

The proposed system can be used as an assistant tool to enhance the quality of education in several areas such as education, teaching materials, and evaluation during the teaching and learning process. Furthermore, specifically, teachers reflect on the received feedback and take the required activities to enhance instruction and educational programs.

However, the advantage of our system at the current level includes the following items:

1. We considered several strategies to classify students' comments/feedback. Therefore, it led to generate an accurate result.
2. To simplify the analysis of student comments about different issues such as course, teacher performance, classroom, library, project, etc., DTLP has a visualization stage that presents:
  - 2.1. Opinion classification,
  - 2.2. Opinion summarization,
  - 2.3. Graphs of changes in students' feedback over time
  - 2.4. Word clouds.

The graph (Figure 2) presents the percentage of positive and negative student feedback. A teacher/lecturer would be able to collect the following information at a glance:

- How was the reflection for teaching?
- How was the content/course delivery?

Meantime if a teacher/instructor wants to analyze students' comments deeply, he/she can use the following options:

1. The current stage also presents the classification of students' comments (Table 2) in terms of '*Positive*' and '*Negative*'. DTLP can take a large text as an input and classifies them a few times. In this case, no need to examine all text manually.
2. In addition, DTLP would be able to create a summary of positive and negative students' feedback (Table 3) separately. It aims to extract formative information from student feedback. Therefore, it is not necessary for a teacher to read all positive/negative comments to extract important information.
3. Word cloud, a visual representation of words (Figure 3 (1)). The size and color of a word show how important it is. The word cloud can be used as a search reference by the users as follows:
  - a. For instance, if a user wants to know what comments have been mentioned for the word "Lecture" which is highlighted in green color. The user can enter a search entry (e.g., '*Lecture*') to obtain the corresponding students' feedback.
  - b. Furthermore, given a word (e.g., 'Hard'), the DTLP also identifies the number of students' feedback sentences that include the words 'Hard' and other words with high frequency (e.g., '*Study*', '*Lecture*', '*course*', '*Lab*', '*course material*', '*teacher knowledge*', etc.). It is worth noting the number will be represented on the relationship line between two words (Figure 5 (2)).
  - c. Finally, as shown in Figure 5 (3), the corresponding sentences related to the selected words (e.g., 'hard' and 'Lectures') are presented, as shown in Figure 5 (3).