## Annex 5: Story-Repository Design

**Repository Design-Instruction**

In the contract, it is stated that:

1. *Apply the Most Significant Change method in order to obtain information about what has been going on with the e-learning project. A social network variation will*
	1. *leave a repository of the stories and the whole process online and available*
	2. *be sustainable as the change we are interested in (improvement of quality of education towards active and critical learners with 21st century skills) is a very long term change (it will take decades).*

*The legacy left will be: the system, teachers and QOU/MoEHE staff trained in the method, the repository of the stories and a continuing process.*

Further, **Requirements from a repository for the “Most Significant Change”** are described as follows:

*According to the MSC methodology change stories will be collected from teachers (and other stakeholders) orally or in non-formal written form. Let’s call these “Level 0” or “Original oral stories”.*

*These stories will then be input to the MSC story repository. Let’s call these “Level 1 stories” or “original written stories”.*

*Other teachers will be able to make comments on these stories by agreeing or disagreeing, adding details etc. In this way we will know which stories express a broader view.*

*Level 1 stories will then be aggregated to school level: either by selecting one of the original or by combining and forming new concocted stories based on the original written stories and their comments. Let’s call these “School Level MSC stories” or “Level 2 MSC stories”.*

*Level 2 MSC stories may again be aggregated to region level: either by selecting one of the Level 2 or by combining Level 2 and forming new concocted stories based on Level 2 stories. Let’s call these “Region Level MSC stories” or “Level 3 MSC stories”.*

*Similarly we could have Level 4 etc stories.*

*The system will be able to*

1. *Host change stories of any level (a repository of such stories), and comments to those stories (Social network /Blog type) and metadata on the stories*
2. *Process the stories, i.e. allow comments to be added, and show for each Level N story, from which Level N-1 stories it was selected or formed*
3. *Answer queries based on the metadata (see examples below)*
4. *Content: Stories – Metadata - Language*

*Stories:*

* *Short stories describing changes. Typically less than 1 page long. Mostly in Arabic.*
* *Comments on stories (binary: agree/disagree or lengthy: comments)*

*Metadata:*

* *Date (when the story was told)*
* *Place (where the story was told)*
* *Story originator (teacher or other stakeholder who testified the story)*
* *Transcriber (person who put the story in writing, typically different from the original story-teller)*
* *Level of aggregation (original story, story selected to represent change at Level X)*
* *Evaluation of the story (e.g. positive/negative, outcome etc.)*
* *Other (e.g. criteria/indicators as to how the story relates to Student-Cantered Learning, to 21st Century skills etc.)*

*Language*

*The original stories are expected to be in Arabic. The system should have the possibility to hold a story in English as well (translation). The system Interface will be in Arabic.*

1. *Roles: Teachers, MoEHE, Project Staff, System Administrators*

*Teachers: will be able to*

* *add a Change Story (Level 1) and*
* *comment on a story (any level)*

*Project Staff: will be able to*

* *add Change Story (level 1) as transcribers, i.e. in the name of a teacher or a school or a meeting*
* *add higher level (aggregate) stories (as editors)*
* *ask queries*

*MoEHE staff will be able to*

* *ask queries*

*System administrators will be able to*

* *Add users giving appropriate rights*
* *Delete stories*
1. *Input – Processing – Queries (Output)*
* *Adding an original (Level 1) story*
* *Adding higher level stories (by ‘Promoting’ a story to represent MSC to a higher level or Concocting a new story out of several (to represent MSC)*
* *Statistics (e.g. number of teachers supporting stories*
* *Binary Support/Disagree to a story (similar to Like/Dislike)*
* *Add Comment: Agree and add to a story*
* *Add Comment: Disagree and add to a story*
* *Add Comment to a story (blog-like)*

*Example Queries*

*Give me all stories from school X*

*Give me all stories from teachers of [Math, Arabic, …]*

*Give me all stories dated between Date1 and Date 2*

*In addition to collecting MSC stories, the system can be used for emancipatory action research,* ***through the use of mind maps for the growing process of the stories*** *and for the qualitative data analysis. The results of the evaluation of the most significant stories will be more easily organized, analysed, and visualized, thus being made available beyond Arab audience. (The OUC team has specific experience with this analysis tool). This will also allow teachers/stakeholders to utilize an ICT tool (such as Inspiration, Cmap, Bubble us etc.) in their action research, integrating a critical way of reflection on stories and action. In this way an ‘administrative’ tool becomes a tool for the development of 21st century skills of the teachers, which is a precondition for their imparting such skills to students.*

Thus we shall create a database with the stories and their evolution: where told, by whom, how commented, etc. (see description of WP1)[[1]](#footnote-1). In this document we describe the information needed.

Basic Entities: Persons, Stories

Additional entities: Future Café Meetings[[2]](#footnote-2), Schools[[3]](#footnote-3), Comments

Basic Attributes: Directorates, Roles[[4]](#footnote-4), Story Sources

Basic Relationships:

Persons: **Person Id**, Name, [email, picture, age, sex, Portal username][[5]](#footnote-5)

Persons-Roles: **Person Id, Role\_Id,** Where[[6]](#footnote-6), [When:Date from, Date to]

Role Types: **Role\_Id**, Role Name[[7]](#footnote-7)

Story: **Story Id**, **Language[[8]](#footnote-8),** Source[[9]](#footnote-9), Level[[10]](#footnote-10), Editor, Date Entered, Text, Picture, Evaluation[[11]](#footnote-11)

Comment: **Story Id, Comment Id**, Author, Binary, Text[[12]](#footnote-12)

Sources: **Meeting id; Future Café Table id,** Story Rapporteur, Story teller

Directorates: **Directorate Id**, Directorate Name

Schools: **School Id,** Name, Directorate, Address, Principal in June 2014, Phone …

Future Café Meeting: **Meeting id**, Place, Time (from – to), Theme, Coordinator

Future Café table: **Meeting id, Table id**, Table Coordinator, Table Rapporteur, Results

Participant: **Person id**, **Meeting id, Table id**

## Comments on Repository Design

1. Screen 1. The functionality apparent from Screen 1 seems good. In order to get a better feeling of how Screen 1 will look, please add actual stories from those collected. You could choose 20 stories with varying length. If a story is longer than (about) 5 lines, then only the first 5 lines should appear on Screen 1. If the reader wants to read more they should be able to press (click) on these 5 lines and get the full story. See Screen 1 layout.pdf as a (familiar) suggestion.
2. Screen 2. I suppose you use “Ahmad XYZ” as the name of *any* forum user.

It would make it clearer if you used “Ahmad Teacher 1”, “Rana Commenter 1”, “Mahmud Commenter 2”, “Rashid Administrator 1” etc.

This is a minor point.

1. Screen 3.
* Is there a limit on the length of the title?

Yes, a reasonable limit for a title in Arabic.

* Is there a limit on the length of the story?

I suggest we should **not** have a limit on the length of the story.

* Is the semantics (meaning) of the ‘date’ field that of story collection, of story input on the portal or something else?

I suggest we keep two fields: “date collected” and “date in portal”. The date of story collection is added by whoever puts it on the portal. The “date in portal” is added automatically.

For comments there is only one date, the date in which the comment was added. This is an automatically filled field.

* What is the semantics (meaning) of ‘Place’? Is it the place where the story was collected or where the story refers to? Is ‘Place’ an open field (any string is acceptable) or does it take values from a specific set only (‘other’ should be a value in this case)?

I suggest we have two fields:

“Where collected” is the place where the story was collected; it has a specific set of values (where the initial interviews were held) and

“Where change refers” which the ‘place’ to which the change refers. This can be a school, a community, a region, but also a subject, a person, etc.

The “where collected” field should not change (except by an administrator);

The “where change refers” should be changeable by Researchers.

* Level of aggregation: This is an R-type attribute (see below) which means that it is intended for Researchers, not for typical Educators to see.
1. Screen 4: Queries
* The system should provide a full query mechanism for existing fixed fields (dates, places, aggregation levels, agree/disagree etc.). For the longer text fields it should allow for queries based on “keywords”, meaning words that can be found in the text of the stories, the title or the comments. Reasonable grammatical forms should be accounted for: I do not know how it is in Arabic but in English a query for “Story” must also fetch “Stories” and “Story-telling”; a query for “data base” will also fetch “database” and “Databases”. We do not ask for programming to implement this; whatever is available in Arabic.
* Additionally, each story can be connected to ‘keywords’. They come from the qualitative analysis. The researcher ‘extracts’ or ‘highlights’ certain words or groups of words from the story text (‘content’, or ‘body’). These should be kept for each story as an R field containing the set of words/expressions.
* Database Quiries 🡪 Story Repository Queries (minor)
1. Note the following (Slight) modification from the original proposal: We understood there that the story aggregation would go along geographic lines: From a single teacher to a school to a directorate.

We now understand that this one way but not the only way (and possibly not the main way) of aggregating stories:

**Level 0**: are the oral stories collected, in non-formal written form, during the June interviews. Most of them do not have a single teacher as source.

**Level 1**: are stories as input to the MSC Repository by a transcriber

* *Level 1 stories will then be aggregated to the next ~~school~~ level: either by selecting one of the original or by combining and forming new concocted stories based on the original written stories and their comments. Let’s call these “School Level MSC stories” or“Level 2 MSC stories”.*
* *Level 2 MSC stories may again be aggregated to the next ~~region~~ level: either by selecting one of the Level 2 or by combining Level 2 and forming new concocted stories based on Level 2 stories. Let’s call these “Region Level MSC stories” or “Level 3 MSC stories”. Similarly we could have Level 4 etc stories.*

Notice that the grouping can be based on many aspects: it can be community-based (e.g. changes in rural / urban schools/communities), shareholder-based (e.g. changes significant for teachers or parents or students), subject-based (e.g. changes in Math teaching/learning, or Language or Civil Studies).

1. A (repository) user has rights as one of:
* Educator (includes Teachers, School Principals, Supervisors, Field Coordinators etc.)
* Researcher (MoEHE or Project Staff), or
* (System) Administrator

Researchers have all the rights of Educators (plus others)

(System) Administrators have all the rights of Researchers (plus others)

1. Each attribute (field) is of T, R or A type (teachers, researchers, administrators)

Teachers can only see T fields, Researchers can see T and R fields and (System) Administrators can see all fields.

1. This database includes information that is not particular to this project, for example data about schools and teachers; ideally this should be taken from other databases in the MoEHE and not created afresh. Otherwise unnecessary effort will be spent, only to be soon outdated. [↑](#footnote-ref-1)
2. A Future Café Meeting happens on a date, during some time, has a Theme and a Coordinator.

There can be several Tables in a Future Café Meeting, each having a Table Coordinator and a Rapporteur.

Participants are Persons who participate in a Table in a Future Café Meeting [↑](#footnote-ref-2)
3. Each School belongs to one Directorate. [↑](#footnote-ref-3)
4. Roles are long-term attributes of persons related to the project (such as Teachers). A Person can have more than one roles; temporary attributes, such as Meeting Coordinator are not considered to be Roles.) [↑](#footnote-ref-4)
5. Square brackets “[ ]” indicate optional attributes [↑](#footnote-ref-5)
6. Where: One of {School Id, Directorate Id, MoEHE Department, …} [↑](#footnote-ref-6)
7. Roles: One of {Teachers, School Principals, Supervisors, Field Coordinators, MoEHE staff, PMT staff, QOU staff, OUC staff, Parents, Students, …} [↑](#footnote-ref-7)
8. By far most stories will be in Arabic; however the system has the affordance to have translations of the stories in English; these translations will have the same Story Id and a different language. Arabic will be the default for this field. [↑](#footnote-ref-8)
9. Level 1: (“Original written stories”) The source is a Level 0 story, “original oral story” and we record the FC table, plus possibly one or more specific persons

Level N: The source is A set of previous level stories + their comments [↑](#footnote-ref-9)
10. See **Requirements** above [↑](#footnote-ref-10)
11. A text field from the data analyst; for example it can state whether the Change described in the story is Positive or negative, what the outcome is, how the story relates to 21st C skills and student-centred learning etc. [↑](#footnote-ref-11)
12. Binary: agree/disagree or lengthy: text [↑](#footnote-ref-12)