**The Midterm Project**

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In order to construct a well-grounded interpretation of the problem and instructional goals, my fist attempt would be to interview the administrators and some other people who are in charge of the new education plan such as docs/physicians/diabetes educators. Through this interviews or semi-informal talks, I would like to know what they exactly expect me to do and why? I think this process would be a good jump into or introduction to the needs assessment procedure. The following would be some of the questions to be asked during this phase:

1. What are their expectations?

Let me assume that their number 1 expectation is to increase the self-management capability of the newly diagnosed diabetes patients who on a recent survey indicated that they are not sure what to do regarding their health situation. Hence, they ask me to develop educational modules in which these patients will earn more and more knowledge on how to deal with diabetes by and large and how to improve their diabetes self-management skills. They add that since insurance does not cover all patients’ diabetes education by an educator, they decided to have a self-management education program of which every patient can take advantage.

1. Why do they think that a series of education modules would be a solution?

It has turned out that they are already aware of some existing self-management education programs applied across the world. They state that they do not know how to develop their own program if necessary or adapt one and apply it in their hospital context.

1. What kind of education modules they ask for: simulations, in-class or face-to-face?

They point out that they do not have a very large budget to spend on this project and they ask for face-to-face education modules to be delivered in the hospital.

1. How newly were the patients “who were “newly diagnosed” diagnosed?

They state that the newly diagnosis refers to a diagnosis done 2 months ago at most.

1. When was the survey conducted?

I figured out that the survey was conducted 2 weeks ago.

1. How many of the newly diagnosed patients have been involving in diabetes education offered by the educators? or how many of them have insurance covering their diabetes education?

I figured out that almost 75% of the patients have not been involving in the diabetes education due to lack of insurance coverage. After a sort of document analysis on the medical reports and surveys of these patients, I found out that almost the entire 60% of the 75% percent above pertains to % 75 of patients who indicated that they did not know what to do. That being settled, what about %15 remaining? Again through interviews and document analysis of the survey I realized that this %15 percent actually has the chance of taking the diabetes education. So, what? I think I have managed to have a clearer picture of the case in hand:

The interesting finding is that even some of those who have an insurance coverage for diabetes education reported on the survey that they are not sure what to do. More interestingly, 15% of those who have not getting diabetes education reported that they are comfortable about what to do. I think these details are of great importance simply because in this case a combination of instructional and non-instructional solutions would be necessary.

Further, I am also skeptical about the results of the survey because: 1) It is based on a self-perception of the patients; 2) Most of the patients have a diabetes diagnosis made within the previous 2 months at the latest. So, the results of the survey may stem from patients’ being “new” to diabetes education and to diabetes treatment. As a result, it would be appropriate to pose the following question regarding the survey results:

1. Is it really the case?

At this point, let me assume that interviews conducted with focus groups which includes a sort of members check on the result of the survey revealed that most of the patients who think they are not sure what to do reported: 1) most of these patients getting education claimed that they are not sure what to do or whether they are doing the right thing; 2) those who are not getting the diabetes education expressed the same. The same type of data collection conducted with those who reported that they know what to do showed that: 1) those getting diabetes education by and large said they are sure what to do; 2) those who are not getting the education confirmed their previous remarks (that they know what to do). However, still, is it really the case? At this point, I would like to put another question on the table:

1. Are there any instruments the hospital uses to assess whether the patients who get the diabetes education make most of it?[[1]](#footnote-1)

After interviewing the hospital administration and diabetes educators, I found out that there is not such an instrument. So, at this point, I would like to go over the goal/s and objectives of the diabetes education. After this analysis, I would like to develop, say, a short-answer quiz together with one of the diabetes educators who functions as an expert in order for me to set up content validity and internal consistency. After patients take the test, I would like to ask two diabetes educators grade the test results in order to calculate the inter-rater reliability so that I can be surer about the results of the test. The results revealed that almost half of the patients[[2]](#footnote-2) having access to diabetes education and who claimed on the survey that they are not sure what to do earned scores with a positively skewed distribution. The scores of the other half of the same group of patients, on the other hand, led to a negatively skewed distribution. Besides, the patients who are not getting the diabetes education and who reported that they do not know what to do mostly failed the assessment. As for the patients getting the diabetes education and claimed that they sure what to do achieved a negatively skewed distribution of scores on the test. However, those who are not getting the education and reported that they are sure what to do mostly failed.

1. Are there any other care givers for the patients other than themselves[[3]](#footnote-3)?

It turned out that more than half of the patients including those who are elderly have one close family member as their caregiver or who helps the patient deal with diabetes. Therefore, it is safe to assume that the focus of the instruction (it there is any in the future) will be on the patients themselves as well as the family care givers or some other care givers. Here is one single question related to diabetes education offered as well as the final question on my detective agenda:

1. Is attendance obligatory or does somehow insurance company want to make it sure that patients attend the sections?

By talking to educators, I learnt that insurance companies wanted to know whether the patients attend the sections or not to cover the cost and that is why it is a legal obligation for educators to keep track of patients’ attendance.

1. Why do most of these patients think that they are or are not sure about what to do regarding their health case despite the assessment results?

It should be noted that there are actually at least four answers to this question depending on the number of group of patients who were grouped on the basis of their survey results. Hence, let me assume that I conducted individual semi-structured interviews with patients in order to find out root causes of any possible discrepancies between what they reported on the survey and what the results of the assessment revealed. Here are my results:

1. Group getting the diabetes education help and claiming that they are not sure what to do:

Interviews revealed that almost half of the patients in this group (it turned out that they actually knew on the basis of the assessment) claimed that most of the time they are scared of their health, and feel anxious and stressed. Some even indicated that one reason for the cause of anxiety or stress for them is lack of adherence to medication o treatment simply because nobody cares about whether they adhere or not. Some more highlighted that during the survey they focused on “being sure” and reported they are not sure simply because they do not get feedback on what they have been doing. On the other hand, the other half of this group (who were found not to know through assessment) reported that even though they have been attending diabetes education they are just taught what to do in one of the rooms in the hospital but nobody really cares about what they do in real practice or give feedback on their learning or performance. That’s why they added that they do not have enough motivation to learn from the education offered by the hospital. As a whole, these sub-groups reported that the brochure provided is just a summary of the info they need and is not very effective.

1. Group not getting the diabetes education and claiming they are not sure what to do:

Interviews conducted with this group showed that they wish they were able to attend the diabetes education to know more about what to do concerning their health case. They further stated that the brochure they were distributed is a short list of what-to-do info and that they need feedback to see whether they are on the right track and that they preferred to get the diabetes education instead of the brochure.

1. Group getting the diabetes education and claiming they are sure what to do:

This group by and large reported that they learn from the diabetes education and they have at least one family member who keeps track of their progress and give them feedback. They further expressed that the content of the brochure does not align with the education and it is not very effective.

1. Group not getting the diabetes education and claiming they are sure what to do:

Interviews with this group yielded that they focused on the brochure and responded on the survey accordingly. However, still, they asserted that they are not sure about whether the brochure is a good source of info or not and that they wish they were taking the diabetes education.

**Conclusions so far:**

The case seems to me to ask for both instructional and non-instructional solutions including but not limited to: 1) feedback; 2) caregiver support; 3) motivation; 4) diabetes education being effective to some extent; 5) brochure is not effective. Therefore, assuming that I have been able to dig into the centre of the problem so far, in the light of the already existing diabetes education and some other external self-management programs, I would continue with the needs assessment by using a combination of discrepancy and innovation models. Especially regarding non-instructional refinements to be done, I would prefer to ask for the help of some other non-instructional experts on those issues.

1. How to identify the goal or goals?

I found out that for the existing diabetes education the hospital has a main goal adapted from ADA resources and a few relevant objectives. Further data collection through interviews and document analysis showed that the goal was developed 3 years ago by diabetes educators in cooperation with some of the physicians. The docs/physicians were mainly responsible for the validation of the goal. Closer examination of the goal revealed that it mainly focuses on the declarative info regarding the content of appropriate types of diet and physical activities without no reference to the management portion of the job. So, it seems that the validity of the goal is under arrest of questioning. Consequently, I think it is necessary to revise the goal and validate it again by comparing whether it addresses the all three parts of self-management of diabetes in tandem with some physicians, diabetes educators, comparing it to existing self-management program whose validity has already been established (like that of Stanford Patient Education Research Center). In addition, while the education is delivered it should also be checked again by comparing performance of those patients getting the instruction, those with usual-care without the education (control) , and if possible, those with no care and education (baseline). Also, assume that the following is the existing goal: “After instruction on the content of individual healthy-eating and physical activities to be done, patients will be able to understand what a diet plan is and what physical activities are beneficial for them”. Here comes another reason to validate the goal simply because it is ambiguous in that it does not specify how patients will show that they understand.

1. What kind of a goal or goals to develop?

Therefore, I think it is necessary at least to revise the existing goal by involving the following people in the process: docs, care providers like family members whose efforts turned out to be very beneficial previously, insurance agents (if any), some previous successful patients, researcher/s studying this issue (if possible), experts on for instance self-management program of Stanford (if possible). This can be achieved mainly by group interviews, some goal determination workshops/activities; final debriefing and members check on the revised and/or newly developed goals. It should be noted that some of these especially the last part also aims at validating the goals by taking the ideas of different experts into account. Plus, further analyses of comparing patients to controls and possible baseline groups, I think, will contribute to the validation of the goal or goals determined. The desirable level of attainment would be: 1) improved health condition as based on blood sugar level and other health tests; 2) a certain level of medical/treatment adherence per month; 3) a 100% complete checklist regarding a monthly diet plan; 4) a certain amount of time spent on determined physical activities included in a 100% complete checklist; 5) at least 90% success at formative assessments given periodically; 6) a certain level of personal reflection and questionnaire results on self-management, feedback, motivation etc.

1. Any gaps?

Formative evaluations, reflections and questionnaires mentioned above, examining medical reports of the patients during education and while completing the education would provide info on actual attainment of the goals. Moreover, a pre-assessment instrument will be applied to see the level of attainment of the new goal/s before the education. It is also assumed that patients getting the diabetes education performed quite well on the pre-assessment targeting newly developed and revised goal/s. Moreover, it is known that results of the education practice applied under Stanford Self-Management Program led to significant improvement on patients’ health condition. Hence, I think, these refer to the necessity of the education modules. Plus, a front-end analysis showed that instruction is necessary. It should be noted that similar instruction applied before like that of Stanford also points out that goals can be met to the desirable level. As for efficiency in terms of time and costs, the Stanford example and analyses conducted on the efficiency of this example will be examined. Of course, during the implementation of our own education modules, we will keep an eye on this issue by observations conducted on the performance of a sample of patients.

1. What about the learning environment?

 The facilitators, teachers, trainers would basically be chosen from the following groups: 1) diabetes educators; 2) Some patients who were successful previously (e.g., under Stanford program); 3) Family members who succeeded at providing care previously; 4) some docs (if any). The curricula would hypothetically include the following subjects[[4]](#footnote-4): 1) techniques to deal with symptoms of diabetes as well as depression, anger, fear, frustration, anxiety; 2) techniques to keep track of and improve medical/treatment adherence; 3) appropriate instruction and exercise for effective and efficient diet planning and implementation; 4) appropriate instruction and exercise for effective and efficient physical activities; 5) techniques (e.g., a checklist) to keep track of starting and maintaining the diet and exercise plan; 6) appropriate use of medication and treatment; 7) appropriate use of feedback; 8) how to work effectively with health care providers; 9) how to provide effective peer feedback and work with other patients. In addition, the philosophy will be mainly individual constructivism as well as some sort of social constructivism through which patients are expected to develop their own understanding of self-management based on their individual and collaborative experience. Needless to say, the same aim targets care providers who will attend the education modules as well. The material to be used would be a very detailed manual on each step of self-management, techniques regarding emotional problems and the like. Plus, the learners will take a copy of the book Living a Healthy Life with Chronic Conditions, and an audio relaxation tape, and an audio exercise tape[[5]](#footnote-5). It is also important to highlight that it would be beneficial to give education to some of those candidate facilitators by more experienced ones such as diabetes educators. Instruction will be delivered in the conference rooms of the hospital with groups of 15-20 patients and care givers. The decisions above have been made through group interviews with physicians, administration, patients, care givers, diabetes educators, and some patients who have been doing well due to Stanford Self-Management Program. The overall community has a basically individualistic culture and appreciates learning by doing. Further, these people appreciate exploring new stuff and make suitable changes when it is necessary, which is based on constant feedback and self-monitoring. Finally, the patients belong to a high-income population.

1. What about the learners themselves in more detail[[6]](#footnote-6)?

As it has been clear so far the patients are newly diagnosed patients with diabetes not under control. At this point, let me assume that interviews and medical report analyses done so far have not revealed any potential contaminating effect of general aptitudes and specific aptitudes so far. For instance, no patient is a special-need patient who would, I think, require another instructional design though.

As for physiological characteristics, a visual test done revealed that most of the patients do not have a severe visual problem. Plus, it was found out that most patients are either young or old adults having an age range of 20-60. Patients have type 1 or type 2 diabetes.

Self-reports, medical files, surveys, rating scales as well as interviews and observations would be used to determine learners’[[7]](#footnote-7) interests, what motivates them, motivation to learn, attitudes toward dealing with a chronic illness like diabetes, anxiety level and level of other emotional problems reported (e.g., fear, anger), beliefs, attribution of success, relationships to peers, feelings toward authority, tendencies towards cooperation, collaboration and competition, moral development, socio-economic bakcground including educational level, racial/ethnic background, affiliations. Finally, since I think they are highly relevant, I would like to collect info on previous treatments including shots like cholesterol test, checkup etc. At this point, let me assume that the learners are more or less a homogenous group especially in terms of socio-economic background, tendencies toward collaboration, moral development and attitudes toward diabetes.

1. What about task analysis?

The following main goal has been established: “Upon successful completion of each education module on medical/treatment adherence, diet management, and physical activity management the learners will be able to: 1) start and maintain an overall diabetes self-management program by creating a plan in a written form; 2) create a checklist approved by docs for each part of the program to keep track of their performance; 3) state techniques to cope with symptoms of diabetes and some emotional problems like anxiety, anger; 4) demonstrate how to give effective feedback[[8]](#footnote-8); 5) demonstrate how to make use of feedback effectively; 6) explain how to work effectively with patients; 7) explain how to work effectively with care givers; 7) state how an effective and efficient self-management program can be achieved. Then, relevant information processing steps and prerequisites will be determined in written and graphic forms. Consequently, relevant terminal and enabling objectives (and entry skills, if any) will be determined. All these will be achieved through gathering info on tasks, giving the prototype of the program to experts to evaluate, identifying common techniques exercises used by experts, and confirming the whole analyses with experts.

1. How to assess?

I am thinking of applying a preassessment and a postassement after each module. Based on the objectives determined (actually while determining them) related questions will be developed. Item specifications for each objective, and assessment blue prints will also be prepared. Pre-assessment will include short answer questions. It will be used to determine the prior knowledge of the learners. Post-assessment will include an essay/narrative question asking them to write down their reflection on what they are learning and how they are progressing; and constructed answer items which will provide learners with different cases in which the learners will try identify pros and cons of decisions made or steps taken regarding feedback, healthy eating, dealing with stress and the like and giving relevant feedback. Pos-assessment will have a criterion level of 90% with a proportion of .40 for the essay question and a .60 proportion for the constructed answer questions. The purpose of the post-assessment will be to determine: a) whether the learners are able to apply what they have been learning to their own health case; b) whether they are able to identify possible pros and drawbacks in self- and others’ programs and give appropriate feedback.

**Conclusion:** I think this case definitely requires both instructional and non-instructional solutions even though it is envisaged that some of the non-instructional elements like motivation, giving feedback is also incorporated into the education modules. It should be remembered once more at this end that the learner group will include both patients and caregivers as based on patients’ wishes found out through interviews, surveys, observations etc. Finally, I aim at using the data that will be gathered through assessments to establish the verification of the instructional design for the new self-management program and to revise the instruction if necessary as well as the checklists the patients and care givers will be distributed in order to question validity and reliability issues.

1. Since patients are newly diagnosed (2 months at most),of course, the quiz was prepared on the basis of what they have covered so far... [↑](#footnote-ref-1)
2. I assume I know this not because patients wrote down their names on the survey or test papers but because of, say, the number codes thy were assigned. [↑](#footnote-ref-2)
3. I think it is also important to examine the patient profile in order to see whether they have any other medical issues related or not related to diabetes. At this point, please let me assume that an analysis of medical reports revealed that diabetes is the one single medical concern for the patients. [↑](#footnote-ref-3)
4. These are mostly adapted or adopted from Stanford Diabetes Self-Management Program: <http://patienteducation.stanford.edu/programs/diabeteseng.html> [↑](#footnote-ref-4)
5. Living a Healthy Life with Chronic Conditions by Lorig, Sobel, Laurent, González and Minor (2006). Info taken from <http://patienteducation.stanford.edu/programs/diabeteseng.html> [↑](#footnote-ref-5)
6. Some learner characteristics like other medical issues were determined beforehand. The rationale was that these could be useful while determining whether to adapt Stanford Program (e.g., by comparing patient profiles) and while developing or revising goals. Besides, I think this way of approaching is in more in line with the iterative nature of ID. [↑](#footnote-ref-6)
7. It should be highligted once more that learners are not only patients but also their care givers. [↑](#footnote-ref-7)
8. This and some other items are basically for the patient care givers who will get the education as well. [↑](#footnote-ref-8)