

# Quantification of MAKE Collocations in High School English Course Textbooks

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Recently, the importance of semi-preconstructed phrases, or collocations, for foreign language fluency has come to be recognized by linguists and language teachers. In Japan, in accordance with the introduction of the new government policy in 2013 to teach English using only English in high school English classes, textbooks have been revised. Therefore, it seems worthwhile to check how one of the most useful verb collocations discussed in several previous studies, namely, MAKE + noun, is used in Communication English 1 course textbooks. In this study, MAKE + noun combinations in seven high school English textbooks were quantified and categorized. They were then checked for appropriateness as collocations using dictionaries, a reference corpus, and native speaker intuition. Based on the results of the study, recommendations for changes in the textbooks are made and classroom activities to supplement the identified weaknesses in the textbooks are suggested.

近年、外国語を流暢に話すためには予めある程度組み立てられたフレーズ（コロケーション）が重要であることが言語学者や言語教育者に認識されるようになってきた。日本では2013年に高校の英語授業を英語のみを使って教えるという新たな政府の方針が導入されたことに伴い、教科書が改訂された。従ってこれまでのいくつかの研究により最も有用であると主張されているコロケーションのひとつであるmake + 名詞の組み合わせがコミュニケーション英語1の教科書でどのように使用されているかを確認することは意義あることのように思われる。本研究では、いくつかの高校英語教科書においてmake + 名詞の定量化と分類を行い、それらがコロケーションとして適切であるか否かを辞書、参照コーパス、ネイティブスピーカーの直観を用いて確認した。本研究の結果に基づき、教科書の変更箇所を提唱し、教科書の弱点を補うための教室での活動を提案する。

**N**ATIVE SPEAKERS use a lot of prefabricated expressions, or collocations (Erman & Warren, 2000; Nattinger & DeCarrico, 1992; Pawley & Syder, 1983; Sinclair, 1991). In contrast, learners of English use fewer collocations and use them incorrectly; teaching correct collocations can improve their fluency (Howarth, 1998, 2005; Nesselhauf, 2005; Wang & Shaw, 2008). Some experienced teachers of English also suggest that teaching basic collocations improves fluency (Hill, 2000; Woolard, 2000). In this study, I examined seven high school (HS) English course textbooks to determine how many of the target collocations were included and whether they were used correctly.

The target collocations of this study included collocations with the verb MAKE in two of its senses (henceforth, verbs in all capitals stand for all their inflectional derivatives, such as *made*, *makes*, *making*, and *make*); the two senses of MAKE were “produce MAKE” and “delexical MAKE.” As the name suggests, produce MAKE comprises the uses of MAKE in the sense of producing or creating. Delexical verbs are “common verbs which are used with nouns as their object to indicate that

someone performs an action, not that someone affects or creates something” (Sinclair et al., 2007, p. 147). Therefore, in this study, delexical MAKE is defined as MAKE used in the sense of performing; it appears with an object noun that indicates some action.

## Past Studies

Fukutomi (2012) found that MAKE is the third most used verb in junior HS student essays following BE and HAVE and that MAKE + noun collocations constitute 81.3% of MAKE usage. She suggested that miscolllocations with the create/produce sense of MAKE found in these essays may be attributable to transfer of the Japanese verb *tsukuru* (produce), which can collocate with almost all kinds of object nouns referring to objects that can be brought into existence. Hori (2011) analyzed the essays of 10,000 Japanese HS students and found that delexical DO and MAKE collocations such as *MAKE a decision* and *DO research* are problematic for Japanese learners due to transfer from the Japanese word *suru* (perform or conduct), which can be used with almost any noun to denote an act that is done. Altenberg and Granger (2001) investigated MAKE usage in essays written by native speakers of French and Swedish, as well as by native English speakers. They extracted all the instances of MAKE from the essays and placed them into eight categories: produce, delexical use, causative use, (earn) money, link use, *make it* (idiomatic), phrasal uses, and others. They then compared the numbers in each category of MAKE in the learner essays with those in the native speaker essays. They found that Swedish learners overused produce MAKE and French learners underused it, while both underused delexical MAKE. Mochizuki (2007), who conducted a similar comparison between Japanese university students’ essays and native speaker essays, found that the Japanese students overused produce MAKE and underused delexical MAKE.

## Aims of This Study

Based on Fukutomi’s (2012) and Hori’s (2011) findings, in this study I explored the usage of produce MAKE + noun and delexical MAKE + noun collocations. HS English course textbooks, which are the major source of English input for HS students, are mostly written by Japanese authors and checked by native English speakers (Langham, 2007). Therefore, based on Mochizuki’s (2007) findings, I hypothesized that

1. produce MAKE would be overused,
2. delexical MAKE would be underused, and
3. there would be at least some cases of incorrect usage in HS English course textbooks.

This study had three aims: (a) to quantify combinations of nouns with two senses of MAKE—produce MAKE and delexical MAKE—in HS English course textbooks, (b) to assess their appropriateness, and (c) to suggest improvements to both textbooks and classroom instruction concerning the acquisition of these two types of MAKE.

## Materials

Seven textbooks—*Crown* (Shimozaki et al., 2012), *Landmark* (Takeuchi et al., 2012), *Pro-Vision* (Tanaka et al., 2013), *Prominence* (Tanabe et al., 2012), *Unicorn* (Ichikawa et al., 2013), *Polestar* (Matsuzaka et al., 2012), and *Genius* (Muranoi et al., 2012)—were used here. These books are used in the Communication English 1 (CE1) course, the only English course mandated by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) in Japan.

The reason for choosing these seven from the 26 CE1 textbooks currently published was that they are the highest level textbooks and target the highest level learners. These textbooks were processed with an optical character reader and turned into text files. Only the text from the lesson sections was used; additional reading sections, lists of words and phrases, and exercises were not included

in the text files because in HS English classes these sections are sometimes omitted or not explicitly taught.

## Method

Concordance lines including MAKE were extracted from the CE1 textbook files using Antconc (Anthony, 2011), a free downloadable concordance software. After concordance line extraction, occurrences of MAKE in all the extracted lines were categorized manually according to the classification used by Altenberg and Granger (2001) described above. Then the percentage of each category of MAKE in the textbooks was compared to that in the native speaker essays used in Altenberg and Granger, to check whether my conjectures about the overuse of produce MAKE and underuse of delexical MAKE were correct. Next, the nouns used as direct objects of these two types of MAKE were compiled into tables. Afterwards, the nouns were checked for collocability with MAKE based on three collocation dictionaries and two corpus-based English learners' dictionaries: *Oxford Collocations Dictionary for Students of English* (OCD; McIntosh, Francis, & Poole, 2009), *BBI Combinatory Dictionary of English* (BBI; M. Benson, E. Benson, & Ilson, 2009), *Macmillan Collocations Dictionary for Learners of English* (MCD; Rundell et al., 2010), *Longman Dictionary of Contemporary English* (LDC; Mayor et al., 2009) and *COBUILD Advanced Dictionary of English* (CAD; Sinclair et al., 2012). Following this, the nouns were also checked with the Bank of English Corpus (BOE; Sinclair & Karlsson, 2014). The BOE corpus was selected as a reference corpus because it has over 400 million words. Sinclair (1991) asserted that a corpus should be as large as possible because the behavior of words can only be fully investigated if they occur many times; some words occur only once or a few times if the corpus is small. Details of MAKE extraction and categorization methods are in Appendix A. Details of the appropriateness check methods are in Appendix B.

## Results

### Quantification

Figure 1 shows the comparison of each category of MAKE usage in the textbooks with the Louvain Corpus of Native English Essays (LOCNESS) analyzed by Altenberg and Granger (2001).

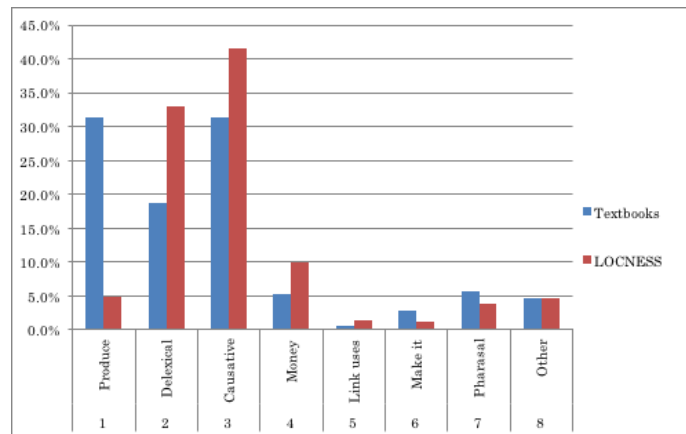


Figure 1. Percentage of categories of MAKE in LOCNESS (Altenberg and Granger, 2001) and Japanese high school textbook corpus.

Figure 1 shows that produce MAKE was overused and delexical MAKE was underused in the textbooks compared to the native speaker essays. This confirms the first and second hypotheses proposed in this study.

Next, all the object nouns used with produce and delexical MAKE were extracted to check the appropriateness of their usage (Table 1).

Table 1. Object Nouns of Produce and Delexical MAKE in Textbooks

Produce MAKE	Delexical MAKE
bread, brick, board, boat, bottle, canoe, chocolate, commercial, curry, dot, electricity, emotion, friend, goods, greenhouse, harmony, home, kayak, lemonade, list, machine, map, match, medicine, movie, nest, noise, noodles, plan, plane, porridge, ripple, roof, room, rope, ship, stroke, T-shirt, version, wave	announcement, attempt, change, choice, comment, contribution, cry, debut, difference, discovery, donation, effort, journey, mistake, pass, progress, tour, trip, use

Forty nouns were used as direct objects of produce MAKE, and 19 nouns were used with delexical MAKE (borrowings from other languages and compound nouns that could not be found in the dictionaries were excluded). Table 1 shows that the textbooks do not include the MAKE + noun collocations that Hori (2011) found problematic: *MAKE a decision*, *MAKE contact*, *MAKE a good impression*, and *MAKE a sacrifice*. Neither do they include *MAKE a speech*, which Fukutomi (2012) indicated as confusing for Japanese students due to language transfer. Altenberg and Granger (2001) mentioned that MAKE + speech-action noun collocations such as *MAKE a speech* and *MAKE a claim* constitute one-third of delexical MAKE + noun collocations most frequently used by native English speakers. Therefore, the lack of MAKE + *speech* and the inclusion of only two MAKE + speech-action noun collocations in the textbook corpus, MAKE + *announcement* and MAKE + *comment*, may be a crucial factor in the lower percentage of delexical MAKE therein.

## Appropriateness Check

Among the 40 direct objects used with MAKE, 22 were confirmed by dictionary and BOE check to be appropriate to use with produce MAKE, while 18 were not so confirmed (see Table 2).

Table 2. Appropriateness Check Results for Produce MAKE + Noun Combinations

Appropriateness confirmed (22)	Appropriateness not confirmed (18)
bread, brick, chocolate, commercial, electricity, friend, goods, home, lemonade, list, machine, map, match, medicine, movie, nest, noise, plan, porridge, ripple, room, wave	board, boat, bottle, canoe, curry, dot, emoticon, greenhouse, harmony, kayak, noodle, plane, roof, rope, ship, stroke, T-shirt, version

For example, it seems appropriate to say *MAKE bread*, but it may not be appropriate to say *MAKE a board* (i.e., a flat piece of wood). Therefore, I conducted a native speaker survey (see Appendix C) targeting native speaker students and teachers involved in the distance master's degree course of the University of Birmingham to check whether they use these 18 unconfirmed nouns with produce MAKE. Results from 54 respondents are shown in Table 3. The nouns are presented in descending order of the percentage of "yes" answers. Note that the forms of nouns are according to the usage in the textbooks: in the singular with an indefinite article, without an article, or in the plural.

Table 3. Native Speaker Survey Results (N = 54),  
With Percentages

Noun	Yes	%	No	%	It depends	%
curry	51	91	0	0	5	9
planes	48	89	0	0	6	11
ships	44	85	2	4	6	12
a dot	37	67	13	24	5	9
a stroke	34	65	13	25	5	10
ropes	34	63	9	17	11	20
noodles	34	62	4	7	17	31
T-shirts	32	62	2	4	18	35
versions	25	47	10	19	18	34
boards	22	39	19	34	15	27
bottles	19	35	18	33	17	31
kayaks	16	30	23	43	15	28
canoes	15	28	25	46	14	26
a greenhouse	10	18	33	60	12	22
a boat	8	15	36	65	11	20
harmony	8	15	41	75	6	11
roofs	6	11	41	77	6	11
emoticons	4	7	44	81	6	11

The percentage of “yes” answers was the highest for *curry*. Moreover, this percentage amounted to a striking 91%, which shows that native English speakers do indeed say *MAKE curry*, although the appropriateness of the combination *MAKE + curry* was not confirmed in either the dictionaries or the BOE. Some respondents

commented that they used *MAKE* when it does not take too much time to prepare the meal and used *COOK* if it takes a long time. For *planes* and *ships*, some respondents commented that they used *MAKE* or *BUILD*. Although no *MAKE + noun* combinations were completely rejected as collocations by the respondents, some nouns had quite a high percentage of “no” answers, *emoticons* displaying the highest. Many respondents commented that they answered “no” because they never made emoticons themselves but just chose and used the already existing ones. The noun *harmony* had the second highest percentage of “no” responses. One respondent asserted that *MAKE harmony* was definitely incorrect. For *roofs*, two respondents commented “definitely not.” A *greenhouse*, a structure similar to a roof, also had a high percentage of “no” responses. Except for *ships*, nouns indicating water vehicles—*kayaks*, *canoes*, and *a boat*—also had a high percentage of negative responses.

Several respondents selected both “yes” and “no” as answers, while a few skipped some questions. Some of the respondents who chose “yes” apparently made choices from the verb options despite questionnaire instructions indicating that was unnecessary. Actually, several respondents commented that they used *MAKE* with the nouns but used other verbs as well. Table 4 shows the numbers of respondents who selected each alternative verb and its percentage against the total number of respondents for each noun. The other verbs column shows the other verbs suggested by respondents. If more than one respondent suggested the verb, the number of respondents is shown in parentheses following the verb. The number of respondents who suggested other verbs is not included in the Total # column.

Overall, the native English speakers seemed to use a variety of verbs with these 18 nouns depending on the size, characteristics, or nature of the object and on the context, and *MAKE* is among their choices.

Among the 19 nouns used as direct objects of delexical *MAKE*, 18 nouns were confirmed appropriate to use with it, while one noun was not so confirmed (see Table 5).

Table 4. Native Speaker Alternative Verb Choices for Nouns (N = 54)

Noun	Verb 1	#	%	Verb 2	#	%	Verb 3	#	%	Total #	Other Verbs
curry	fix		27	prepare	4	27	cook	7	47	15	
planes	produce	0	0	create	0	0	build	6	100	6	
ships	produce	1	8	create	1	8	build	10	83	12	
a dot	produce	0	0	create	0	0	mark	4	100	4	draw, put, write, place
a stroke	produce	1	20	create	1	20	do	3	60	5	place, draw (2), write, paint, stroke as a verb (4)
ropes	produce	7	47	knit	0	0	weave	8	53	15	braid, manufacture
noodles	fix	8	21	prepare	9	24	cook	21	55	38	do, boil up, fix (2)
T-shirts	produce	9	39	weave	0	0	manufacture	14	61	23	design, sew (2)
versions	produce	7	23	create	12	39	release	12	39	31	
boards	produce	7	41	create	2	12	manufacture	8	47	17	cut (6), cut into, mill
bottles	produce	12	32	create	2	5	manufacture	24	63	38	mold
kayaks	produce	5	12	create	2	5	build	36	84	43	manufacture, carve
canoes	produce	3	7	create	2	5	build	36	88	41	carve (2), assemble, put together
a greenhouse	produce	2	4	create	2	4	build	42	91	46	put, put up, construct
a boat	produce	1	2	create	1	2	build	45	96	47	craft, design, engineer, manufacture (2)
harmony	produce	3	5	achieve	23	41	create	30	54	56	have, be in, promote, maintain (2)
roofs	install	10	23	create	2	5	build	32	73	44	put on (8), put up, lay, erect, roof a house using roof as a verb
emoticons	produce	2	13	create	6	40	design	7	47	15	use (11), type (8), insert, add

Table 5. Appropriateness Check Results of Delexical MAKE + Noun Combination

Appropriateness confirmed (18)	Appropriateness not confirmed (1)
announcement, attempt, change, choice, comment, contribution, debut, difference, discovery, donation, effort, journey, mistake, pass, progress, tour, trip, use	cry

Four dictionaries used suggested that the following verbs were appropriate to use with *cry*: *give*, *let out*, *raise*, and *utter*. One dictionary, CAD, suggested no alternative verbs. The appropriateness of these verb + *cry* combinations was checked in the BOE using the confirmation method described in Appendix B. *Give*, *utter*, and *let out* were found appropriate to use with *cry*.

## Discussion

It was found that produce MAKE was overused and delexical MAKE was underused in the HS English textbooks. The overuse of MAKE seems to be due to transfer of the Japanese counterpart, *tsukuru*, which is more versatile than MAKE (Fukutomi, 2012). While Japanese speakers seem to use MAKE for all the actions of producing, native speakers use a greater variety of verbs. The underuse of MAKE seems to have been partially caused by the low inclusion of MAKE + speech action nouns, which are often used by native English speakers (Altenberg and Granger, 2001). Furthermore, it was found that some usages in the textbooks may not be appropriate. Based on these results, I recommend some changes to the textbooks and propose some activities to supplement their current weaknesses.

For produce MAKE, two changes are necessary in the textbooks. First, more appropriate verbs should be used for *emoticon*, *roof*, and *harmony* (e.g., *create harmony* instead of *make harmony*). Second, a greater variety of verbs should be used in addition to produce MAKE (e.g., both *make a boat* and *build a boat* in two different contexts).

In classes, I propose raising students' awareness that the Japanese verb *tsukuru* (produce) does not always correspond to MAKE. A possible classroom activity to prevent overuse of produce MAKE involves using Japanese-English dictionaries. I suggest that English teachers take at least 15 minutes during a class and ask students to check how *tsukuru* is translated into English in the dictionaries. For example, in *Genius* (Konishi et al., 2006), *tsukuru* is translated as

*make*, *produce*, *build*, *form*, *create*, *grow*, *found*, *establish*, *organize*, *set*, *compose*, *make out*, *raise*, *cook*, and *prepare*.

Another option is a fill-in-the-blank activity such as that shown in Figure 2.

(日本語に合うように1.~5. のかっこ内に適語を下から選びなさい)。

Choose an appropriate verb for each blank in sentences 1-5 from the options in the box underneath to match the Japanese translation.

1.	( ) salad.	サラダを作る。	(salada wo tsukuru)
2.	( ) a house.	家を作る。	(ie wo tsukuru)
3.	( ) a line.	列を作る。	(retsu wo tsukuru)
4.	( ) a poem.	詩を作る。	(shi wo tsukuru)
5.	( ) tomatoes.	トマトを作る。	(tomato wo tsukuru).
build      write      grow      form      prepare			

Figure 2. An example of a fill-in-the-blank activity.

For delexical MAKE, I suggest that a more appropriate verb should be used with *cry*, namely *give*. A greater variety of nouns + delexical MAKE should be included in textbooks, especially MAKE + speech-action noun collocations: *MAKE a speech*, *MAKE a point*, *MAKE a claim*, and so on.

In classes, teachers can draw their students' attention to delexical MAKE + noun collocations and refer to other nouns that are synonymous with the nouns used in the collocations with MAKE in the textbook. For example, in *Genius English Communication 1* (Muranoi et al., 2012), the word *comment* appears in the context "a couple of comments made by two conversationists." Teachers could explain that *MAKE a comment* is one pattern of MAKE + speech-action noun frequently used by native English speakers, and other similar



nouns such as *remark*, *statement*, and *point* can also be used with MAKE to express one's opinions or ideas, depending on the context.

Teachers can also use ideas from collocation-focused material for general English learners. One book, *English Collocations in Use* (McCarthy & O'Dell, 2005, p. 19), dedicates a page to MAKE and DO collocations. One exercise asks students to replace *been mistaken* in the sentence "The waiter must have been mistaken" using a collocation with MAKE and a noun, namely, to change the sentence to "The waiter must have made a mistake." Teachers can fairly easily use material from resources like this to create their own handouts. For example, students could be instructed to replace *commented* in the sentence "The researcher commented on the possible causes of the problem" with a collocation with MAKE and a noun, targeting the sentence "The researcher made a comment on the possible causes of the problem."

### Limitations and Suggestions for Future Studies

This work has several limitations. First, only seven CE1 textbooks were investigated for only two types of MAKE collocations, produce MAKE and delexical MAKE. Second, only five dictionaries and only one native speaker reference corpus were utilized, and native intuitions of only 54 native English speakers involved in the Birmingham course were analyzed.

Future studies in this area could use a wider pool of textbooks, for example, all 26 CE1 and *Communication English 2* textbooks; a larger number of dictionaries; a wider variety of native speaker reference corpora; and a survey involving more diverse groups of native English speakers. It may also be interesting to conduct a study on the collocations of DO (*do*, *did*, *does*, *doing*), which are sometimes conflated with MAKE collocations in the literature, as this paper has shown. Furthermore, examination of miscollocations of both MAKE and DO in essays written by Japanese HS students who have studied English using CE1 textbooks may be useful.

Despite these limitations, this study has revealed the current use of MAKE collocations in CE1 textbooks could be improved.

### Bio Data

**Mayumi Shimizu** worked as a language school administration staff member after graduating from Aoyama Gakuin University in Japan. After moving to Shizuoka Prefecture, she worked as an in-house translator. She began her teaching career as a HS English teacher in 2008. In 2014, she completed a distance MA in applied linguistics offered by the University of Birmingham. She now works as an in-house translator and a business English teacher. <marunesan777@hotmail.com>

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## Appendix A

### MAKE Extraction and Categorization

1. Sentences including MAKE were extracted using Antconc.  
 2. Examples of MAKE were manually categorized according to Altenberg and Granger's (2001) classification. Below are example sentences automatically extracted from the text using Antconc, the name of the source text, and the classification of MAKE.\*

1. era, curry powder was imported and people started making curry in Japan. At that time, curry was an expens

Landmark English Communication 1.txt (1)

2. In fact, Vasco-5 used 6,540 L (liters) of oil to make the journey. Here is a lesson I learned from this

Landmark English Communication 1.txt (2)

\*The numbers in parentheses are the categories according to Altenberg and Granger: (1) "produce," (2) delexical use, (3) causative use, (4) (earn) "money," (5) link use, (6) "make it (idiomatic)," (7) phrasal uses, and (8) others.

## Appendix B

### Appropriateness Check Methods

#### 1. Check with dictionaries

If the combination of MAKE + noun was indicated as a collocation or shown as a usage example, appropriateness was considered confirmed.

A collocation example: "MAKE + bread"

Bread (noun) Verb+Bread bake, make  
 (OCD; McIntosh et al., 2009)

A usage example: "MAKE + list"

List S1 W1 /list n[C] 1 a set of names, numbers, etc. usually written one below the other, for example, so that you can remember or check them: [+of] Make a list of all the things you have to do....

(LDC; Mayor et al., 2009)

#### 2. Check with BOE

For each object noun, make@ + a/an + noun or make@ + noun (in plural forms) were placed in the query line of BOE and concordance lines were retrieved. In the query line, the @ placed after make indicates a lemma, which means any instance of *make*, *made*, *makes*, and *making*. If there were matches, the *t* score of MAKE was determined. For example, when we input *make@+a+map*, concordance lines such as the following are shown:

a famous early astronomer, **made** a map of the known world of his day, first

recorded the solar spectrum and **made** a map of the spectral lines in 1811

hellip; that first day. I have **made** a map. I want to show you. I have placed

survey this plot of ground, to **make a map** of it, by pacing, I found every

Then, when we hit the letter c, the corpus shows *t* scores, a type of indicators to show the strong tendency of the words to collocate with a map in the descending order such as below:

A	17	3.436090
make	8	2.791497

of	12	2.511769
made	6	2.406614
to	8	1.696421
text	2	1.410602
have	3	1.393334
making	2	1.387627
yes	2	1.379430

The noun is determined appropriate to be used with MAKE if the I score of either *make*, *made*, *makes*, or *making* was larger than 2.0, based on Barnbrook (1996), Hunston (2002), and Stubbs (1995).

## Appendix C

### *Native Speaker Survey (Sample Questions)*

Do you say “make a boat (a vehicle, not a model or paper boat)”?

Yes

No

It depends

Any comment?

If your answer is “no,” do you prefer to use any of the verbs below? If you prefer to use verbs other than below, please specify:

Produce

Create

Build

Other (please specify)