REQUEST FOR APPLICATIONS

Position: Consultant to Develop a CSPro Data Dictionary for Uploading GDQS Data to a CSWeb Server
Project: *Intake* – Center for Dietary Assessment
Geographic Coverage: Remote work
Issued on: November 24, 2020
Application Due Date: December 10, 2020
Expected Program Duration: January 4, 2020- January 31, 2021 (around 15 working days)

Background

Intake is a Center for Dietary Assessment at FHI Solutions that aims to strengthen policies and programs to improve nutritional status by increasing the availability, quality, comparability, and use of reliable dietary intake data in low-and middle-income countries (LMICs). *Intake* has worked with colleagues at Harvard University, School of Public Health, Department of Nutrition and the National Institute of Public Health (INSP), Mexico to develop a new metric of diet quality (called the Global Diet Quality Score – or GDQS), which is appropriate for use in population-based surveys carried out in LMICs.

To facilitate the collection of the GDQS in population-based surveys, *Intake* has worked with colleagues in the Digital Development department at FHI 360 to develop a custom mobile application for data collection, for use on Android mobile phones and tablets. We envision the custom mobile application developed to be used in large-scale population-based surveys carried out across the world.

To enable wide-scale, free public use of the GDQS app that has been developed, we have selected CSPro's CSWeb server as the platform where the collected data will be transferred, stored, and analyzed.

Purpose of the Consultancy

Intake is seeking a consultant to design a CSPro data dictionary for uploading to CSWeb server and accepting the GDQS data collected using the custom mobile app. The prototype for collection of the data has already been developed.

The technical assistance services requested through this consultancy are to develop a CSPro based system to transfer the data to be collected by the app to a CSWeb server, in an appropriately organized way that will be straightforward to use for data analysis, while retaining all data fields, and data values that are collected through use of the GDQS app.

The consultant to carry out the work must have significant experience and strong capacity with CSPro and developing data dictionaries for hierarchical and open-ended data for uploading to CSWeb servers.

Scope of Work

The scope of work for the consultant will consist of designing the CSPro/CSWeb data dictionary according to the requested specifications in order to capture the data collected with the GDQS app and provide the corresponding data format to app developers that will be used for uploading of the collected data to a CSWeb server using the CSWeb API. The data dictionary should capture all of the data that will be collected using the GDQS app, to ensure that all data collected are retained on the server. The paper version of the questionnaire that has been programmed into the GDQS app is provided as Annex 1, for reference.

Key Tasks

The key tasks to be undertaken for this consultancy are to produce the draft and final versions of the CSPro data dictionary to be used for accepting the data collected with the GDQS app on the CSWeb server. The consultant is also requested to participate in a kick-off meeting, to learn more about the app, and discuss any questions before beginning work, to ensure there is a common understanding of the work requested, and the end vision for the data that should be available to be uploaded to the server, and the requested structure of that data.

During the work, the consultant is requested to reach out to discuss any issues or questions that arise, and to share an early draft design for a sub-set of questions, to ensure the work is moving in the correct direction.

We request the draft CSPro data dictionary to be completed by January 20, 2021; and the final version to be finalized no later than January 31, 2021.

Candidate Profile

The consultant must have significant experience in working with CSPro and developing data dictionaries for accepting data collected with mobile data collection tools to a CSWeb server.

Fluency in spoken and written English is required.

Submission Requirements

To be considered, interested consultants must submit the following information in English as an application for the consultancy:

- *An updated CV, including educational credentials, with experience related to the technical areas listed above and language skills (limit- 5 pages)*

- *A brief summary (no more than one page) that details areas of expertise.*

- *Two professional references who can comment on CSPro/CSWeb work performed (including name, job title, company, contact information, and your relationship with the referee).*

- *A completed biodata form (in the application template), indicating a proposed daily rate.*

Evaluation Criteria

Proposals will be reviewed and evaluated by a review committee. The following factors will be considered when evaluating the submissions:

1. Experience and qualifications related to the relevant technical areas specified above– **60 points**
2. References – **20 points**
3. Proposed Daily Rate –**20 points**

NOTE: FHI Solutions will not compensate an individual for its preparation of an application in response to this Request for Application nor is the issuing of this Request for Application a guarantee that FHI Solutions will award a contract for work in the future.

Anticipated Contractual Relationship

This Request for Application is to select a consultant for work to be carried out in January, for a total of approximately 15 days, commencing January 4, 2021. Invoices will include the previously approved daily rate with specific days worked listed. Payments will be contingent on timely submission, and *Intake* approval, of deliverables.

Request for Proposals Response Information

Interested parties should submit their application via email to Lina Constien lconstien@fhi360.org with a copy to Megan Deitchler mdeitchler@fhi360.org **by 5pm EST on December 10, 2020**. Submissions received after this date and time may not be accepted. *Intake* will acknowledge receipt of your submission by email.

Any questions or requests for clarification need to be submitted via email to Lina Constien lconstien@fhi360.org with a copy to Megan Deitchler mdeitchler@fhi360.org by **December 1, 2020**; answers will be shared with all parties that have submitted questions or expressed interest, as well as posted on the Intake website at https://www.intake.org/whats-new. No telephone inquiries will be answered.

Withdrawal of Application

Individuals may withdraw applications by written notice via email received at any time before award.

Offer Verification

FHI Solutions may contact applicants to confirm contact person, address, information on the biodata form and to confirm that the application was submitted for this solicitation.

False Statement in Offer

Applicants must provide full, accurate and complete information as required by this Request for Application and its attachments. If at any time FHI Solutions determines that an applicant has provided false statements in the response, FHI Solutions may reject the response without further consideration.

Disclaimers and Protection Clauses

- This solicitation is not intended to result in the issuance of an award.
- FHI Solutions may cancel the solicitation and not make an award.
- FHI Solutions may reject any or all responses received.
- Issuance of a solicitation does not constitute an award commitment by FHI Solutions.
- FHI Solutions reserves the right to disqualify any offer based on the applicant's failure to follow solicitation instructions.
- FHI Solutions will not compensate offers for response to solicitation.
- FHI Solutions reserves the right to issue an award based on initial evaluation of offers without further discussion.
- FHI Solutions may choose to award only part of the activities in the solicitation, or issue multiple awards based on the solicitation activities.
- FHI Solutions may request from short-listed applicants a second or third round of either oral presentation or written response to a more specific and detailed scope of work that is based on a general scope of work in the original Request for Applications.
- FHI Solutions has the right to rescind a Request for Applications or rescind an award prior to the signing of a consultancy agreement or subcontract due to any unforeseen changes in the direction of FHI Solutions' client, be it funding or programmatic.
- FHI Solutions reserves the right to waive minor proposal deficiencies that can be corrected prior to award determination to promote competition.
- FHI Solutions may be contacting applicants to confirm contact person, address and that the application was submitted for this solicitation.

- END OF REQUEST FOR APPLICATIONS -

Annex 1. GDQS app: scripts and app specifications

Enumerator instructions (text to be displayed in the app)	Application specifications
Step 1	
Before starting the interview, please enter the respondent ID number. Enter age and sex information if applicable in the context of your survey.	For each respondent, the app should start by asking the enumerator to enter the person ID (if already given in the context of a larger survey) or generate a unique ID number. This should be followed by entering information on age (in years) and gender. The information on age and sex is optional.
In step one, you will ask the respondent to walk you through their day and tell you everything they ate and drank the previous day, one food or beverage at a time.	All foods, beverages and mixed dishes likely to be reported should be pre-populated in the database of food items. As the enumerator begins typing the food or beverage item, a dropdown menu should appear so that the enumerator can select which item was mentioned (rather than type the full food or beverage name). This will also prevent spelling issues, which would have an effect on the prompts that would appear for each food/beverage item.
In step one, you only need a brief description of each item. You will get a chance to ask more details for some foods in step two. Please avoid interrupting the respondent as they are telling you about everything they consumed and help them with questions about their activities during the day only if they get stuck and cannot remember what they ate.	**1.** If a food or beverage is mentioned that is not in the database of food items, the app should present a screen to the enumerator to indicate if the food item recorded is a mixed dish, or a single food or beverage that is not included in the pre-populated database. **2.** If the enumerator records that the food item mentioned is a single food or beverage item, then the enumerator will later (after step 1 is completed, before step 2 begins) need to be prompted to classify as best as possible that food or beverage item into one of the 24 GDQS food groups (the 24 GDQS food groups referred to here exclude the "deep fat fried" food group) **3.** If the enumerator records that the food item mentioned is a mixed dish, then more details about that mixed dish should be asked about in step three (see below).
Start by reading the following text to the respondent: "I would like you to walk me through your day and tell me what you had to eat and drink, one food or beverage at a time, including snacks. We will do this in order from the moment you woke up yesterday to the moment you went to sleep for the night yesterday. What was the first think you ate or drank after you woke up?".	
For each eating occasion, enter all foods and drinks reported by the respondent. Before moving to another eating occasion, ask: "Do you remember eating or drinking anything else at that time?".	In addition to foods and beverages, the app will also need to allow the enumerator to record a number for each eating occasion, i.e. eating occasion 1, eating occasion 2, etc. The app should keep a trace of all foods that were eaten together on a given eating occasion.

Enumerator instructions (text to be displayed in the app)	Application specifications
Step 1a	
In step 1a, you will review the day with the respondent to check that they reported everything they ate and drank and that they did not forgot anything. When reviewing the day, pay special attention to periods of time in between eating occasions.	
Read back the list of all foods and beverages that the respondent reported consuming in step 1. After reading, ask the respondent: "Do you remember eating or drinking anything else in the past 24 hours?".	The list of foods and beverages reported in step 1 should be displayed to the enumerator. In case the respondent remembers something new and responds yes to this question, they can: - Either add a food to an existing eating occasion; - Or click on "add eating occasion" button and add the food in a new eating occasion.
Step 2	
In step two, you will ask the respondent (to the best extent of their ability) to tell you about the main ingredients of the mixed dishes that they reported eating.	
For mixed dishes, ask the respondent: "What were the main ingredients of the (actual name of the mixed dish)?". If the respondent says that they do not know or remember, prompt them to remember at least one main ingredient of the dish and record that information.	The mixed dishes should appear in the order that they were mentioned by the respondent. Some of these mixed dishes may already be included in a pre-populated database and classified as a mixed dish. Other mixed dishes may be ones that the respondent mentioned, which were not included in the pre-populated database, and which the enumerator confirmed at the app's prompting, that this was a mixed dish. For each mixed dish, the enumerator should be prompted to ask the respondent to list the main ingredients of the mixed dish. If two or more mixed dishes were mentioned, the app should lead the enumerator to ask the respondent to first list the main ingredients of mixed dish #1, then #2 etc. The database will have a list for mixed dished in addition to the list on food items and ingredients. The 2 lists should be concatenated together in the dropdown menu.

Enumerators instructions (text to be displayed in the app)	Application specifications
Step 3	
In step three, you will ask the respondent additional questions about some items that they reported to collect a more detailed description of the items and classify them into the adequate groups. The app will automatically bring up those items that need additional details.	The food/beverage items that require additional detail (as indicated in the pre-populated database) should appear in the order that they were mentioned by the respondent, with the complete set of questions asked for each food/beverage item, before the set of detailed questions for the next food/beverage item appears.
Tell the respondent: "Now I am going to ask you for more details about certain foods and beverages you consumed."	
Ask the respondents to answer the following questions for the food/beverage item mentioned.	For some food/beverage items, no tags/prompts will be necessary; for other food/beverage items, one or two tags/prompts may be necessary. The number and type of tags/prompts per food/beverage item will be pre-populated in the database.
(Question displayed on the app): Was it? - Tag option 1	A dropdown menu should appear for the enumerator to read the tag 1 options. After the enumerator enters the respondent's answer to the tag 1 question, depending on the food/beverage item, and the respondent's answer, it may be necessary (but not always) to ask a follow-up question. Whether a follow up question is necessary will be specified in the pre-populated database. If as second tag question needs to be asked, the following question should appear in the app.
- Tag option 2	A dropdown menu should appear for the enumerator to read the tag 2 options only when there is need for it as per the database of list of foods.
Step 3a	
In step 3a, you will classify as best as possible some foods or beverages entered in step 1 and 2 into one of the 24 GDQS food groups (the 24 GDQS food groups referred to here excludes the "fried" food group). These are items which not found in the database and therefore could not be automatically classified by the application.	The app will list all ingredients, foods and beverages for which there is no classification. The enumerator will click on each of them and select one of 24 categories. After selecting a category, a green checkmark will be displayed next to that item marking it as classified. After classifying all items in the list, the "next" button will activate.

Enumerator instructions (text to be displayed in the app)	Application specifications
Step 4	
During step four, you will also check with the respondent if any of the foods that they reported were deep fat fried.	
Ask the respondent: "Were any of the foods you ate yesterday deep fat fried? If yes, which ones?"	The list of foods and ingredients of mixed dishes should appear to the enumerator. Some of the foods may be already tagged as deep fat fried in the database and these should be ignored by the enumerator.
Ask: "Was (mention the deep fat fried food) prepared at home or purchased from outside?"	After each food that the respondent said was deep fat fried, the app should display this probing question about whether the food was prepared at home or purchased from outside. If prepared at home, then the follow up question below should be asked. If purchased from outside, then the app should count the food in its corresponding GDQS food category and in the "deep fat fried foods" category. Nothing gets recorded in the "liquid oils" group.
Ask the respondent: "For the (mention the deep fat fried food at home), was the oil used pourable?"	The app should ask this follow up question with 3 possible answers: yes, no, or don't know. If yes or "don't know": the food deep fat fried at home was made with liquid (pourable) oil, this should count towards the corresponding food group in the GDQS (for instance fried chicken gets counted as "chicken" having been consumed) and also to the "liquid oils" food group at the high cut-off range for quantity of consumption, i.e. above 7.5 grams. In this case, the app should skip step 6 for the "liquid oils" food group. No further questions about quantity of consumption for the "liquid oils" food group are needed. If no: the food deep fat fried at home was not made with liquid (pourable oil) but with semi-solid oil or solid fat, then the "liquid oil" food group should not be added to the list of GDQS food groups consumed by the individual but the food itself that was deep fat fried still gets counted in the corresponding food group (like the fried chicken example above, in which fried chicken counts as "chicken" having been consumed).

Enumerator instructions (text to be displayed in the app)	Application specifications
Step 4a	
Ask the respondent: "Was liquid oil poured on any food you ate yesterday?"	This question should appear only if liquid oil has not already been added to the list of foods consumed during the previous steps. If the answer is "yes" to this question, the app should automatically add "liquid oils" to the list of GDQS food groups consumed by the individual at the "high" category of quantity of consumption and skip step 6 for "the liquid oils" food group.
	If, after the steps above, the app has not recorded any information for liquid oils, then it should follow these rules: - If [the individual has had no mixed dishes, then liquid oils category is not added. - If the individual has had only 1 mixed dish, they go into the "middle" category of quantity of consumption for liquid oils - If the individual has had 2 mixed dishes or more, then they go into the "high" category of quantity of consumption for liquid oils No further questions are asked about the "liquid oils" food group in step 6. The information about quantity of consumption for the "liquid oils" group should be complete now. The app should skip step 6 for liquid oils.
Step 5	
During step five, you will check with the respondent if they added sugar or other caloric sweeteners to anything they ate or drank yesterday. Ask the respondent: "Did you add sugar or other sweeteners like honey, maple syrup,……etc, to any food or beverage you had yesterday?"	If the respondent answers yes, the app should present a list of sugar and sweeteners for the enumerator to choose from. This is a close ended question with a fixed list of possible answers which will be provided by the Intake team. When sugar and sweeteners are consumed, they should appear in step 6, for the respondent to consider when thinking about the total quantity consumed for the "sweets and ice cream" food group.

Enumerator instructions (text to be displayed in the app)	Application specifications
Step 6	
In step six, you will help the respondent visualize the total quantity of foods and beverages they consumed for each of the 24 food groups. You will help them do this using the set of 3D models provided to you. For each food group, the respondent will choose which 3D model from the set comes closest to the volume of foods consumed within a given food group. You will ask no questions about liquid oils.	The question for each food group should list all the ingredients, foods and beverages consumed in that food group. For example, for the "sweets and ice cream" group, the enumerator will say: "You said you had ice cream, chocolate, and marshmallows. If you placed the total amount you consumed of all these foods together, which of the cubes that you see in front of you comes closest to the total you consumed?". This will be done for each of the food groups (but not for the "liquid oil" food group), to the extent relevant. If a respondent consumed both cheese and other high fat dairy products, the total quantity consumed of cheese and the other high fat dairy products will be asked as two separate questions. If the respondent did not report consuming any foods/ingredients/beverages in a food group, then the enumerator will not ask about that food group and it will not be displayed by the app.
For each food group, tell the respondent: "Now I am going to ask you to think about (name the reported foods that belong to the food group of interest). If you could place all those foods together, which model that you see in front of you comes closest to the amount that you consumed of all those foods combined?"	The enumerator should record one variable and the app should automatically complete another variable based on the respondent's response. The first variable recorded in the app is the number of the model that the respondent says comes closest to the total volume of food consumed for all foods consumed in the given food group. We are planning to use 10 3D cubes to help the respondent to visualize and report the amount consumed per food group. The enumerator will record for instance for the food group "other fruits", the number 3 which corresponds to cube number 3 that the respondent pointed to for that food group. Then, the app will automatically translate this number 3 into the gram quantity amount associated with cube number 3 for that food group using a data base on the backend that Intake will provide, which associates an average density value with each food group and can be used with the standard volume information for each cube, to translate into a gram quantity value per food group.
If the respondent points to a model that corresponds to the exact quantity of consumption cut-off for a food group (the app will guide the enumerator), tell the respondent: "Was the amount of all foods consumed at least the size of this cube or was it slightly smaller?"	If the respondent selects a cube size that corresponds exactly to the quantity of consumption cut-off point of a given food group, the enumerator will prompt the respondent to give a little more precision (as described to the left). The enumerator will seek to clarify whether the amount consumed is slightly more or slightly less than the exact cut-off to avoid classifications errors.

Interview is now complete