Abstract: due to the challenges faced by deaf and hard-of-hearing (D/HH) students and language teachers in foreign language instruction at inclusive university, a needs analysis in this area becomes crucial. The current study aimed at (i) identifying barriers faced by D/HH students in learning English as a foreign language at higher education, and (ii) analyzing their needs to help them cope with their English learning. This qualitative study was conducted at a state university in Indonesia involving six D/HH students, one English teacher, two interpreters, and one tutor as the subjects. The data were collected through participant observations, semi-structured interviews, and questionnaires. To obtain dependable and credible data, a triangulation of sources and methods was performed. It reveals that the barriers hindered by the D/HH students from successful language learning could be classified into external and internal barriers. Such barriers as lack of English proficient interpreters and students’ low effort refer to the former and latter, respectively. Next, these barriers were transformed into internal and external needs that should be fulfilled to assist their learning. The results of this study may bring fruitful implications for language teachers to conduct classroom activities and universities to provide support service accessible for D/HH students.

Keywords: needs, deaf and hard-of-hearing students, English as a Foreign Language, barriers

As the Government granted access for students with disabilities to inclusive education, their number pursuing higher education has been gradually ascending. In Indonesia, for instance, there was merely 0.94% students with disabilities pursuing higher education in 2009 (Marjuki, n.y), while according to the data from SBMPTN (Committee for Student Admission Selection Test to State Universities in Indonesia), the number of young adults with disabilities applying to state universities has increased from 148 people in 2013 to 193 people in 2014 (Harahap, 2014). Although this number is insignificant compared to the number of those not pursuing tertiary education, the trend tends to rise. Of all the students with disabilities attending universities, the number of deaf and hard-of-hearing (D/HH) students is relatively significant. Since its declaration as the first inclusive university in Indonesia in 2012, Universitas Brawijaya has admitted 36 students with disabilities, 27 of whom were the D/HH students (PSLD, 2013).

As university students, D/HH people must meet with expectations and standards applied by university just like their hearing peers, one of which is the fluent mastery of English particularly in non-English speaking countries. English mastery becomes a university requirement for all students attending higher education in Indonesia because of the prominent role this language plays in academic as well as work settings. While this is still a challenge for most hearing students learning English in non-English speaking countries, a much greater challenge is obviously faced by D/HH students mainly due to their linguistic barriers (Barnes et al., 2007). These barriers may eventually lead to their lack of active participation in classroom activities and discussion, which adversely influences their academic success (Antia et al., 2006).

Likewise, the language teachers, who are commonly untrained to teach D/HH students, might cope with similar problems in teaching them the target language. Their lack of awareness on D/HH students’ characteristics might lead to giving them inappropriate treatment, which may hinder their learning (Stinson and Antia, 1999). Despite the strategies and methods proposed (see Brokop and Persall, 2010; Clymer and Berent, 2007; Fukuda, 2009; Westwood, 2009) in helping teachers deal with D/HH students’ communication skills in their EFL class, teachers of English in general still find it difficult to handle this class where D/HH students are enrolling.

Few studies focusing on EFL teaching for D/HH students at inclusive education have been conducted. Freel et al. (2011) investigated the role of American Sign Language (ASL) as a bridge in understanding English reading texts, which shows positive relationship between D/HH people’s ASL proficiency and their English reading skills. Since all the undergraduate participants involved here utilized ASL at young age, this study failed to mention whether the same principle applies to those whose native language is neither ASL nor English and learn ASL at a later age as in the case of D/HH people living outside the United States.

The most current one was conducted by Szymanski et al. (2013). They investigated the needs of D/HH students by identifying their barriers from the perspectives of not only D/HH students themselves, but also of hearing individuals from diverse backgrounds, roles, and geographic locations, eighty-five percent of whom
have experienced in dealing with D/HH students. This quantitative survey study, however, did not specifically highlight the needs of D/HH students in a particular school setting, such as in an EFL class. Thus, the current study is worth investigating since there has been no study focusing on the needs of D/HH students in learning EFL particularly at higher education context.

Prior to analyzing the needs of D/HH students in learning EFL at higher education, it is necessary to identify the barriers that D/HH students face in learning English. This study, thus, aims at two folds: (i) to identify the barriers that deaf and hard-of-hearing (D/HH) students in learning English as a foreign language at higher education, and (ii) to analyze the deaf and hard-of-hearing students’ needs, transformed from their barriers, to help them cope with their English learning.

Methods

This is a needs analysis-based study employing a qualitative approach aiming at identifying the barriers and the needs of the D/HH students in learning English at higher education. A qualitative approach was employed due to the diverse methods and sources of the data, so that rich and in-depth description of the data could be obtained. Furthermore, this approach was used to fill in the gap of the previous study utilizing a quantitative survey (see Szymanski et al., 2013).

Six D/HH undergraduate students from the Fine Arts Program of Universitas Brawijaya in Indonesia were chosen to participate in this study. The reason for this choice was because all of these students have been taught in the same EFL class by the researcher, which eased the observation and data analysis process. Another reason was because five of them were all in the same class, and thus it would be easier to observe their participation and interaction not only among their non-hearing group, but also with their hearing peers and interpreter(s). Each of the students comes from diverse family, hearing level, and educational backgrounds, and thus receives different language treatment.

Since the researcher also played the teacher role in this class, participant observation was employed for one semester period in this study. During observations, the researcher did some note-taking whose data later would be used as the basis to design the questionnaire as well as the interview questions. The documents collected during classroom activities, such as students’ portfolios, tests, scores, were also taken into account for analysis. At the end of the class, these students were given a questionnaire regarding their barriers and needs in learning English. Due to their limited literacy skills, some of their answers were quite incomprehensible, so semi-structured interviews were also conducted to some of them, mediated by an interpreter, to gain more clarification as well as consistency of their answers.

These data were then compared and checked for further clarification by collecting more data from different sources. In this study, one teacher of English, two interpreters, and one tutor were also interviewed to identify their roles in the D/HH students’ English learning, the students’ barriers, and needs from each of the interviewees’ perspectives. These data obtained from various sources and methods were then triangulated to gain more dependable and credible data (Long, 2005).

Findings

Based on the questionnaires, interviews, and observations, it was found that three of the D/HH students show better English proficiency than the others. However, all of them admitted that they still find barriers in learning English that could be classified into external and internal. These barriers are later transformed into internal and external needs, which will be further elaborated at discussion.

Internal barriers

The first barrier is related to the literacy skills in which most D/HH students show low English literacy skills comparing to the hearing students. Although they have studied English in high school, they still find difficulties in comprehending texts and constructing sentences. Both the sentence structure and the vocabulary are considered to be complicated for them as found in a response from the questionnaire by one D/HH student when asked about how well she is in English literacy:

"membuat kalimat bisa, tetapi tidak paham"
[I can make a sentence (in English), but I don’t understand what it means].

This is also supported by her English scores in literacy activities. She got the lowest score in the class among the hearing as well as the non-hearing peers.

The second barrier is the learning effort. Based on the questionnaire, it could be identified that those who have better literacy are those who tend to have considerable effort in learning, such as using internet to read English texts and joining English tutorial in campus. They also carry dictionary either the digital or printed one to aid learning. The others, however, merely study English in class and rely on the interpreter. They never even use dictionary while learning and seem to have less social interaction, especially with the hearing peers. Based on the observation, it was found that they barely interacted with the hearing. During presentation session, for
example, when they had to work in pairs with the hearing peer, they tended to be more passive than their hearing partner.

Finally, in terms of internal barriers, D/HH students seem to have low participation in support service which is provided by Study and Service Center for Disabled Students (PSLD). There is a tutor who gives English tutorial for all disabled students in the university. Yet, only those with high motivation join the tutorial. Among six D/HH students, there is only one student regularly attends the program, whereas the rest argued that their absence was due to a timetable clash. However, the tutor assumed that it is the low motivation that may hinder them from joining.

**External barriers**

Related to external barriers, it was found that the difficult material becomes one of the barriers. Since it is English for Specific Purposes (ESP) for Fine Arts, the topics are about arts which cover aspects of arts, history of arts, schools of art, art works, and artists. Thus, there are many technical terms related to this area of study covered. While they are still struggling with general vocabulary, it becomes a challenge for D/HH students to deal with technical vocabulary.

The second barrier is the lack of visual media. The fact that D/HH students cannot produce or hear utterances makes them easier to study by using visual media. Pictures and films with subtitles help them to understand the materials. Yet, not all of them are available in such forms. Based on the questionnaire, almost all of them emphasized the need of visual media and dictionary to learn English.

Interpreters proficient in English are also crucial in English class since it influences the quality of translation. By using Indonesian sign language (Bisindo), the interpreter transfers what the lecturer says in English. The interpreters argue that they are not supposed to make D/HH students understand the material; instead, they only interpret what the teacher says. However, due to the limited number of interpreters having good English proficiency, which is confirmed by the interpreters from the interview, it was revealed that several classroom observation that the D/HH students were assisted by an interpreter having low English proficiency, which might impact on their interpretation.

Another barrier is the English teacher’s readiness having D/HH students in her class. It is common knowledge that teachers prepare syllabus and materials before the semester starts, assuming that these are applicable for hearing students. However, it became an uneasy task for the teacher under study to deal with D/HH students after knowing that several of them also enrolled in her class at the first meeting. Being worried about the appropriate teaching strategy, material, and assessment method that can be applied for both the hearing and D/HH students may influence the teaching performance as well as the classroom atmosphere.

**Discussion**

Every D/HH student has different proficiency which is caused by some factors. The way the family communicates with them and the communication treatment treated at schools they used to attend might also play a role in shaping their language proficiency (Freel et al., 2011; Szymanski et al., 2013). As found from the questionnaire and observations, those who attended inclusive high schools tend to be more independent than those who did not because there was no interpreter who helped them interact with the peers and teachers and thus received the same treatment as other hearing students. Treating disabled students as equals has been one of the goals of inclusive education, which may help to minimize the discrepancies between the disabled and non-disabled and eventually increase their career opportunities (OECD, 2011).

Because they had to communicate with their hearing peers and teachers, these D/HH students seemed to have considerably good language proficiency and communication skills. This may not be the case with those from special high school for disabled, however, where much tolerance in learning given by the teacher might play a role in their learning and communication barriers at inclusive university, as admitted by two of D/HH students under study. Consequently, those having these problems seemed to less participate in classroom activities and discussion, which adversely influences their academic success (Antia et al., 2006). This is not to say that all students graduated from this special school must have more language and communication barriers than those from inclusive school, but it is the language treatment applied to the D/HH students by the school’s teacher that might be the issue. The case of one D/HH student as one of the subjects of this research whose English literacy skills is good despite her enrolment in special high school might indicate that this is not a general case. Apart from this, professional and trained teachers and tutors are crucial to help meet the needs of D/HH students with their language proficiency and communication skill by providing English tutorials that should be attended by all D/HH students.

Next, more trainings for interpreters as well as D/HH students need to be conducted by introducing them to American Sign Language (ASL) due to its influence in helping to improve students’ English literacy skills (see Freel et al., 2011), although further research in this area is still worth conducting.
Finally, since it was found that visual media may help D/HH students to understand the material, its use is highly recommended. In a language class, the use of films and pictures may stimulate their understanding of context. This is in line with Pritchard’s (2004) suggesting better results in language learning by enhancing pupils’ interaction opportunities using video phones, video letters, and IT.

Conclusions
The success of EFL learning for D/HH students in an inclusive class is supported by several aspects. The family support is the most important one because it mainly helps students’ self-development and proficiency, which then influences their ability in higher education. Almost all of the barriers found were related to the support that the students get. However, it will show better result when D/HH student also have high motivation and effort to develop themselves.

After conducting this needs analysis, some suggestions are provided. Because English is a compulsory subject, English tutorial should be a compulsory program for D/HH students which is important to minimize the discrepancy of the language competence in the university and that in high school, and thus the dependence on interpreters could be lessened. It is also crucial to enhance teachers’ awareness on D/HH students to help them cope with their learning. Lastly, since this study only focuses on the needs of D/HH students in learning English, further studies may elaborate it into suitable teaching method, materials, and assessment.

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