EFL Learners' Use of the Modals and Quasi-Modals of Obligation and Necessity

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This study examines the use of the modals and quasi-modals of obligation and necessity, which involves the layering of *must, should, have (got) to, got to*, and *need to* in a corpus of cross-cultural communication between EFL learners. The study compares the EFL learners' corpus with a sub-corpus of ICE-GB in terms of token counts and semantic/functional distributions because International Corpus of Standard varieties of English serves as common reference points for international comparison of varieties of English. The results showed that *must, should*, and *have to* were the main players in both the corpus of EFL learners and that of native speakers. However, some discrepancy exists between EFL learners' corpus and the native speakers' corpus in the use of the modals and quasi-modals of obligation and necessity. Compared to the corpus of native speakers, the corpus of EFL learners was distinctively different in the relative unpopularity of *have to* and in the comparative popularity of *must* particularly for root meaning. Suggestions were made for using computer corpora in understanding EFL learners' language use. And pedagogical implications were made for teaching English modality considering the current usage of the modals and quasi-modals in Standard varieties of English and helping the students develop pragmatic competence.

[modality/modal/quasi-modal/root/epistemic/obligation/necessity]

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I. INTRODUCTION

There has been a considerable body of conceptual and empirical research on the English modals (Beiler, 2010; Coates, 1983; Coates & Leech, 1980; Collins, 2007, 2009; Driven, 1981; Duffley et al., 1981; Jung & Min, 1999; Palmer, 1990; Tagliamonte & D'Arcy, 2007). The semantic category of modality has attracted the interest of a large number of linguists and the complexity of the meanings expressed by the English modals has presented a challenge to both semantic theory and descriptive grammar (for descriptions of modal semantics based on textual data, see Coates, 1983; Palmer, 1990).

In addition to their semantic complexity the modals display a significant amount of regional variation and register variation (Biber et al, 1999; Coates, 1983, 1995; Collins, 1988, 2007, 2009). Extensive descriptions of the English modal system suggest that there exists significant variation in the modal systems of different varieties of English (Coates & Leech, 1980; Collins, 2007; Ljung, 1996; Tagliamonte & D'Arcy, 2007) and the English modals are currently undergoing change in their usage in all varieties of English (Leech, 2003; Jankowski, 2004). Studies on the modals also found that notable are differences in the distribution of modals in different kind of registers. Certain modal verbs differ greatly in their distribution in different kind of registers, while others are fairly evenly distributed (Biber et al., 1999; O'kaeeffe et al., 2007).

Among the English modals, no other modals have received quite the attention showered on the modals and quasi-modals of obligation and necessity, which involves the layering of *must, should, have(got) to, got to*, and *need to* (studies include Coates, 1995; Collins, 2005, 2007; 2009, Tagliamonte & D'Arcy, 2007). Corpus-based studies on the semantics of the modals of obligation and necessity have been conducted but they have been limited in scope (Coates, 1983; Collins, 1988, 1991; Leech, 2003; Nelson, 2003; Smith, 2003) except Collins (2005, 2009) who compared the distribution of these modals and quasi-modals across the major varieties of contemporary English and Tagliamonte and D'Arcy (2007) who examined data from corpus of Canadian English from the longitudinal perspective.

However, the use of modals in EFL learners' discourse represent a little-studied area and we still know little about how it is typically realized in EFL learners' interaction and how it is different from that of native speakers'.

Modals represent a well-documented feature of both spoken and written discourse and an important communicative resource because they play a significant role in pragmatic functions. But modals still represent a complex feature of English for even advanced English language learners to acquire (Beiler, 2010; Brown & McCreary, 1977; Cook, 1978), and "the command of which greatly influences how English learners are perceived" (Beiler, 2010, p. 1). Therefore, training English language learners in

contextually appropriate usage of the English modals is crucial in preparing learners for successful language use both inside and outside of the classroom.

This study aims to examine the use of the modals and quasi-modals of obligation and necessity in a corpus of cross-cultural communication between EFL learners through the on-line discussion. More specifically, the study compares the EFL learners' corpus with a corpus of native speakers in terms of token counts and semantic/functional distributions. A standard variety of English was chosen to compare with the learners' corpus because of the central role of Standard varieties of English in ESL and EFL teaching (Strevens, 1981) and because they serve as common reference points for international comparison of varieties of English (Crystal, 2003). This study aims to gauge which modals and quasi-modals do EFL learners prefer for expressing obligation and necessity and what meanings do they assign to the modals and quasi-modals of obligation and necessity.

II. SEMANTIC FRAMEWORK

The precise notions expressed by the English modals continue to be the subject of much debate. But as Palmer (1990, p. 2) indicates, a suggestion that modality is concerned with the 'opinion and attitude' of the speaker seems a fairly helpful definition. In traditions of the semantic analysis of the English modals, there is little debate that each modal expresses two or more independent meanings (Coates, 1983, 1995; Collins, 2007; Huddleston & Pullum, 2002; Lyons, 1977). However, much debate as focused on the matter of 'the ambiguity phenomenon'. Most of the modals produce cases which, in abstraction from context, are "ambiguous between an epistemic and non-epistemic meaning" (Collins, 2007, p. 475). For example, it is not clear that *Tom may visit* means 'Tom is permitted to visit' or 'It is possible that Tom will visit'.

Given the complexity of defining the precise meanings expressed by the modals, several classification systems of modal meanings have been proposed. Coates and Leech (1980, p.25) divide modal meanings into epistemic and root, the former imputes "a state of belief to the speaker regarding the truth of some proposition", whereas the latter "refers to a phenomenon". Coates (1983, 1995) and Collins (2005) repeat the root versus epistemic distinction. Using different terminology, Quirk et al. (1985, p. 485) distinguish between "intrinsic" modality, which refers to actions and events that humans directly control, and "extrinsic" modality, which involves human judgment of what is or is not likely to happen. Palmer (1990) and Huddleston and Pullum (2002) adopt a tripartite classification of modal meanings: epistemic, deontic, and dynamic. Epistemic modality is concerned with the speaker's commitment to the truth of the proposition, deontic modality with conditions relating to the completion of an action deriving from an

external source, and dynamic modality with an individual's ability or volition (Palmer 1990, p. 35-37).

1. Root and epistemic meanings

In identifying the kinds of meaning relevant to the descriptions of the modals and quasi-modals of obligation and necessity, this study adopts a bipartite classification of modal meanings based on Coates' (1995) distinction between epistemic and root modality. Most of the modal expressions under review in the study have two main meanings associated with different types of 'necessity': epistemic necessity, involving the speaker's inference about the truth of the proposition and root necessity, that is 'obligation', relating to the social world of obligations, duties, recommendations and the like (Collins, 2005, p.251). According to Collins (2005), obligations can be distinguished as 'subjective', where the speaker is the source of the obligation as in (1a-b) and 'objective', where the source of the obligation is external to the speaker as in (1c-d).

(1) a. I think you must check the bus schedule.
  b. I must try golf before I get to thirty.
  c. The hearing must ensure that all the statements are recorded.
  d. The bank must endure the stress test.

When the source of the obligation is the speaker, the modal represents a typically strong performative meaning as in (1a), or less directive meaning as in (1b) where the root *must* represents rather exhortation than kind of compulsion. The *must* in (1c) and (1d) where the source of the obligation is not the speaker but some external body gives even weak sense of obligation. The examples in (1) show that the degree of obligation ranges from strong to weak.

General finding in literature is that root meaning of the modals of obligation and necessity such as *must* recedes while epistemic meaning holds its own (e.g. Coates, 1983; Collins, 2005; Jankowski, 2004; Tagliamonte, 2004). The decline of English modals such as *must* generally is due to the emergence of a new category, the quasi-modals, which include forms such as *have to* and *need to* (see Krug, 2000; Tagliamonte & D'Arcy, 2007). Westney (1995, p. 11) associates this 'quasi-modal' status with the process of grammaticalization. Grammaticalization entails a development in which an erstwhile lexical unit is transformed into a more grammatical one. In the case of at hand, lexical verbs such as *have* and *need* appear to be becoming makers of modality (Tagliamonte & D'Arcy, 2007, p. 49). Grammatical change is more often initiated in the spoken than in the written medium (Leech, 2003, p. 226). This study takes the meaning

of obligation and necessity as the point of departure and examines the way comparable forms are used to express it.

III. METHOD

1. Corpora

This study used two sets of corpora, the EFL learners' corpus (NNC) and the native English speakers' corpus (NC). The NNC was compiled by a corpus of cross-cultural communication through the bulletin board system through which college students of English at Japanese and Korean universities interacted with each other discussing the local and global issues. Seventy two students (32 Korean who registered in a national university in Korea and 40 Japanese from a private university in Japan) participated in on-line discussion through the bulletin board system for ten months in 2011. All Korean participants majored in English education or English language and literature, and Japanese students were English and computer science majors. Participants from both countries volunteered for the on-line discussion. The NNC contains of 2400 messages totaling about 289,774 words, each message having an average length of about 128 words. Though the students wrote messages through the bulletin, their on-line discussion is quite similar to the spoken communication. It was informal and almost real time interaction.

For the native speaker corpus, a sub-corpus of the International Corpus of English Great Britain (ICE-GB) was used. ICE-GB is the British component of the International Corpus of English (ICE) which was first released in 1998. Since then it has been used for research and education in universities, colleges and schools all over the world. ICE-GB contains one million words of spoken and written British English from the 1990s. The ICE consists of total twenty varieties of English around the world for comparative studies of English worldwide. The ICE United States is not available yet. Currently available ICE corpora include Canada, East Africa, Great Britain, Hong Kong, India, Ireland, Jamaica, and Singapore. Among these, ICE-GB was selected for the corpus of Standard variety of English. The sub-corpus of written English in ICE-GB consists of formal writings in both academic and non-academic contexts except some personal letters. Considering context-sensitive nature of the modals, therefore, in this study the sub-corpus of ICE-GB spoken discourse, in particular, face-to-face conversations in the workplace, broadcast interviews, and broadcast discussions, was used. The speakers of the texts are aged 18 or above and educated in the Great Britain. The NC is made of texts

of 50 conversations, 10 interviews, and 10 discussions with a total of 149,505 words. Each text of the NC has an average length of about 2,000 words.

2. Procedure

This study focuses on the realm of obligation and necessity, which involves the layering of *must, should, have to, have (got) to, got to*, and *need to*, as in (2) below.

> (2) a. That is one of the main criteria you *must* take into consideration.
> b. Hey, you *should* quit right now.
> c. Things have changed. So you *have to* change with it.
> d. You'*ve got to* get control of your household!
> e. I think she *gotta* go for the work.
> f. You don't *need to* repeat it.
> (NC)

WordSmith Tool (Scott, 2001) was used to find the modals and quasi-modals of obligation and necessity in the two corpora. The primary use of WordSmith Tool is to generate concordance or listings of all the occurrences of any given word in a given text, with words shown in context. With the use of WordSmith 4.0 (Scott, 2001), the five modals and quasi-modals were automatically retrieved from the NNC and the NC, and then manually sorted.

First, the number of tokens of the modals and quasi-modals in the two corpora was compared in order to see the difference in the use of the modals and quasi-modals between the NNC and the NC. Then each of them was examined to look at which one EFL learners prefer for expressing obligation and necessity and what meaning they assign to the each modal and quasi-modal.

IV. RESULTS

1. Frequency of form

Table 1 shows the frequencies of the tokens of the modals and quasi-modals used in the NNC and the NC. Since the two corpora differ in size (289,774 words for the NNC and the 149,505 words for the NC), frequencies are normalized to tokens per 10,000 words and raw frequencies are given in parentheses.

TABLE 1

Frequencies of modals/quasi-modals of obligation and necessity

	NNC	NC
must	8.0(250)	6.5(97)
should	9.2(260)	11(164)
have to	6.4(180)	12.4(185)
have got to	2.3(60)	3.9(58)
got to	1.6(46)	2.6(38)
need to	2.3(60)	1.9(28)
total	30.6(856)	38.3(570)

The frequency in the token analysis indicates that EFL learners used slightly fewer modals and quasi-modals which involve the realm of obligation and necessity in their cross-cultural communication than the native speakers (30.6 vs. 38.3). Considering the frequencies of each modal, Table 1 shows that *must, should*, and *have to* are main players followed by *have got to, got to*, and *need to* in both the NNC and the NC. This is in line with the current extensive corpus-based studies (Collins, 2005; Leech, 2003) which report the functional expansion of *have to* to the realm of modality in Modern English, particularly in spoken English. According to Leech (2003), *must* has declined in recent decades in British English, while *should* and *have to* have increased in frequency over the same period. As Table 1 above indicates, *must* is markedly less popular than both *should* and *have to* in the NC (by a ratio of approximately 1:1.7:2). However, the NNC contrasts the NC in having the relatively high frequency of *must* and comparatively low frequency of *have to*. While *have to* and *should* are primary exponents of obligation and necessity in the NC, *should* and *must* are more common than *have to* in the NNC.

The overall frequencies of *must* revealed a clear difference between the NNC (8.8 tokens) and the NC (6.5 tokens). The overall frequencies of *should* also revealed the difference between the NNC (9.2 tokens) and the NC (11 tokens). The frequency of *have to* in the NNC is just about half of that in the NC (6.4 vs. 12.4 tokens). Table 1 shows that *have to* is about twice as popular as *must* in the NC, but the difference is not so clear in the NNC. Findings indicate that EFL learners comparatively underuse *have to*.

Table 1 also indicates that both *have got to* and *got to* are less commonly used both in the NNC and the NC. *Have got to* and *got to* are more popular than *need to* in the NC, while *need to* is as popular as *have got to* in the NNC. Among the quasi-modals, the native speakers have a strong tendency to prefer *have to* followed by *have got to*, while EFL learners prefer *have to* followed by *have got to* and *need to* equally.

2. Distribution of forms by function

Turning to the functions expressed by each modal and quasi-modal, a more detailed examination will be made on EFL learners' use of them in comparison with that of native speakers'. Since the two corpora differ in size (289,774 words for the NNC and the 149,505 words for the NC), frequencies are normalized to tokens per 150,000 words and percentages are given in parentheses.

1) Must

TABLE 2
Must

	Root	Epistemic	Total
NC	37(38)	60(62)	97
NNC	92(73)	34(27)	126

As Table 2 indicates, while root *must* is markedly more popular in the NNC than the NC (by a ratio of 2.5:1), epistemic *must* is remarkably more popular in the NC than the NNC (by a ratio of 1.6:1).

For the NNC, Table 2 shows that root *must* is three times as popular as epistemic *must* and this finding strikingly contrasts with that of the NC. Collins (2005) and Leech (2003) suggest that root *must* is less popular in speech than writing in Standard varieties of English, contrasting with *have to* in this regard and that the decline of root *must* in speech is partially related to strongly subjective and directive force *must* has. Biber et al. (1999) also suggests that *must* is relatively rare in marking personal obligation, but when it encodes logical necessity it is much more common, particularly in spoken English. The findings on the NC in Table 2 are quite compatible with those of previous research.

Root *must* is related to the social world of obligation or duties. A pragmatic factor differentiates between objective and subjective obligation (Coates, 1983; Collins, 2005). Objective obligation is imposed by a source external to the speaker as in the example in (3a) and subjective obligation by the speaker, demonstrated in the examples in (3b-c).

(3) a. My father *must* have a car. That's why he saved money so far! (NNC)
    b. You *must* look after Thomas. (NC)
    c. I *must* go. You can come with me. (NC)

Epistemic *must* typically expresses a confident or assured inference about the truth of the proposition, as in the examples in (4) below:

(4) a. I must have been near Dublin in my… early teens. (NC)

b. It must be getting harder and harder! I hate this, though. (NNC)

2) Should

TABLE 3
Should

	Root	Epistemic	Total
NC	145(89)	19(11)	164
NNC	130(100)	0(0)	130

As Table 3 indicates, Root *should* is markedly more popular both in the NC and NNC. Leech (2003) suggests that *should* has undergone a mild decline mainly at the expense of its epistemic uses and root *should* is still quite popular in Standard varieties of English. The suggestion is in line with the findings in Table 3. Epistemic *should* is considerably less frequent than root *should* in the NC. In the NNC, all tokens of *should* showed root use with no occurrence of epistemic use.

Collins (2005) suggests that *should* tends toward the weak force and this is why examples conveying strongly subjective and objective obligations as in (5a-b) are comparatively infrequent as against those expressing weakly subjective and objective advices as in (5c-d).

(5) a. You *should* leave! (NC)

b. Dublin *should* not be expanded any more. (NC)

c. Perhaps, you *should* talk to your teacher after the class. (NC)

d. I don't understand why people in Asia *should* learn at least one of European languages. (NNC)

3) Have to

TABLE 4
Have to

	Root	Epistemic	Total
NC	185(100)	0(0)	185
NNC	90(100)	0(0)	90

As Table 4 shows, *have to* is used only for root meaning both in the NC and NNC. There are no tokens of epistemic *have to* in the two corpora. But *have to* is much more

popular in the NC than the NNC (by a ratio of 2:1). In view of Collins (2005) and Smith (2003)' finding that *have to* has enjoyed increasing popularity in recent usage of all varieties of Standard English including British English and *have to* is more commonly found in spoken than written registers, it comes as no surprise that it should, as Table 1 above shows, outstrip *must* in the NC (by a ratio of 2:1). The comparative popularity of *have to* over *must* in Standard varieties of English might lie in its greater objectivity, and consequently less overly authoritarian tone when used in face-to-face interaction (Biber et al., 1999; Collins, 2009). However, as Table 1 and Table 3 indicate, EFL learners have a strong tendency to prefer *must* to *have to* for root use.

In view of Collins' (2005) suggestion that *have to* differs from *must* in its strong preference for objective root over subjective root meaning, it is also comes as no surprise that objective root *have to*, where the source of the obligation is external to the speaker, is more popular in the NC. But EFL learners show relative preference for subjective root meaning as in (6a-b) over the objective use as in (6c-d).

(6) a. You know, I *have to* take sleeping pills every day. (NNC)

   b. I *have to* admit that I could not prepare for the mid-term. (NNC)

   c. I believe Korean *has to* be one of the important languages in near future. (NNC)

   d. I mean, umm, it *has to* be serious, right? (NC)

In spite of the functional expansion of *have to* and its increasing popularity in current usage of Standard varieties of English, the rarity of its epistemic meaning is due to the incomplete grammticalization (Collins, 2009, p. 288).

4) Have got to

TABLE 5
Have got to

	Root	Epistemic	Total
NC	58(100)	0(0)	58
NNC	30(100)	0(0)	30

Semantically *have got to* is similar to *have to* in serving primarily as a marker of strong root necessity. But *have got to* shows a sharp contrast to *have to* in its syntactic behavior such as its lack of non-tensed for, its inability to co-occur with modals, and etc. As Table 5 shows, *have got to* is comparatively more popular in the NC than in the NNC (by a ratio of almost 2:1). Like *have to*, every tokens of *have got to* are used for root

meaning in both corpora. As Table 1 above indicates, *have to* markedly outstrips *have got to* in the NC and this finding is compatible with the previous research (Collins, 2005; Leech, 2003) that note an overall decline of *have got to* in recent British English. The NNC has much lower frequency of *have got to*.

(7) a. You *have got to* visit your grandma every summer or so. (NC)

b. Sometimes I feel I *have got to* stop my mom talking too much! (NNC)

5) Got to

TABLE 6
Got to

	Root	Epistemic	Total
NC	38(100)	0(0)	38
NNC	23(100)	0(0)	23

Got to is the least popular in the NNC. *Got to* in Modern English commonly occurs in phonologically and graphically reduced form as *gotta* (*gotta* accounting for 87% and 100% of all tokens in the NC and NNC each). Like *have got to*, Table 6 shows that the overall frequencies of *got to* are quite low in both corpora, and all tokens of *got to* are used for root meaning as in examples in (8).

(8) a. I *gotta* go now! But you can stay if you want. (NC)

b. I *gotta* finish this stuff whatever you say, okay? (NC)

6) Need to

TABLE 7
Need to

	Root	Epistemic	Total
NC	28(100)	0(0)	28
NNC	30(100)	0(0)	30

Need to is the least popular in the NC. Table 7 displays that the overall frequencies of *need to* are quite low in both corpora, and all tokens of *need to* are used for root meaning as in the examples in (9).

(9) a. You *need to* finish the final draft up soon. (NC)

b. You know, I believe, I don't *need to* talk to her twice. (NNC)

According to Collins (2009), the root use of *need to* has a pragmatic meaning that acquires the illocutionary force of exhortation rather than obligation associated with the root *must* or *have to*. In (9a), for example, the implication that the speaker is sensitive to the addressee's needs gives it a less overbearing tone than would be implied by *must* or *have to*.

V. CONCLUSION

This study aimed to examine the use of the modals and quasi-modals of obligation and necessity, which involves the layering of *must, should, have (got) to, got to*, and *need to* in a corpus of cross-cultural communication between EFL learners in an e-learning environment. The study compared the EFL learners' corpus with a sub-corpus of ICE-GB in terms of token counts and semantic/functional distributions because International Corpus of Standard varieties of English serves as common reference points for international comparison of varieties of English (Crystal, 2003) and play an important role in ESL and EFL teaching.

The interrogation of the two corpora has yielded insights into the semantic/functional field of obligation and necessity associated with the modals and quasi-modal forms studied. The results showed that *must, should*, and *have to* were the "main players" in both the NNC and the NC and this findings are compatible to the most previous research of English modals of obligation and necessity in Standard varieties of English. The tendency of the functional expansion of *have to* to the realm of modality in Modern English particularly in spoken English proposed seems to be confirmed by the findings of the present study in the corpus of native speakers and that of EFL learners. While root *have to* was the main player followed by root *should* in the NC, root *should* and root *must* were much more popular in the NNC with *have to* ranking the third. Compared to the NC, the NNC was distinctively different in the relative unpopularity of *have to* and in the comparative popularity of *must* particularly for root use.

According to Collins (2005, p. 266-67), the transcendent popularity of *have to* in speech in Standard varieties of English is attributable to its more "objective" or "democratic" sense compared to the "overt marking of power and hierarchy" associated with root *must*. This phenomenon provides a window on the grammaticalizaion of the modals of obligation and necessity: as *must* exists the system, *have to* expands into the system (Tagliamonte & D'Arcy, 2007). However, this progress or change in the modal system does not appear to be prominent in the corpus of the EFL learners.

As for the other three quasi-modals, *got to* and *need to* were used only for root meaning and have quite small numbers in both corpora. *Have got to* has also small

number in the corpus of EFL learners but relatively more popular in that of native speakers.

The results of this study must be considered exploratory due to the fact that the limited amount of data of the EFL learners' on-line discussion was analyzed and the corpus of native speakers compared does not belong to the exact same category with the EFL learners' corpus. So, the confirmation of the difference awaits further research. And the corpus of native speakers used in the present study is a sub-corpus of one variety of English, that is, British English. Other varieties of English were not included in the study. Moreover, the circumstances recognized as appropriated for the use of the modals and the function each modal is seen to fulfill might be differ markedly depending on the register variation and social factors such as age, gender, and education. So, the results of this study should be compensated in the future.

For all these limitations, this study still has both methodological and pedagogical implications. Methodologically speaking, computer corpora of both native and non-native English prove to be useful tool to yield meaningful data for investigating the quantitative and probabilistic aspects of EFL learners' language use. The data used in this study came from small sub-corpora (on-line discussion, face-to-face conversation, broadcast interviews and discussions). By isolating sub-corpora of specific contexts of interaction from very large sized corpus, researchers can get a picture of how language use becomes specialized in its context of use and how lexico-grammatical patterns become routinized. Many of the features may not be shown up if they just focus on the mega sized corpora. Therefore, more attention needs to be given to specialized sub-corpora of specific contexts.

Pedagogically speaking, several implications can be made to the teaching of the English modality. One important principle might be to discard distinctions that do not reflect current usage of the modals and quasi-modals in Standard varieties of English. *Have to* should be taught as an exponent of subjective or objective obligation in spoken English. For the root use, it would be advisable to expose language learners to the variety of quasi-modals, specially *have to*. English modals represent an important communicative resource because they play a significant role in pragmatic functions. But modals still represent complex feature of English for even advanced English language learners to acquire.

After all, language teachers would help their students by exposing them to the variety of forms they might encounter in different English-speaking contexts. It seems important to include as part of this exposure instruction on the connotations that particular usage of the modals and quasi-modals have in different situations rather than just focusing on the grammaticality. In this way language teachers enable learners to be prepared for practical and pragmatically appropriate use of the English modals and quasi-modals in real life.

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Examples in: English
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Applicable Levels: Tertiary

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