NICEにおける日本人英語学習者による法助動詞の使用傾向

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発表の流れ

- ・調査目的・コーパス紹介
- ・ 頻度数の比較
- 教科書との比較
- NS•NNSの区別
- 意味的分類
- 教材作成
- ・まとめ

調査目的

• 法助動詞(modal verbs)の使用傾向

NICE (Nagoya Interlanguage Corpus of English)

英語母語話者(NS)と非母語話者(NNS)との 使用の相違を量的・質的に考察する

NICEの紹介

Nagoya Interlanguage Corpus of English

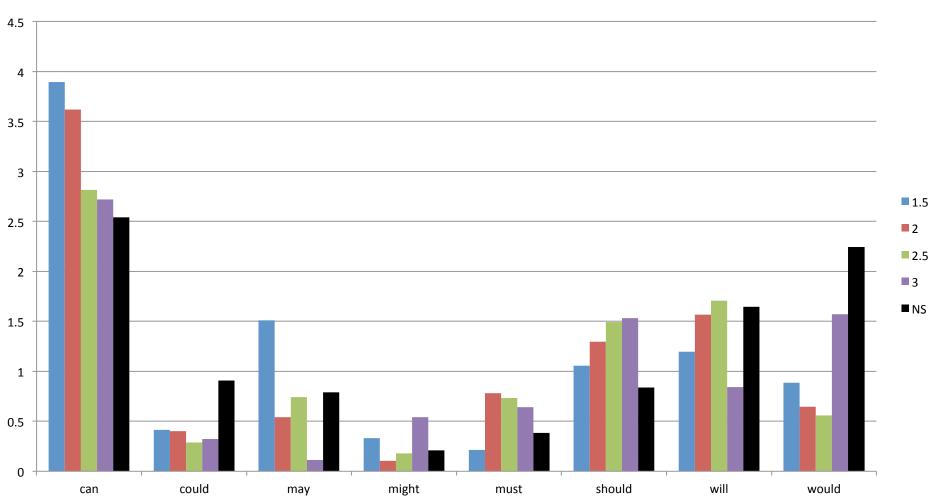
NSとNNSによる英作文

11のテーマ

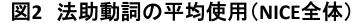
• 習熟度を英検スコアで5段階に分ける

頻度数の比較

図1 法助動詞の平均使用(NICE全体)



テーマ別の比較



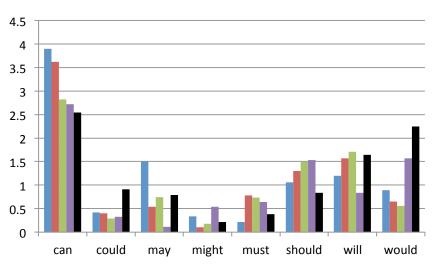


図3 法助動詞の平均使用(「お金」)

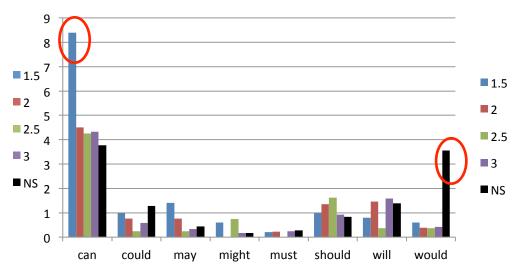


図4 法助動詞の平均使用(「学校教育)

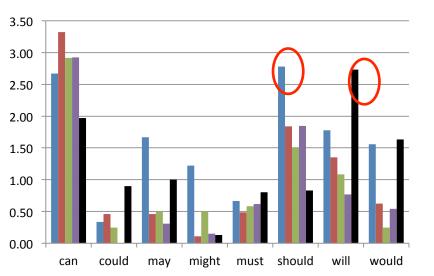
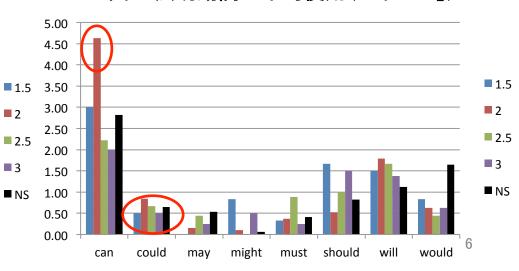


図5 法助動詞の平均使用(スポーツ」)



「お金」で見られる実例

NNS

- (1) "People <u>can</u> not live without money" (1.5)
- (2) "But after I got used to the job I *can think it's fun" (1.5)

NS

- (3) "If I wanted a car however, I would first need a Japanese driver's license" (NS)
- (4) "I <u>would</u> dream of buying a Formula one racecar someday" NS)

「学校教育」で見られる実例

NNS

- (5) "That is why we should be sensitive when we think of issues relating to school education." (1.5)
- (6) "Students should not memorize everything they hear and read." (1.5)

NS

- (7) "people will do literally anything to learn or go to school." (NS)
- (8) "If a country does not back up its people with a good education, the country will be left behind." (NS)
- (9) "This essay will deal with the school education system in Northern Ireland" (NS)

「スポーツ」で見られる実例

NNS

(10) "But I should play sports to refresh my brain and get the new ideas now." (2) (11) "So, we should start from understand our history thorough education." (2)

(12) "Gym's members are so friendly and soon I ?could become their friend." (2)

NS

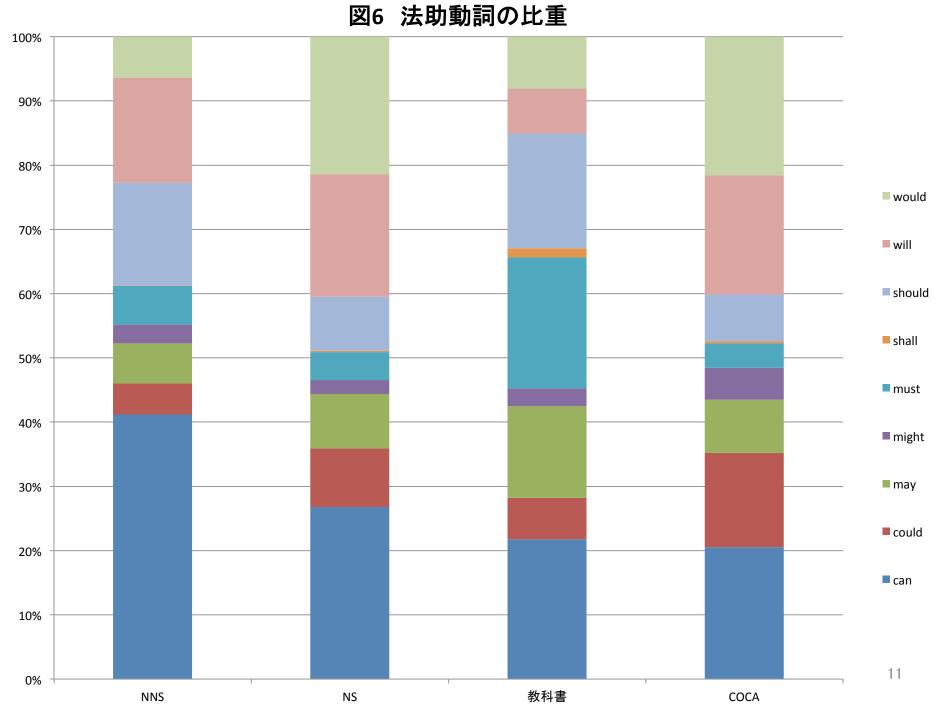
(13) "it would seem to be a peculiar decision...to pay him thirty billion yen for his services over a five-year period." (NS)

(14) "You <u>could</u> say sports were like a religion in ancient Sparta." (NS)

教科書

- ・ 文科省認定の高校英 語教科書49冊の調査
- ・「法助動詞」の解説で 用いられる368の例文 を抽出





考察

- NNS: canの過剰使用、wouldの非用
- 教科書: would will の非用は調査によると思われる
- mustの重視
- shouldの重視(NNSでもみられる)
- NNSの使用と教科書の使用がよく似ているとは言えない
- (準助動詞や副詞などは本調査の対象外とする)

判別分析1

-0.29245 11.961 < 0.001 should. -0.398180.18025 25.262 < 0.001 can total -0.48328 -0.76584 16.588 < 0.001 . 97647 3.59030 判別関数 1 と 2 の判別 0.98135 マハラノビスの汎距離: 0.312理論的誤判別率: 判別係数 標準化判別係数 would -0.20439-0.47240should. 0.35705 0.61235 0.28921 0.78969 can -0.14128-0.74994total 0.30691 定数項 判別結果集計表 判別された群 実際の群

50

67 142

• rを用いて判別分析を行う

4つの要素を以てNSと NNSを判別できる

• 正判別率72.85%

• Would/should/canを見ていくことにする

判別分析2

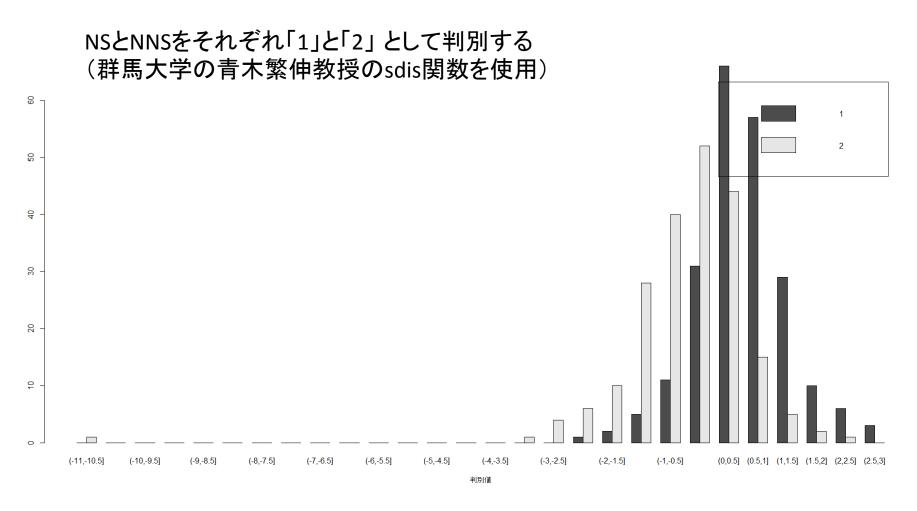


図7 判別分析

Bigram

Rank	NNS	NS Ra	ank NNS	NS	Rank NNS	NS
	1I think	of the	35they are	the death	68 <mark>I would</mark>	all the
	2 of the	in the	36 For example	from the	69 money is	there are
	3it is	to the	37 school educatio	n I would	70think it	is that
	4in the	to be	38 junior high	have to	71 n't have	into the
	5do n't	l was	39 for the	It is	72there is	going to
	6high school	for the	40 will be	think that	73 how to	that it
	7a lot	it is	41 part-time job	to a	74 as a	on a
	8lot of	is a	42 death penalty	of my	75 we should	on TV
	9want to	and the	43 we have	need to	76to think	had to
	10have to	on the	44 of money	was a	77 think about	a few
	11 can not	as a	451 want	there is	78they do	to have
	12It is	do n't	46go to	the most	79 much money	this is
	13 is not	with the	47 like to	one of	80 are many	can not
	14in Japan	in a	48to make	have a	81 on the	can be
	15to be	that the	49 and so	This is	82 very important	such as
	16think that	is not	50to get	that is	83 to have	people who
	17 <mark>we can</mark>	in Japan	51so on	for a	84 <mark>I can</mark>	a good
	18ca n't	of a	52 and the	lot of	85 about the	way to
	19 elementary school	I think	53to learn	fact that	86 need to	want to
	20I have	the same	54that the	would be	87 When I	high school
	21to study	that I	55 that they	have been	88 to work	of it
	22to do	is the	561 am	by the	89 school students	in my
	23 is very	I have	57that we	be a	90 are not	amount of
	24the world	at the	58 one of	as well	91 because they	able to
	25do not	they are	59 is that	and I	92 is good	When I
	26there are	I had	60 many people	did n't	93 when I	There are
	27 is the	death penalty	61 <mark>can be</mark>	about the	94 such as	that we
	28is a	it was	62they have	to get	95 <mark>I will</mark>	of violence
	29to the	to do	63 is important	the fact	96 we do	number of
	30people who	l am	64 able to	out of	97 to go	I could
	31have a	that they	65There are	when I	98 But I	we are
	32I was	l do	66 <mark>should be</mark>	of their	99the other	to take
	331 do	a lot	67 on TV	ca n't	100 study English	that she
	34they can	the world				

can should would その他 表2

Trigram

Rank	NNS	NS	Rank	NNS	NS	Rank	NNS	NS
1	a lot of	the death penalty	35	to study English	up in the	68	the person who	it is not
2	I think that	a lot of	36	elementary school students	the number of	69	to earn money	is one of
3	junior high school	I do n't	37	I was a	the idea of	70	the death penalty	but it is
4	and so on	the fact that	38	I think the	the age of	71	It is very	as it is
5	I want to	one of the	39	the most important	that it is	72	In this essay	a number of
6	I do n't	I think that	40	want to do	that I had	73	have much money	This is not
7	lot of money	the United States	41	that it is	people who are	74	death penalty is	I would n't
8	I think it	violence on TV	42	it is not	out of the	75	to get money	I think it
9	would like to	there is a	43	There are many	is going to	76	the importance of	I know that
10	do n't have	as well as	44	when I was	ca n't be	77	n't have to	I do not
11	I would like	in order to	45	to go to	a result of	78	lot of things	At the same
12	one of the	to be a	46	over the world	I was a	79	is not good	with each other
13	in the world	I did n't	47	in the future	I can not	80	is important for	to have a
14	think it is	the case of	48	high school students	to say that	81	a part-time job	to get a
15	they do n't	when I was	49	high school and	they do n't	82	the people who	to be the
16	is very important	of the death	50	do n't think	that they are	83	is said that	there is no
17	be able to	in the world	51	we do n't	some of the	84	in junior high	the use of
18	we have to	One of the	52	to learn English	more and more	85	have to study	the majority of
19	there are many	I had to	53	more and more	in the case	86	So I think	the importance of
20	violence on TV	the same time	54	is good for	in Japan is	87	I have to	that they had
21	have a lot	the amount of	55	go to school	do n't think	88	to talk about	that he was
22	part time job	in the United	56	all over the	do n't have	89	to communicate with $ \\$	look at the
23	the other hand	death penalty is	57	they ca n't	as long as	90	they have to	in the future
24	is one of	seems to be	58	in order to	as a result	91	the number of	going to be
25	high school student	of the most	59	do not have	I was in	92	people who have	but I do
26	they can not	is not the	60	of school education	you do n't	93	it is important	a second language
27	in elementary school	do n't know	61	it is very	you ca n't	94	do n't want	a part of
28	we ca n't	be able to	62	can not be	the end of	95	but it is	a few years
29	I do not	to go to	63	are a lot	that there is	96	But I think	There are many
30	we can not	the rest of	64	I think we	part of the	97	want to be	I would like
31	they want to	can not be	65	I did n't	of water pollution	98	lot of people	I was shocked
32	do n't know	When I was	66	to think about	of the world	99	is the most	I used to
33	When I was	I could n't	67	there is a	most of the	100	We have to	I think the
34	On the other	I ca n't						

can should would その他 表3

4-gram

Rank	NS	NNS	Rank	NS	NNS	Rank	NS	NNS
1	of the death penalty	a lot of money	35		for a long time	68		I think there are
2	in the United States	I would like to	36		It is said that	69		to learn English in
3	the death penalty is	I think it is	37		I think that the	70		there are many people
4	in the case of	have a lot of	38		when I was a	71		the rich and the
5	one of the most	On the other hand	39		to be able to	72		that violence on TV
6	is one of the	is one of the	40		start to study English	73		that elementary school students
7	I do n't think	I do n't think	41		need a lot of	74		rich and the poor
8	At the same time	all over the world	42		money is very important	75		it is said that
9	the end of the	are a lot of	43		get a lot of	76		have a part-time job
10	but I do n't	a lot of things	44		and junior high school	77		have a part time
11	as a result of	do n't have to	45		a lot of time	78		for the first time
12	I do n't know	in junior high school	46		There are a lot	79		do not want to
13	the fact that the	a part time job	47		I will talk about	80		can not live without
14	of violence on TV	junior high school and	48		think that it is	81		between the rich and
15	in the first place	a lot of people	49		the person who got	82		Some people say that
16	a great deal of	they do n't have	50		person who got the	83		I think that we
17	I would like to	When I was a	51		is very important to	84		I think that it
18	the rest of the	there are a lot	52		do n't think so	85		I do n't want
19	the death penalty in	do n't want to	53		at the same time	86		I do n't have
20	that there is a	is the most important	54		It is very important	87		what they want to
21	of the opinion that	junior high school students	55		would like to talk	88		to go to school
22	not be able to	a junior high school	56		with a lot of	89		the junior high school
23	is the fact that	I think we should	57		who have a lot	90		teaching English in elementary
24	at the same time	English in elementary school	58		who got the penalty	91		reason why I think
25	In the case of	will be able to	59		we do n't have	92		like to write about
26		junior high school student	60		was a high school	93		learn a lot of
27		a high school student	61		it is important to	94		it is important for
28		I do n't know	62		is very important for	95		it is difficult to
29		the most important thing	63		is more important than	96		gap between the rich
30		school and high school	64		has a lot of	97		education in elementary school
31		people who commit suicide	65		If we do n't	98		do n't know the
32		one of the most	66		I was a high	99		be able to speak
33		like to talk about	67		I think this is	100		as a part-time job
34		high school and high						

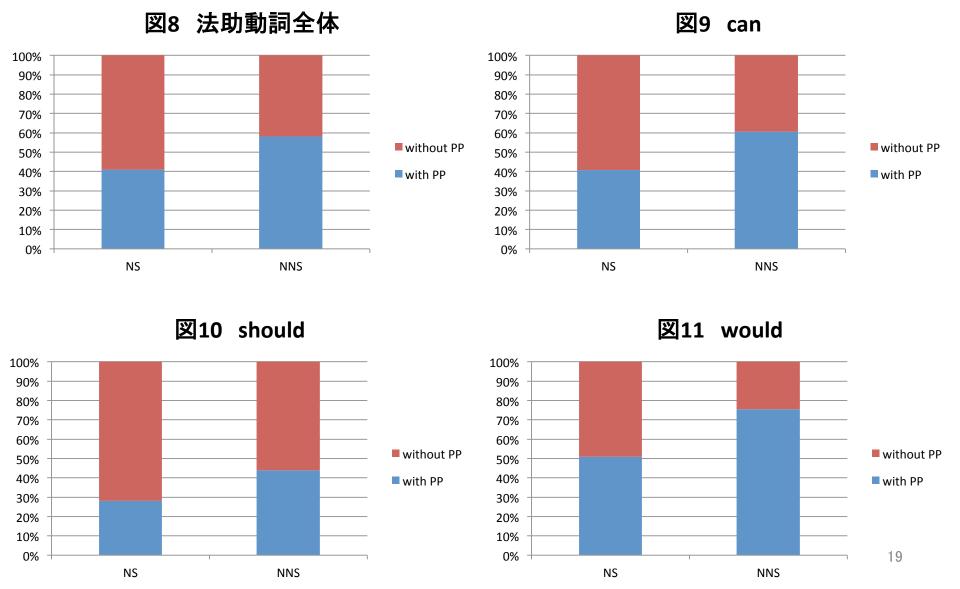
can should would その他

学習者向けの法助動詞分類

- Longman Student Grammar of Spoken and Written English(Biber et al 2002)の分類を採択
- 法助動詞を三分類する簡潔な枠組み
- Personal (intrinsic,内的)とlogical (extrinsic,外的)との対立

分類	法助動詞(準助動詞など)	意味
許可•能力	Can, could, may, might	内的:許可、可能性、能力 外的:可能性
義務•必然性	Must, should, (had) better, have (got) to, need to, ought to, be supposed to	内的:義務 外的:必然性
意志•予測	Will, would, shall, be going to	内的:意志 外的:予測

代名詞との共起



意味的分類に基づいた比較

図12 can使用例の意味的分類

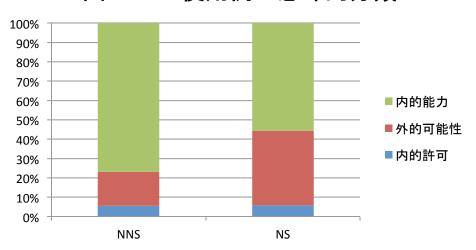


図14 would使用例の意味的分類

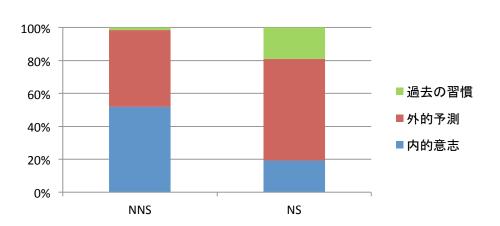
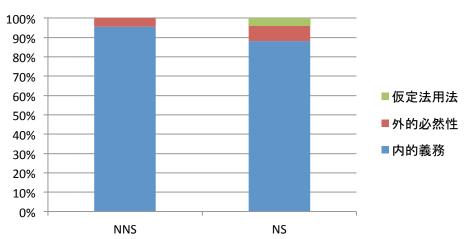


図13 should使用例の意味的分類



- NNSがより内的な用法に偏っていると 思われる
- 問題点:
- ▶ 法助動詞の多義性→一つの用法に 絞るのが難しい
- ▶ NNSの英文では推測する必要がある

教科書の場合

図15 can使用例の意味的分類

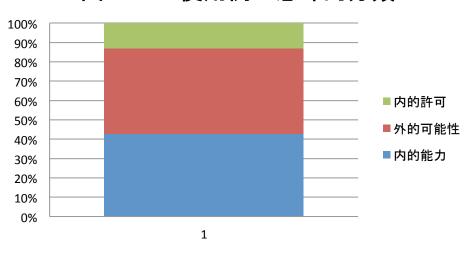


図16 should使用例の意味的分類

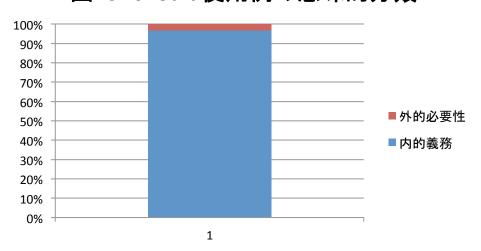
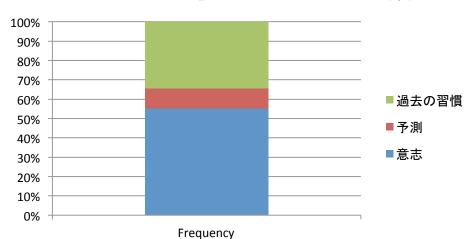


図17 would使用例の意味的分類



- Shouldの使用重視においては、NS との共通性
- 教科書が「過去の習慣」を頻繁に取り上げているが、NSはほとんど用いていない

教材への発展

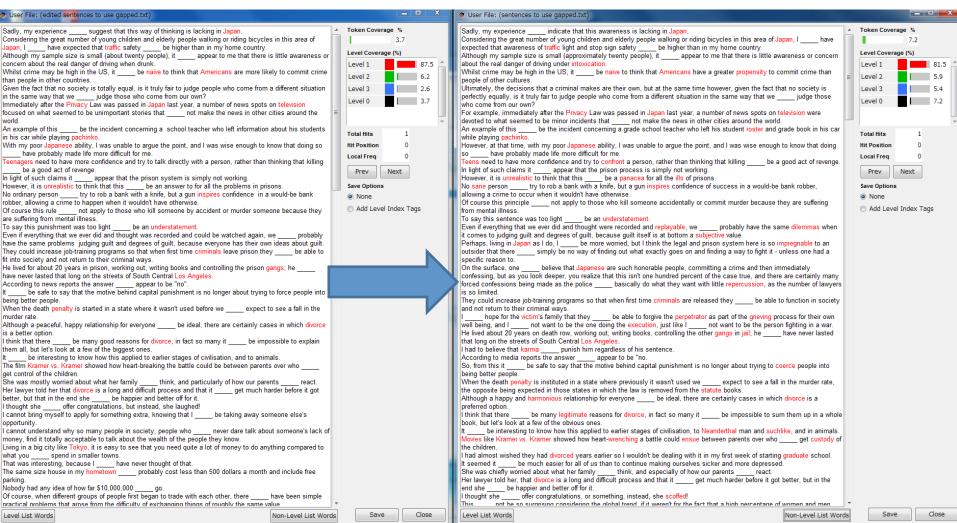
・ 学習者が目的の法助動詞を学習しているが 自分の英作文では用いていない

• 学習者に各動詞の使い方を認識させる必要

• NICEのNSの文章を基に教材を作成

・ 適切な文を100抽出し、書き換える

Ant Word Profilerによるテクストの書き換え



書き換えの結果

表5

	Token coverag e (%)	Level 1 coverage (%)	Non level list words (%)
訂正前	92.8	81.5	7.2
訂正後	96.3	87.5	3.7

訂正後のNon level list words

- 固有名詞: Americans, Internet, Japan, Los Angeles, Tokyo
- 既習と思われる語彙: drug, elementary (school), jeans, television, yen
- その他(作文テーマに関わる語彙など): criminal, (death) penalty, pollution, traffic

クローズ・テスト

• 回答を問題の3形式に 絞る

・ 各形式が持つ他の使い方を認識させる試み

自然な文脈で自然な使用例を

4
Can you fill the blanks with the correct modal verbs?
Please choose from the modal verbs below, changing their form when necessary. You can
use each one as many times as you like.
et e
CAN SHOULD WOULD.
4
According to news reports the answer (1) appear to be "no".↓
After several thousand years, we as a society (2) have long since moved pastth
e idea of solving problems with "an eye for an eye or a tooth or a tooth" way ofthinking.
e idea of solving problems with all eye for all eye of a tooth of a tooth way offininking.
Although a peaceful, happy relationship for everyone (3) be ideal, there arecert
ainly cases in which divorce is a better option.₄
·
Although English education is present in elementary schools at the moment, thenumber of
classes (4) vary greatly depending on the area or the number of teachers.
vary ground aspertanting of the first families of teachines.
Although my sample size is small (about twenty people), it (5)
there is little awareness or concern about the real danger of driving whendrunk.
An example of this (6) be the incident concerning a school teacher who leftinfor
mation about his students in his car while playing pachinko.

まとめ(1)

• NNSによる法助動詞の使用はその頻度においても意味的分類においてもNSとは異なる

• 英語教科書と同じような使用傾向がみられる

• NNSが稀にしか使っていないものを中心に教材作成を試みた

まとめ② 本調査の限界

- 3つの法助動詞のみを対象としている
- ・ 仮定法は特に取り上げていない
- 教材の効果は実証していない
- 高校向けの教科書はどれほど大学生の知識を反映しているか
- 法助動詞の意味的分類は個人の判断による
- 誤用を考察する価値もあるだろう
- 小規模なデータ→頻度の低い法助動詞の調査するには向いていない

参考資料1

- Longman Student Grammar of Spoken and Written English Douglas Biber, Susan Conrad & Geoffrey Leach 2002. Pearson Education Limited. Harlow.
- 『英語学者コーパス活用ハンドブック』 投野由紀夫・金子朝子・杉浦正利・和泉絵美編著.2013.大修館書店.
- Cloze Test Creator (オンラインクローズテスト作成)
 http://zander.io/cloze-test/
- COCA (Corpus of Contemporary American English)
 http://corpus.byu.edu/coca/
- Laurence Anthony's Website (Ant Word ProfilerやAnt Concなど) http://www.laurenceanthony.net/
- Nagoya Interlanguage Corpus of English http://sgr.gsid.nagoya-u.ac.jp/wordpress/?page_id=441
- RICよる統計処理(判別分析などのr関数) http://aoki2.si.gunma-u.ac.jp/R/
- Sketch Engineホームページ https://the.sketchengine.co.uk/auth/corpora/

参考資料2:英語教科書

- •Big Dipper English Communication II (Suken Shuppan)
- Compass English Communication I/II (Taishukan)
- Comsos English Course I (Sanyusha)
- Crown English Communication I (Sanseido)
- Crown English Expression I/II (Sanseido)
- Departure English Expression I/II (Taishukan)
- Discovery English Communication I/II (Kairyudo)
- Expressways English Expression I (Kairyudo)
- Genius English Communication I /II(Taishukan)
- •Grove English Communication I (Bun-Eido)
- •Grove English Expression I/II (Bun-Eido)
- Landmark English Communication I/II (Keirinkan)
- Mainstream English Communication I/II (Zoshindo)
- Mainstream English Expression I/II (Zoshindo)
- New Favorite English Expression I/II (Tokyo Shoseki)
- •New Stream English Communication I/II (Zoshindo)
- Perspective English Communication I/II (Daiichi Gakushusha)

- Perspective English Expression I/II (Daiichi Gakushusha)
- Polestar English Communication I/II (Suken Shuppan)
- Polestar English Expression I (Suken Shuppan)
- Power On Communication English II (Tokyo Shoseki)
- Prominence Communication English I/II (Tokyo Shoseki)
- ●Pro-Vision English Communication I/II (桐原書店)
- Unicorn English Communication I (Bun-Eido)
- Unicorn English Expression I (Bun-Eido)
- Vision Quest English Expression I Advanced (Keirinkan)
- Vision Quest English Expression I Standard (Keirinkan)
- Vision Quest English Expression II (Keirinkan)
- Vivid English Communication I (Daiichi Gakushusha)
- Vivid English Expression I/II (Daiichi Gakushusha)
- ●World Trek English Communication I/II (桐原書店)