Practical Task 9

**Babu Pallam**

**P2849288**

# Exercise III: Developing a research instrument (For qualitative studies)

To develop the research instrument as per the document given, six steps need to be followed.

## Step 1: briefing about the sub objectives.

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| # | Sub objectives/ hypothesis | Specifically, what information do you require? | Identify the required variables | Formulate questions (on a separate piece of paper) |
| 1 | Natural Language Processing (NLP) | Fundamentals concepts of NLP; NLP models; Know NLP Tool Sets | Familiar with  Awareness  Familiar with  Extensiveness | Follows in Step 2 |
| 2 | Domains for NLP integration | Different Domains; Knowledge about NLP implementations; | Awareness of  Integration methods | Follows in Step 2 |
| 3 | Design and Implementation of NLP system | Learn Integration Techniques; Design of NLP based model; Implementation of NLP model design | Knowledge  Effectiveness of  Implementation of | Follows in Step 2 |

## Step 2: Formulation of Questions

Based on the subobjectives, several questions have been listed as given below.

1. How often do you use NLP applications in your daily life?
2. Do you think that NLP applications are secure?
3. Do you think that NLP applications are not biased?
4. How do you deal with errors when interacting with NLP applications?
5. How often do you encounter errors while using NLP applications in your daily life?
6. Do you think that these NLP applications can be a challenge to disabled fellow beings?
7. Have you ever thought that there is one functionality which is missing right now which could be done using NLP technologies?
8. In your perspective, how personalize these NLP applications are?
9. Do you think that you have the whole control of your NLP applications?
10. Have you ever thought that the NLP application is controlling and managing your life?
11. Did you find any major impact or improvement in your day-to-day social interaction after NLP applications came into your life?
12. Did you find it difficult after NLP applications got introduced by upgrading existing systems in transport infrastructure?

## Step 3: Incorporating Interactive statements

The following are some interactive statements included questions which as of my analysis would let me gather some more data from the correspondence.

1. Out of 10, how do you rate the progress of NLP applications in the past one decade?
2. What is the importance of NLP in existing implementations?
   1. Not important at all
   2. Important
   3. Very important
   4. Inevitably important

## Step 4: Answer the questions ourselves

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| --- | --- | --- |
| **#** | **Questions** | **Answers** |
| 1 | How often do you use NLP applications in your daily life? | I use NLP applications often everyday. For example, Siri for text prediction and assistance like search and others. |
| 2 | Do you think that NLP applications are secure? | It can be secured if you take proper precautions while sharing data with those applications. |
| 3 | Do you think that NLP applications are not biased? | It can be depends upon the reliability of the application since the bias can be created within the algorithms while implementing the application |
| 4 | How do you deal with errors when interacting with NLP applications? | When I encounter errors with NLP applications, I usually try to rephrase or replace the queries with more meaningful or simple English. |
| 5 | How often do you encounter errors while using NLP applications in your daily life? | The error are frustrating, but I used to encounter those errors infrequent since I used to make sure that the queries I provide is simple with correct syntax and semantics. |
| 6 | Do you think that these NLP applications can be a challenge to disabled fellow beings? | It is potentially challenging but at the same time these applications can provide a lot of benefits to those people. From application to application, it might vary. |
| 7 | Have you ever thought that there is one functionality which is missing right now which could be done using NLP technologies? | Yes, one thing I found which ends up into frequent errors is the real time translation of conversations. |
| 8 | In your perspective, how personalize these NLP applications are? | I found a lot of functionalities with NLP applications which is more personalized, including the remembrance of past conversations, recommendations, preferences, remainders, and so on. |
| 9 | Do you think that you have the whole control of your NLP applications? | Not exactly, but user has a certain degree of control over NLP applications. |
| 10 | Have you ever thought that the NLP application is controlling and managing your life? | No, I haven't felt that an NLP application is controlling or managing my life. |
| 11 | Did you find any major impact or improvement in your day-to-day social interaction after NLP applications came into your life? | Yes.. NLP applications significantly improved my day-to-day social interactions, giving notification of birthdays, events and scheduling events or tasks based on my emails and texts. |
| 12 | Did you find it difficult after NLP applications got introduced by upgrading existing systems in transport infrastructure? | No |
| 13 | Out of 10, how do you rate the progress of NLP applications in the past one decade? | 7 |
| 14 | What is the importance of NLP in existing implementations? | Yes… existing systems can be upgraded with NLP functionalities which has been provided by applications right now. |

## Step 5: analysis of the questions

The questions found to be simple, and easy for individuals to answer without over thinking. The questions can be answered from their own experience since smartphone is being used by everyone in the world.

## Step 6: Retracking the questionnaire

Each of the question has been identified based on the subobjective considers and none could be avoided.

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| --- | --- | --- |
| **#** | **Questions** | **subobjective** |
| 1 | How often do you use NLP applications in your daily life? | 2 |
| 2 | Do you think that NLP applications are secure? | 1 |
| 3 | Do you think that NLP applications are not biased? | 2 |
| 4 | How do you deal with errors when interacting with NLP applications? | 2 |
| 5 | How often do you encounter errors while using NLP applications in your daily life? | 2 |
| 6 | Do you think that these NLP applications can be a challenge to disabled fellow beings? | 2 |
| 7 | Have you ever thought that there is one functionality which is missing right now which could be done using NLP technologies? | 1 |
| 8 | In your perspective, how personalize these NLP applications are? | 3 |
| 9 | Do you think that you have the whole control of your NLP applications? | 3 |
| 10 | Have you ever thought that the NLP application is controlling and managing your life? | 3 |
| 11 | Did you find any major impact or improvement in your day-to-day social interaction after NLP applications came into your life? | 2 |
| 12 | Did you find it difficult after NLP applications got introduced by upgrading existing systems in transport infrastructure? | 2 |
| 13 | Out of 10, how do you rate the progress of NLP applications in the past one decade? | 3 |
| 14 | What is the importance of NLP in existing implementations? | 3 |