

RESEARCH ARTICLE

Exploring Students' Reflective Journals Using Thematic and Sentiment Analysis

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주제 및 감성 분석을 사용한 학생 성찰일지 탐색 연구

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ABSTRACT

Journal writing can help learners to formulate new opinions and perspectives and give them a venue to explore, think, and practice skills learned in class. Against this background, the present study examined themes and sentiments in students' reflective journals. For this aim, thirty-two students who enrolled in an audio-visual translation class were required to keep a weekly reflective journal for 10 weeks. After completing the 10-week journal writing, they were asked to write one reaction entry on reflective journal writing including their thoughts about the class. Students' final reaction journal entries were analyzed qualitatively using NVIVO 12 and a sentiment analysis approach. Results showed that the most iterative themes emerged from the journals were *group presentation*, *reaction to class*, *reflective journal writing*, *learning how to condense texts*, and *in-class discussion*, followed by *aftermath of class*, *difficulties in translation and translation process*, showing both positive and negative responses respectively. In addition, the result of sentiment analysis revealed that students tended to hold a positive attitude towards the class. Upon closer examination of student emotions in the reflective journals and class, emotions such as *happiness*, *sadness* and *fear* were more prominent than those of *anger*, *disgust* and *surprise*. These findings provide a meaningful foundation for evaluation and revision of a course syllabus.

Key words: Reflective journal, translation, theme, sentiment, condensation, paralinguistic feature



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Introduction

One of goals in higher education is to promote critical thinking skills and learner autonomy. One common method that has been utilized so as to realize this is the use of reflective journals. Reflective practice (journaling), which was initially developed in professional development (i.e., nursing and teacher education), at university level is being increasingly used in many disciplines in undergraduate studies as an instructional tool that may help students to develop critical thinking skills and learner autonomy (Hubbs & Brand, 2010; Moon, 2006). However, in the field of translation the use of the reflective journal as a teaching tool has not been long.

Teaching translation courses in a Korean university can be challenging especially in an undergraduate program in which students need to take a variety of classes for graduation unlike at a postgraduate level. The amount of time and concentration that students can pour into their translation classes to develop their translation competence are limited due to the high load of course readings and assignments. In addition, in an undergraduate program, only a handful translation courses are offered towards a Translation major. Commonly, the Interpretation and Translation major is offered at a postgraduate level in South Korea to train students to become professional interpreters or translators. The university where the researcher works offers an Interpretation and Translation major at the undergraduate level, and it aims to train students to become ready to go to a graduate program possessing master translation competence.

The researcher implemented reflective journal writing as part of the course requirements for two purposes. First, it is believed that reflecting on one's own experiences is an important step to become a critical thinker and independent learner, especially for these undergraduate students who want to become professional translators. The second purpose was to discover how students who are given limited hands-on translation practices in class understand, process, and feel about the class. This paper thus tries to examine the insights, reactions, and thoughts of the students who completed a reflective journal as part of the course requirement in the class that the researcher taught. In addition, it investigates student sentiments by focusing on the following research questions.

1. What are students' insights and thoughts about reflective journal writing?
2. What are students' sentiments about the class?

Background

Studies on Reflective Journals

The term, reflection seems to be used loosely and encompasses a wide range of concepts and strategies. Boud (2001) defines reflection as "a process of turning experience into learning, that is way of exploring experience in order to learn new things from it." (p. 10). He highlights that when we reflect, we try to make sense of what has happened by taking the new experiences, engaging with them, and focusing on our thoughts and emotions that accompany them. It is argued that reflective learning journals can help students integrate and apply course materials and develop insights and new perspectives (Chen, 2018; Maarof, 2007; Stevens & Cooper, 2009), that students could enhance their learning by becoming more cognizant of their own thinking through writing and that writing encourages the deepening of reflection

and provides ownership of learning (Moon, 2006). In the context of translation studies with respect to reflective journals, Defeng (1998) argues that there are potential benefits of utilizing reflective journals in a translation class. That is, it can help students focus on the process of translation and consolidate theories learned in class. In addition, students can improve their writing skills. Pietrzak (2019) also points out that reflective journals will positively influence student learning and development. Students who are engaged in reflection will become more self-reliant since they realize and express their own ideas, feelings, strengths, and weaknesses.

A reflective journal, referred to as journal writing, or a learning journal has been adopted as a learning tool to assist students to make sense of his or her own learning. Moon (2006) underscores that journal-writing can serve multiple purposes. That is, journal writing can be used to “facilitate learning from experience”, “to develop critical thinking or the development of a questioning attitude”, “to increase active involvement in and ownership of learning”, and “to increase ability in reflection and thinking,” (pp. 46-47). Studies have shown the benefits of reflective journal writing in class. Shih (2011) who investigated university students' perceptions regarding reflective journal writing claims that most students reported that they had never kept a learning journal, so writing a reflective journal was difficult. However, students reported that journal writing helped them consolidate translation theories. A study by Lee (2015) is in line with this conclusion. That is, nine graduate students who were required to keep a weekly reflective journal for 12 weeks showed a positive attitude towards reflective learning journals. Kim (2015) shared a similar finding from her study where she examined undergraduate students' perspectives and attitudes towards the use of reflective journals in a translation class. At the end of semester, students were asked to do a survey on their perceptions and attitude towards reflective journal writing. Results showed that most students reported that writing reflective journals helped them review what they learned in class and improve their critical thinking skills and that it was their first time using a reflective learning journal in a class. They also reported journal writing was a useful tool in organizing their thoughts.

Studies on Sentiment Analysis

It is well documented that emotional obstacles that students face affect students' motivation and performance in class and that happy students are generally more motivated to accomplish their set goals throughout the course (Lawson et al., 2021). In recent years, studies on sentiment analysis have been increasing in popularity in the field of English language teaching where student perspectives, attitudes, and emotions towards subjects are assessed to improve learning and teaching (e.g., Chen et al., 2018; Rani & Kumar, 2017; Shin, 2020; Shin et al., 2021). Leem et al. (2020) who investigated students' feedback on the open-ended questions of the course evaluation using sentiment analysis claimed that students had a more positive attitude towards their classes and that the sentiment analysis gave a solid measurement of students' written comments for the courses and helped them to improve teaching methods. Munezero et al. (2013) also explored the sentiments in student learning diaries to understand the different issues that students experience. They identified that most students showed relatively low frustration, but students showed a higher level of anxiety towards their college life. Chen et al. (2021), who used a sentiment analysis approach to examine 80 pre-service teachers' perceptions by analyzing 367 journals, also argued that they could identify the weekly teaching focus and the themes in which participants had long-standing interest.

In the context of language learning, Shin et al. (2021) investigated the satisfaction level on the use of a chatbot that learners used to learn English using a sentiment analysis approach. They found that the satisfaction level of high school students was much greater than that of university students and that the emotional state of both groups was positive. In the case of the study by Chen et al. (2018), they developed a sentiment analysis program called RESOLVE that is a context-based emotion synonym system and investigated to what extent the program could assist Chinese students in learning English emotional vocabulary. The results showed that the participants made a substantial improvement on emotion word use and showed a positive attitude towards the use of tool in learning appropriate emotion word use.

Method

Participants

Thirty-four students enrolled in a class entitled, “*Audio-visual Translation 1*” (AVT), which was one of the elective courses where students in the department of English could enroll. One of the class requirements was keeping a reflective journal throughout the semester. Two students who did not complete their journals successfully were excluded in the study. Thus, a total of 32 students partook in the study, and they were all Interpretation and Translation majors. Among the 32 students, 17 were seniors, nine were juniors and six were sophomores. The number of females was 19 whereas that of males was 13. Their ages ranged from 21 to 26 years old.

Instrument

Reflective journal writing was introduced as a course requirement on the first day of class, and the guidelines which specified details such as the number of words in length per entry, contents they could include, languages (English and Korean) they could use, and the duration were explained to ensure that they would take journal writing seriously and utilize it as a learning tool. At week 15, they were required to write one final entry in English on their overall reaction to journal writing and the class. Prior to writing the final reaction entry, they were encouraged to read their previous entries to learn what they had written. In this study students’ final journal entries were drawn upon for analysis.

Data Analysis

To gain insights from the final journal entries, the data were analyzed qualitatively using NVIVO 12, a qualitative data analysis software. All 32 final journal entries were converted into a text file and fed into the program. Fig. 1 illustrates the process of coding analysis with one journal entry as an example. When a name on the left is double-clicked, the full journal entry, composed by a particular student appears on the right. The researcher read the entry line by line and created categories based on the themes emerged. The highlighted areas indicate that they were coded with different categories. Under “Files” in the figure, there are *name*, *code*, and *reference*. *Code* indicates the total number of categories assigned to a journal entry while *reference* shows the total number of occurrences of the categories. For example, the case of the entry written by Student 15, seven different categories were assigned, and they were addressed in eight different contexts.

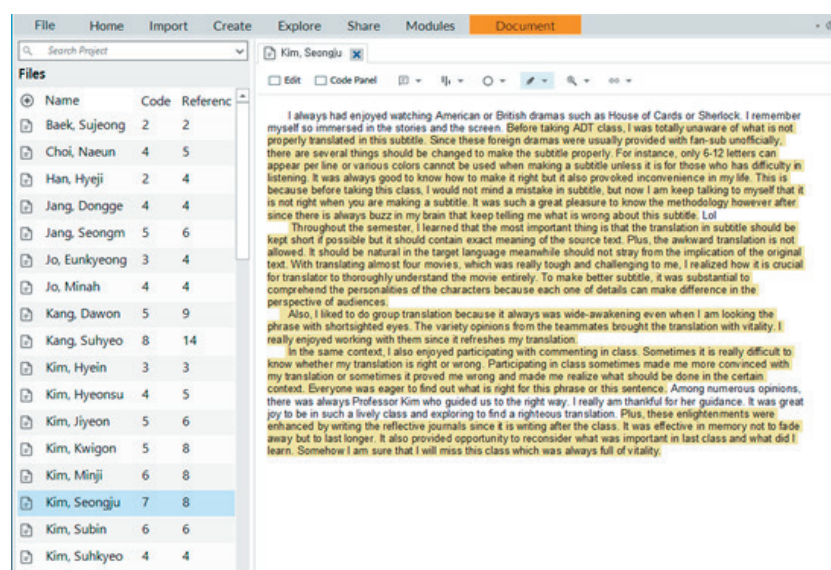


Fig. 1. An analysis of one journal entry with NVIVO 12

To investigate student sentiments in the entries of the reflective journals, a sentiment analysis approach was used using Vader and SentiArt in Orange 3, which is a component-based data mining software, and it includes data visualization, machine learning, data mining, and data analysis.

Results and Discussion

Analysis of the Reflective Journal Entries

To gain an overview of word use in the final reflective journal entries, a word cloud was generated. The visual representation which highlights prominently used words were *subtitles*, *class*, *group*, *translation*, *time* and *movie* followed by *think*, *learning*, *audiovisual*, *make*, and *journal* as shown in Fig. 2. One of the class activities that students often did was to watch films and translate them from the source language (English) to the target language (Korean), so the most frequently used words would appear predictable. However, words that describe learning, for example, *understand*, *realize* and *reflect*, were also found in the entries. The word, *reflective* which was not one of the most frequently addressed words in the entries was analyzed further with a text query search as it is believed that it is an important concept as reflective journal writing had a relatively high weight on students' final grade.

The result showed that *reflective* was used in word, phrase, and sentence levels in the students' journal entries, showing a strong collocation with the word *journal* as shown in Fig. 3. Also, the verb form of *reflective*, which is *reflect* was found in the entries. This seems to imply that journal writing task played a big part in class, and students tried to utilize journal writing as a learning tool.

students' names. The category for *learning* was further subclassified into *language and culture*, *strategy*, *paralinguistic features*, and *condensation* based on the themes, and the category for *difficulty* was also subdivided into *culture*, *paralinguistic feature*, *condensation*, and *language*. It is observed that there was a number of overlaps between the subclassification of *learning* and *difficulty*. This can be interpreted that when students faced difficulties in different aspects in class, they may have felt frustrated. However, through the practice of translation and carrying out coursework, they may have been able to tackle those difficulties.

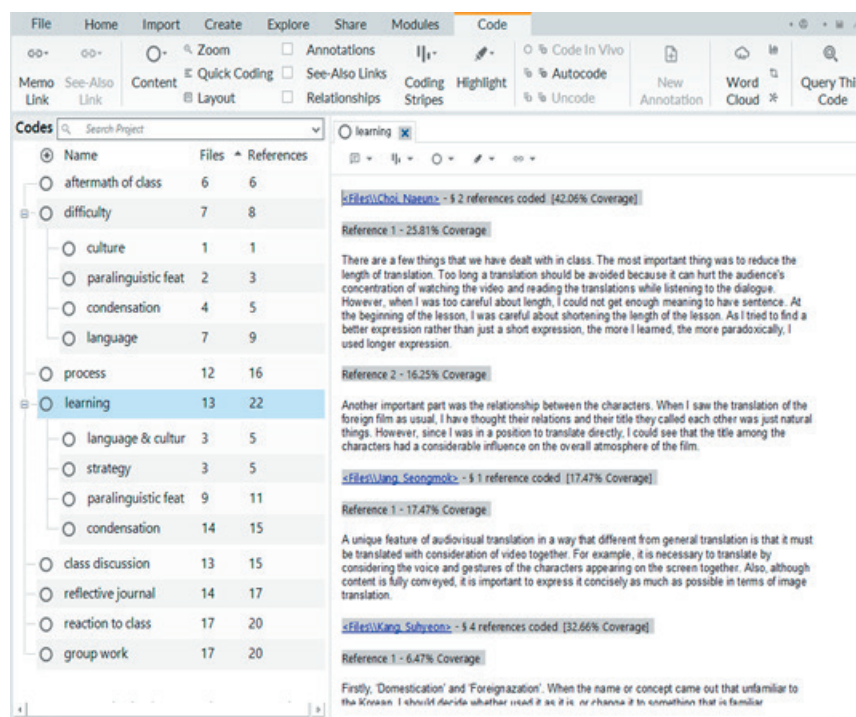


Fig. 4. The categories for final journal entries

A Qualitative Analysis of the Reflective Journal Entries

Group Work (Group Presentation)

Studies have shown that group work can be of a useful activity to use in class as students can learn from each other by negotiating, cooperating, and compromising to complete assignment as they do group work together (Gillies, 2003). In the journal entries, students reported the benefits of group work by pointing out that they could gain a sense of belonging in the group, which made them feel part of the class. In addition, students also wrote a comment that they could count on their members for ideas and suggestions when encountering problems as the excerpts are shown.

<Files\\Student 5>

I could learn how to do teamwork collaboratively with my team members. And I really love working with them because we can share various opinions and fresh ideas for making better subtitles. Also it was a really good time and good opportunity for me because I did not need to translate alone which was a really tough thing to me. Doing

groupworks, I was also able to learn many skills from team members such as how to translate within a context and how to translate shortly but deliver perfect meaning. I am sure that I could not acquire such many things for translating without groupwork and my team members.

<Files\\Student 18>

It was really good opportunity to make a subtitle myself through doing group work. We discussed a lot. Sometimes there was little conflict of the ideas during the discussion. And discussing more, we found better translation. And also, I can learn more through group work, it was very comforting that I have someone to ask and talk about translation. Whether I have to decided something, or made a mistake group work was very helpful.

However, it seems group work was a challenge for some students. One student reported that group work consumed much more time than individual work; however, she commented that the result of the group work was satisfactory.

<Files\\Student 22>

Group project was also a good experiment. I was not expected that it would take so long, almost 5 to 8 hours to collect each members' translation and discuss which would be good to use in script. But it was easier than before when I did alone and the result was also better than I did alone.

Reaction to Class

Taking a number of translation classes per semester can be very demanding for undergraduate students as each class requires students to produce translations from the source text to the target text. In addition, each instructor may use a different course syllabus demanding various types of classwork. Nevertheless, the audio-visual translation class appears to have been interesting for two reasons. First, the translation materials for the AVT class were films, so the students had enjoyed watching the films, composed of dialogs or monologues before they carried out the translation tasks. The second reason is that they were able to work with the lines of actors rather than a long piece of text. Due to the relatively shorter texts in length, it would appear that students assumed translating films was much easier than text translation. However, once they had hands-on translation experience, they found it difficult to translate.

<Files\\Student 12>

It was hard time to attend AVT lecture, because this was my first time that attended to translation class. But it was also a big fun to attend. Watching movies carefully to hear characters' lines precisely and translate those lines to Korean was also exciting experiments.

<Files\\Student 13>

Although there are many genres and classes in translation, but the translation of the movie script is the most exciting class because we can see foreign film in our everyday life and we make the subtitles by ourselves. So, I expected that the process of making the subtitles would be funny and easy work. But it was wrong to think like that. The work was much harder than I thought.

Even though some students expressed their frustration with their abilities and the complex process of translation, it appears that they eventually learned by trial and error in class as shown below.

<Files\\Student 4 >

Through this class, I've learned that making subtitle translation is not a simple job. As I mentioned, it is really complicated work. For text materials, we can focus only on text itself. But in audiovisual material, that can't be happened. I've learned to care information overall, from visual things, voices, to context. I didn't mastered it, of course, but at least I think I've got sense of it.

<Files\\Student28 >

To self-reflect what I learned through the lecture Audiovisual Translation I, even though I sometimes got disappointed with myself being poor at the translation, it was very fruitful get much knowledge about ENG-KOR translation and study together with such great team members.

Reflective Journal Writing

Reflective journal writing was also frequently addressed in the entries showing 20 references; some students mentioned the benefits they gained through journal writing whereas some others expressed disappointment after reading their own entries that they had written throughout the semester. It would appear that Student 5 had a favorable opinion regarding reflective journal writing. He stated that reflective journal writing was a learning tool that he could organize his learning process and gather ideas and suggestions for his group's presentation.

<Files\\Student 5>

'Reflective Journal' is one of the things that I enjoy and I love. People usually forget something so easily if they would not write or record it. But I could remember what I had learned or what I had realized because of the process to write a reflective journal after class. Also I could manage and organize what I learned on my reflective journal and even rethink about our group's translation again and again while writing down. So, I think reflective journal becomes a really good tool for me to gather my ideas and think considerably of other teams' materials. Finally reflective journal is really important and necessary in that writing down what I think and adding the reason why I think like that makes me logical and rational.

In addition, Student 9 pointed out that journal writing requirement made him review class materials including words and expressions he learned in class. On the other hand, Student 25 reflected that her writing style was similar in each entry, not showing a variety of expressions, and this made her feel a bit embarrassed.

<Files\\Student 9>

The last step of the class work was keeping the journal once a week. This was so much helpful for me to remind what I had realized during the classes. Without this system, I would have just slip over all the things. I could sum up what I learned, and try to remember not to use the wrong/awkward expressions again, or to use the good expressions/ methods next time. I tried keeping the journals as if I had kept my private journals contemplating what I learned.

<Files\\Student 25>

In the end of the semester, I felt that my literary style is always similar when I wrote the journal. Not being very good at English, I used familiar writing skills, expressions and words. Sometimes, I strived to avoid repetition by finding a new way of saying, but I could not shake the feeling that they seems to be similar. I felt a sense of shame on my poor English proficiency, so I decided to read a lot of English books and improve writing skills.

The insights from the entries seem indicate that the use of reflective journal was helpful for students to critically think about their learning process, to learn new words and expression and to realize their weaknesses in writing.

In-Class Discussion

One of the class requirements was carrying out a group translation project based on assigned texts. Students were first assigned to groups with a segment of a film to translate together in groups. Each group was supposed to work on translation and prepare a presentation that entails a full translation of their text and strategies they had used. Based on the translation done by the other groups, an in-class discussion activity started by inviting all students to make a comment or suggestion to presenters. In-class discussion could be difficult to succeed when the class size is big, and students are not accustomed to voicing their opinion. In the final entries, both positive and negative comments on in-class discussion were frequently mentioned. For instance, Student 11 reported that by listening to his classmates, he could improve his translation skills.

<Files\\Student 11>

As students discussed about each group's translation, I could get various perspectives of the translation even for the same line. I learned how different each individual's translation or speaking style is. That's why I could enjoy this course. I established my own standards about translation and these also include my speaking style. I also changed and improved my translations by comparing with others' translations. This entire process was valuable and made me think deeply about languages.

On the other hand, some negative reactions to in-class discussion were also reported. Student 31 showed an example of someone showing reluctance to express their opinion in class. It appears that he thought there was one correct translation to the source text. However, the entries indicate that active class discussion enabled students to change their perspectives and concentrate in class better.

<Files\\Student 31>

Second one is feedback time. Because I was stuck in one prejudice that 'I am right and you are wrong' or 'I shouldn't be wrong so you guys should too', the feedback time made me nervous at first. It was hard for me to express my thoughts because I was worried about 'How am I wrong?' Even there were no wrong answers. There were just various opinions and feedbacks. But through much feedback time in each class, I became to overcome my prejudice. I admitted that I can be wrong and it doesn't matter if my thoughts are wrong or can't be agreed by most people. Also, I admitted others can be wrong and their thoughts are just opinions derived from their experience. I became to break my strong prejudice.

Learning

Learning, which was one of the most frequently mentioned themes in the final entries encompasses four different subcategories. Among them, there were many comments on *paralinguistic feature* followed by *condensation*. In translating a film from a source language to a target language, there are several points to consider unlike a text translation. For instance, translators should be able to consider tone of voice, facial expressions, and personality of characters in the

film. However, it seems that students often found them difficult to incorporate them in translation. Through the practice of translation, it seems that students learned the importance of paralinguistic features in audio-visual translation as shown in the excerpts.

<Files\\Student 12>

I realized the importance of paying attention to the small details like the tone, facial expression, and gesture of the characters when translating. Depending on these details, same lines can be worded differently, and this can help capturing the meaning and intention of the character's speech.

<Files\\Student 30>

When translate the movie, we have to try hard to figure out each character's personality. Everyone has their own way of speaking. So, depend on the specific personality, we have to translate differently.

Condensation

When the aforementioned categories are related to class activities or class requirements, condensation is one of translation strategies that students had to use in their translation. One major difference between film and text translation is that film translation has space and time constraints, so translators must condense original texts (scripts) to produce two-line subtitles to put them on movies by using effective strategies. Often this can be very challenging especially for those who are accustomed to text translation. Students expressed difficulty in condensation and strategies they tried to use to condense texts so that their translation would be easily read in a short time period as shown.

<Files\\Student 16>

The shorter the translation is, the better for watcher to understand. So I was concerned about the way to make sentences short still having same meaning, and familiar expressions I usually use. Especially, when actor spoke so fast with anger, the speed of changing subtitle was also fast, so it needed much shorter translation. To do this, I tried to do liberal translation and combine several sentences and omit repeated word and phases.

<Files\\Student 20>

To sum up with, this audio-visual translation was so difficult to me because of the condensation. Usually, when I do the translation of other texts, such as news articles, speeches and statements, I translate the original text exactly same in Korean. Or sometimes I put additional information in translations to help readers understand them better. However, this audio-visual translation has to keep the line as short as possible so that it would not disturb movie-viewers watching.

Difficulties

Another category that emerged from the final entries was the source of difficulties in translation. Translating films from a source language and to a target language is unquestionably complex, time-consuming, and difficult, and this can be considerably more challenging to students who have not carried out film translation previously. According to the entries, the source of difficulties arose from translation materials being dialogs, which often include slangs and colloquial expressions. Another difficulty was derived from the differences in the two languages. That is they had hard time in translating technical words as shown.

<Files\\Student 21>

Translating newly coined words, technical terms, idioms, slang and colloquial expressions into Korean expressions which are familiar and intelligible to people of almost all ages is a definitely hard thing.

<Files\\Student 8>

I should find similar or exact Korean equivalent for words of expressions. Especially, the movie <Chef> had lots of jargons or slangs. The main character Carl is an impetuous and cool man who uses coarse languages often. So, it was hard to express his angry situation.

In audio-visual translation, students need to pay close attention to paralinguistics features of characters in a film, for they add emphasis or shades of meaning to what the characters say. Student 7 has put a comment nicely regarding paralinguistic features in her journal based on her learning in class.

<Files\\Student 7>

Movie translator should not miss any small behaviors, facial expressions, tone, context, relationships between characters, personality of the characters and even the music included in the movie.

Sentiment Analysis

Sentiment analysis (SA), also known as text mining, is the process of identifying and classifying user's opinions from a piece of text and assigning different sentiments, for example, positive, negative or neutral. The text often has both objective and subjective perspectives, and SA allows to focus on the analysis of the subjective perspective of the data. Studies claim that SA plays an important role in understanding student learning behavior and performance and improving the process of teaching and learning (Chong et al., 2019; Zhou & Ye, 2020). That is, it is a useful approach for gaining insights in the field of English language teaching and translation where student feedback is essential to improve learning and teaching as teachers can learn student learning experience, teacher performance and other course attributes. To this end, sentiment analysis was performed using a text mining tool, Vader and SentiArt in Orange 3 developed by Demsar et al. (2013) to examine emotions in the final journal entries.

Fig. 5 shows the procedure and results of the sentiment analysis with Vader first. Vader, a lexicon and rule-based sentiment analysis tool, classifies text into polarities like positive, negative, or neutral. As can be seen in the figure, polarity lies between -1 and 1. -1 indicates a negative sentiment while 1 defines a positive sentiment. The compound score is the sum of positive, negative and neutral scores and lies between -1 and 1. When the compound score is close to 1, it indicates that the positivity of the text.

Table 1 shows the result of sentiment analysis. It showed that the score of neutral ($M = .81$, $SD = .04$) was highest while the score of positive sentiment ($M = .13$, $SD = .04$) was slightly higher than that of the negative sentiment ($M = .06$, $SD = .03$). However, the compound score, which was the sum of positive, negative, and neutral sentiment was substantially high. This would appear to indicate that students had a positive attitude towards reflective journal writing and the class even though the course requirements such as keeping a reflective journal, group presentation, and in-class discussion could have been demanding.

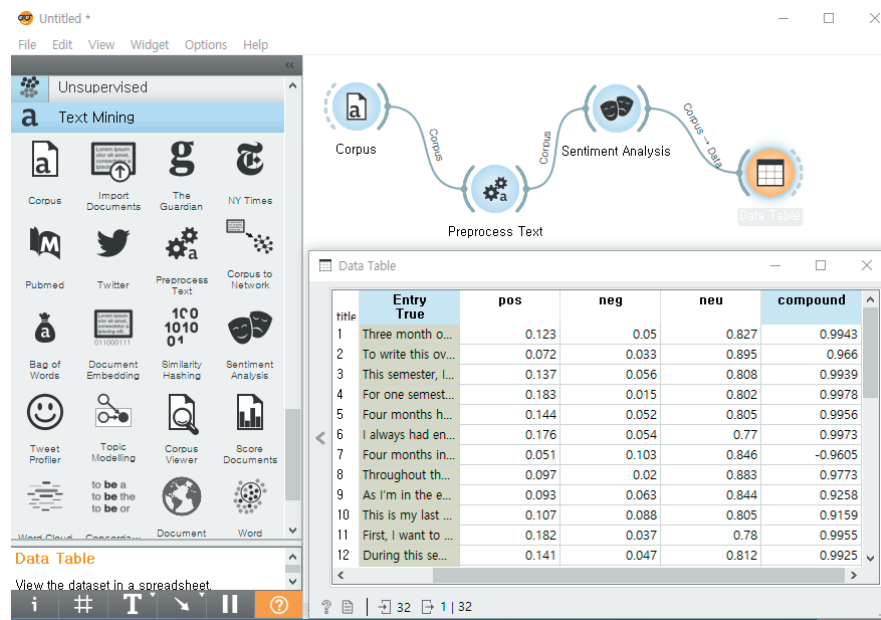


Fig. 5. A sentiment analysis with Vader in Orange 3

In order to examine student emotions in more detail in student final journal entries, SentiArt was performed. While Vader shows emotional polarity, SentiArt allows to analyze emotions such as *anger*, *fear*, *disgust*, *happiness*, *sadness*, and *surprise* as shown in Fig. 6. For example, in the case of Student 1, two marked emotions, *sadness* (.84) and *happiness* (.27) were found followed by *fear* (.52) in her journal. Concerning Student 10, the emotion of *happiness* (.74) and *fear* (.70) were more prominent than the emotion of *sadness* (.66).

Table 1. Results of sentiment analysis with Vader

Polarity	<i>N</i>	<i>M</i>	<i>SD</i>
Positive	32	.129	.037
Negative	32	.055	.029
Neutral	32	.818	.038
Compound	32	.792	.519

Table 2 shows the results of sentiment analysis with SentiArt for the 32 students. Three outstanding emotions found in the journals were *happiness* ($M = .81$, $SD = .07$) and *sadness* ($M = .75$, $SD = .08$) followed by *fear* ($M = .62$, $SD = .07$). Another emotion that had a relatively high score was *anger* ($M = .40$, $SD = .07$). This seems to imply that through the course of learning, students had various emotions which may have influenced their learning and attitude towards the class.

Although each student showed a different emotion towards the journal writing and class, the three dominant emotions were *happiness*, *sadness*, and *fear*. It seems to indicate that through different kinds of class assignments and activities, it appears that students may have experienced achievements and obstacles that made them feel proud, discouraged, and frustrated while they were studying.

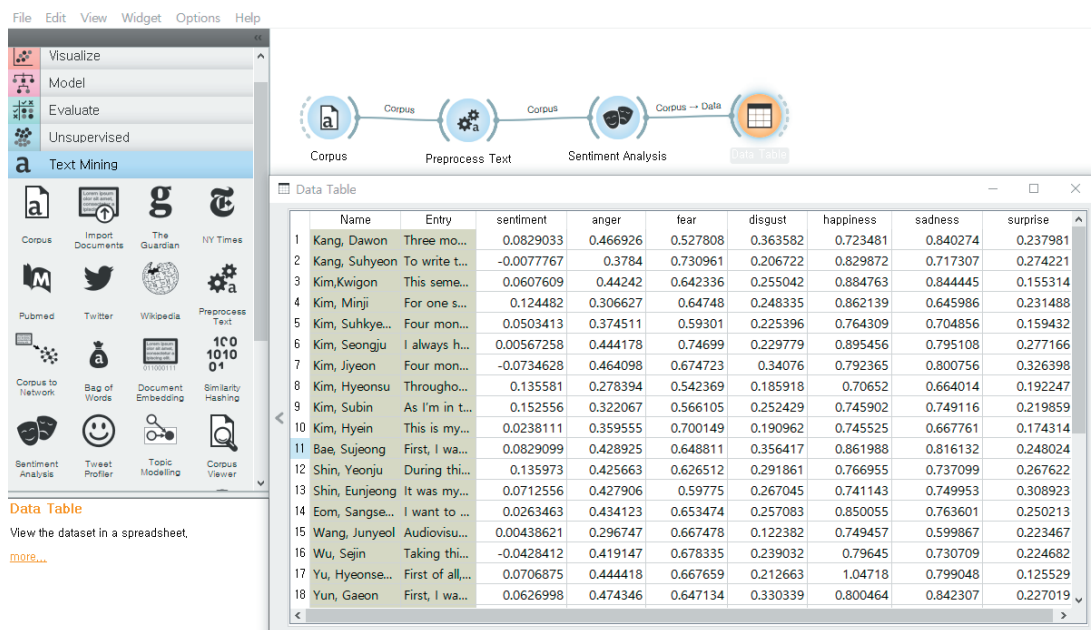


Fig. 6. A sentiment analysis with SentiArt in Orange 3

Table 2. Results of sentiment analysis with SentiArt

Emotion	N	M	SD
anger	32	.404	.079
fear	32	.624	.073
disgust	32	.262	.077
happiness	32	.814	.073
sadness	32	.756	.088
surprise	32	.225	.076

Conclusion and Implications

The present study tried to investigate thirty-two students’ insights and sentiments in their reflective journals that they kept as a course requirement. Based on the qualitative analysis, several categories were emerged from the entries. The most frequently addressed themes in the journals were regarding *group work (group presentation)*, *reaction to class*, *reflective journal writing*, *in-class discussion*, *learning translation skills* and *difficulties in translating films*. As *group work (group presentation)*, *reflective journal* and *in-class discussion* were of the course requirements where students were given a mark respectively, they may have been mentioned more frequently than the other topics in their journals.

Concerning *group work (group presentation)*, students reported that they appreciated the opportunities to work on translation for assigned texts with their group members and that they learned a lot from their group members who suggested different perspectives and strategies while some other students pointed out that journal writing helped them reflect their own translation process and find their strengths and weaknesses in translation skills. A good number of students also appreciated that they could review what they learned in class by writing a journal. Next, even though in-class discussion activities that forced them to give feedback on the translation done by their classmates, some students

reported that they liked the fact that they could freely suggest and critic on translations and that they liked the class dynamics. Regarding learning translation skills, most students reported that they learned the importance and difficulty of condensation in audio-visual translation which has space and time constraints. Furthermore, students reported that paralinguistic features such as the tone of voice and formality of language were difficult aspects to translate in audio-visual translation class, and they should be treated as a piece of text that needs to be translated.

The results of sentiment analysis with Vader revealed that students showed a positive attitude towards the class, and this seems to imply that the course requirements such as group presentation, in-class discussion and journal writing could continuously be introduced in class to help students develop critical thinking skills and solidify their translation skills. In examining specific emotions, the emotions of *happiness*, *sadness*, and *fear* were more outstanding than those of *disgust*, *surprise* and *anger*. These findings need to be interpreted with caution as the emotion, for example, *happiness* could arise in many different circumstances. However, these findings would serve a good resource for evaluating and revising course syllabi.

In future studies, it would be desirable to include interviews with students to obtain more accurate perceptions, attitude, and sentiments towards the class. In addition, the inclusion of all journal entries which students kept throughout the semester might be optimal to gain a deeper understanding about students.

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