which ensure the sustainability of the programme.

For sustainable expansion at a larger scale in the future, there should be no financial support from a donor. Ultimately, the best option would be that a learner purchases a mobile handset with a loan/subsidy of mobile service companies or manufacture to start participating in a literacy/post literacy programme. In terms of future commercial benefits, corporate social responsibility, and branding, it would be advantageous for private companies to promote literacy through mobile phones. UNESCO/NGO could provide technical support in developing contents of messages, examinations, monitoring when required.

Suggestion

In order to promote literacy through ICT in an effective way, the collaboration among private corporations, UN, CSO and governments is inevitable. I would like to suggest forming an international/regional taskforce on literacy through ICT, which consists of ICT related private corporations, CSO, UN agencies, and Governments. Under the taskforce, funds could be raised to implement pilot activities, to find more effective approaches, and disseminate lessons learnt.

As we have seen over the world, our internal motivation to be connected with others is enormous. In 14 years, emails, blog, social networks, and Twitter have been pervasive and attracted all people in these communication systems in developed and developing countries.

The potential of mobile devices in promoting literacy is vast. In following years, smart phones with high specifications will be more affordable. Sending and receiving longer messages, information and stories will be much easier through free email services like Yahoo, Gmail, and hotmail. Learners will be soon using social networks and other latest services despite possible cultural barriers and traditions. I believe that literacy through ICT is the one of most powerful alternatives to eradicate illiteracy.

While appreciating the participation and active roles of private sectors, it is also important to keep quality control and avoid that the learning programme become too business and benefits oriented for the mobile companies.

Annex

A-1: Activities and descriptions of the Project

Main Activities of the project and description. Though the mobile literacy programme for learners was carried out for 4-5 months, the entire process of the project took about one and half years for preparation and administrative procedures in UNESCO and partners.

1. **Designing overall programme module**
2. **Preparing contents and assessment tools**
3. **Developing software for messaging and monitoring**
4. **Developing a brief training manual for teachers of literacy centers**
5. **Training teachers of literacy centers**
6. **Purchasing mobile phones and SIM cards, and distributing them**
7. **Test run of the programme (5 months)**
8. **Monitoring the pilot operation of the programme**
9. **Evaluating the project implementation**
10. **Disseminating the results of the project**

1. **Designing overall programme module**
   Overall programme including the literacy programme, contents of messages, methodologies of sending SMS, short training of teachers and learners, and evaluations were designed mainly by UNESCO Islamabad in consultation with local partners.

2. **Preparing contents and assessment tools**
   SMS contents were developed by the local partner (Bunyad) which is one of the most experienced and technical NGOs in Pakistan in terms of literacy, post literacy and gender. As many as 600 SMS messages in Urdu were developed with simple words and topics learners may be interested.

   To assess the literacy skills of learners, assessment tools of Bunyad were used mainly.25 learners belong to the nearest mobile literacy center and they are to report and have weekly examinations at the center.

3. **Developing software for messaging and monitoring**
   Partnership Agreement was made between UNESCO and a local mobile carrier, Mobilink[2]. Mobilink developed web-based software to send SMS in consultation with UNESCO. The software enables us to send SMS to hundreds of learners at a time and to set all tasks scheduled and automated.

   However, due to the technical complexity and inadequate budget, a monitoring tool could not be imbedded in the software. However, the literacy skills of learners were manually monitored at weekly base at the mobile centers.

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[2] Mobilink is the largest mobile phone service company in the county.

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4. **Developing a brief training manual for teachers of literacy centers**
   25 teachers at the mobile centers trained learners how to operate mobile phones for receiving and sending messages in Urdu. A brief training manual was developed by Bunyad which managed 10 mobile centers and provide training to teachers.

5. **Training teachers of literacy centers**
   As mentioned above, 25 teachers were oriented by Bunyad on how to train learners on the usages of mobile phones and the monitoring of literacy skills of learners.

6. **Purchasing mobile phones and SIMs, and distributing them**
   A domestic tender was carried out by UNESCO Islamabad. 250 mobile handsets were purchased from the supplier who won the tender. Mobilink provided 250 SIM cards after receiving all names and ID of 250 learners from Bunyad.

7. **Test run of the programme**
   Learners received an initial training on mobile phones and basic literacy skills. They have been receiving 3 messages in the morning, afternoon and evening for the last 4 months. When they receive messages, they are to reply to teachers or Bunyad staff in Urdu, and to write those messages in Urdu on their working book for their practices. Learners were also encouraged to communicate among learners to practice skills obtained.

8. **Monitoring of the pilot operation**
   All mobile centers were frequently monitored by Bunyad staff and UNESCO staff. Both agencies visited learners at all centers to have dialogues to find challenges and lessons for further improvement and expansion. Moreover, the results of weekly and monthly examinations were monitored by teachers at the center level.

9. **Evaluation of the project**
   Evaluation has two parts. One part is evaluation of learner's learning achievements and the other part is how the project was implemented. Both evaluations were conducted and reflected to this project document.

10. **Disseminating the results of the project**
    Suggested by Mobilink and Bunyad, a documentary of this initiative has been made currently. Mobilink, Bunyad and UNESCO Islamabad planed to have a dissemination workshop in Lahore in Dec 2009.

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A-2: Target Group

Target Population: 250 youth and young adults, with a particular emphasis on
                       females

Target Districts: 3 districts in Punjab, where low literacy rates and large
                       gender gap are observed, and literacy programmes of the
                       governments/NGOs are in operation.

A-3: Implementation Partners

The project will be managed by a project team located at the UNESCO
Islamabad Office, which will also be responsible for the content development and
evaluation of the programme.

Partners in the governments and NGOs will be indispensable in their contribution
to the pilot run of the programme, especially in training the teachers on the
operation of the programme and the actual run of the programme. Teachers and
supervisors of literacy centers will be trained by government and NGO staff
members on how to use the mobile phone as a distance learning tool. In turn,
teachers will train learners at literacy centers in sessions of no more than a few
hours duration.

A mobile company will be selected to develop the software of the programme for
messaging and monitoring. It will also see to the development of all other
technological support systems need to run the distance programme. The mobile
company will, naturally, be the provider of the mobile phone sets and the
messaging system.

The main responsibilities of the Government/NGOs, the mobile company and
UNESCO are as follows:

Governments / NGO Partners
- Provide basic literacy courses for learners (youth and young adults)
- Develop a brief technical guide for teachers with UNESCO
- Train teachers of literacy centers
- Organize / participate in the dissemination workshop

Mobile Company/Message Service Provider
- Develop system for sending messages and monitoring
- Send messages to learners during the test run period

UNESCO Islamabad
- Manage the project implementation
- Design an overall programme modules
- Purchase mobiles phones through the bidding process and distribute
- Monitor and manage overall project implementation
- Evaluate the project with external evaluators
- Disseminate the results of the project in and out of the country

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A-4: Message Contents (588 messages)

1.	Religious	=	82	short sentence
2.	Health	=	81	short & long sentence
3.	Hygiene	=	23	short & long sentence
4.	Nutrition	=	50	short & long sentence
5.	Body Care	=	21	short & long sentence
6.	Legal Rights	=	20	long sentence
7.	Environmental	=	23	long sentence
8.	Economy	=	7	short & long sentence
9.	Livestock	=	3	short sentence
10.	Skills	=	3	very long sentence
11.	General knowledge	=	26	short & long sentence
12.	Quotation	=	102	short & long sentence
13.	Recipes	=	3	very long sentence
14.	Riddles	=	4	long sentence
15.	Jokes	=	46	very long sentence
16.	Tips	=	6	very long sentence
17.	Question & Answer	=	69	short & long sentence
18.	General News	=	19	short & long sentence

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