1st Annual Conference of Teachers of English as a Foreign Language (ACTEFL 2017)

October 27, 2017

São Paulo, SP

Brasil

CORPUS LINGUISTICS AND TEACHING:
hands-on work with corpora

Helmara Febeliana Real de Moraes, PhD
U.S. Embassy – Brasília
Regional English Language Specialist
moraeshf@state.gov
October 2017

OVERVIEW

➢ Corpus Linguistics: what is it?

➢ What is a *corpus*?

➢ Concordance lines

➢The *corpora* online

➢What shall we explore?
  Discovering patterns

➢ Patterns in the classroom - activities

CORPUS LINGUISTICS: WHAT IS IT?

"Corpus linguistics of the 80's and 90's can be defined as a branch of general linguistics that involves the analysis of large machine-readable *corpora* of running text, using a variety of software tools designed specifically for textual analysis." (Laviosa, 2002:6)

IT INVOLVES...

➢ the analysis of language in use/empirical data - (new) findings and inferences

➢ observation vs. intuition/introspection

➢ questioning: langue/parole (Saussure); competence/ performance (Chomsky)

Language is seen as a social phenomenon - uses which can be empirically studied
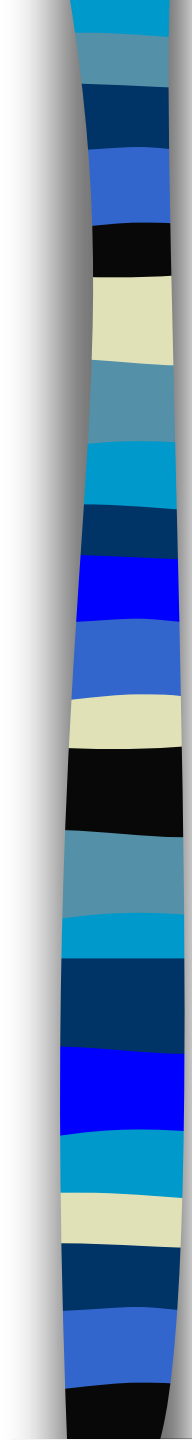
But is it a theory?   A methodology?

An approach?

WHAT IS A CORPUS?

"A corpus is 'a collection of texts assumed to be representative of a given language, dialect or other subset of a language, to be used for linguistic analysis.'" (Francis, 1992, in Sinclair, 1992:2 apud Laviosa 2002:6)

• the researcher/linguist can work with samples of texts

• compilation criteria - representativeness

• authentic material - always obtained from sources of language in use

• computer-stored information - it can be manipulated through specially developed search tools

A TEXT	A *CORPUS*
read whole	read fragmented
read horizontally	read vertically
read for content	read for formal patterning
read as a unique event	read for repeated events
read as an individual act of will	read as a sample of social practice
instance of parole	gives insights into langue
coherent communicative event	not a coherent communicative event

(Tognini-Bonelli 2001:3)

CONCORDANCE LINES

"A *concordance* is a collection of the occurrences of a word-form, each in its own textual environment." (Sinclair, 1991)

Search word: centralized and followed by its original co-text → the words it occurred with in the *corpus*.

Example:

concerned about the way the western nations **lavishly** use the earth's diminishing resources. The

theatre. [p] [p] Though many of the camps are **lavishly** equipped (even with electricity in the

guide to Art Deco style. Paperback, 80 pages, **lavishly** illustrated in colour and black and white.

the Roman invasion to the Battle of Britain. **Lavishly** illustrated with photographs, paintings and

Elton John, Bernie Taupin [/h] [p] In this **lavishly** illustrated book the poetry of the lyrics of

of classic pop, rock and soul covers. This **lavishly** produced and seductive selection includes

by Lydia Greeves and Michael Trinick, and **lavishly** illustrated with colour photographs, it

with a ferocity that is truly shocking in a **lavishly** equipped four-door sedan, particularly so

for nearly three months," he says, pulling **lavishly** at the bottle. `They had already lost one

selected for detailed reproduction in this **lavishly** illustrated volume. Text is meanwhile kept

of religious drag. [p] Piere et Gilles is a **lavishly** illustrated catalogue of some of their best

Aspects to observe:

• the horizontal <u>and</u> vertical axis;

• the most visible repetition of words that collocate with the node (to the right and to the left);

• the repetition of patterns in the light of grammatical categories;

• repetition at the semantic and functional levels (semantic field and semantic prosody);

Summarizing: we should *read vertically, read fragmentarily* and *focus on repeated events.*

(Tognini-Bonelli, 2001)

THE CORPORA ONLINE

➢ BNC (British National Corpus)

A closed *corpus* of 100 million words of British English, both spoken and written. It was concluded in 1995 and generates 50 examples with the search word.

Access to the whole *corpus*: through purchase.

Online access:
http://www.natcorp.ox.ac.uk/
http://corpus.byu.edu/bnc

➢ COCA – The Corpus of Contemporary American English

- 520 million words (1990 – 2015)

- includes 20 million words each year

- equally divided among spoken, fiction, popular magazines, newspapers, and academic texts

- search different genres at different periods of time

- semantically-based research (little/small, republicans/democrats)

- free online access at

  http://corpus.byu.edu/coca

Corpus of Contemporary American English

TALL

SEE CONTEXT: CLICK ON WORD OR SELECT WORDS + [CONTEXT] [HELP...]   COMPARE

		CONTEXT	FREQ		ALL	%	MI	
1	☐	MAN	766		345167	0.22	5.40	
2	☐	GRASS	496		21403	2.32	8.79	
3	☐	ORDER	352		111272	0.32	5.92	
4	☐	BUILDINGS	319		26397	1.21	7.85	
5	☐	TREES	279		46450	0.60	6.84	
6	☐	ENOUGH	242		198460	0.12	4.54	
7	☐	TALES	215		7575	2.84	9.08	
8	☐	WOMAN	193		184603	0.10	4.32	
9	☐	GLASS	191		52495	0.36	6.12	
10	☐	WINDOWS	163		37372	0.44	6.38	
11	☐	GUY	144		96632	0.15	4.83	
12	☐	BLACK	128		201438	0.06	3.60	
13	☐	TALE	126		12074	1.04	7.64	
14	☐	PINES	117		3310	3.53	9.40	
15	☐	BUILDING	112		96420	0.12	4.47	
16	☐	BOY	94		83793	0.11	4.42	
17	☐	GRASSES	86		2623	3.28	9.29	
18	☐	GLASSES	80		15173	0.53	6.65	

Corpus of Contemporary American English ⓘ 📄 ⬇ ⬀ 🟨 🕓 ❓

| SEARCH | **FREQUENCY** | CONTEXT | HELP |

HIGH

SEE CONTEXT: CLICK ON WORD OR SELECT WORDS + [CONTEXT] [HELP...]   COMPARE

		CONTEXT	FREQ		ALL	%	MI	
1	☐	SCHOOL	61398		338174	18.16	8.64	████████████
2	☐	SCHOOLS	4332		94107	4.60	6.66	▉
3	☐	LEVELS	3681		63292	5.82	6.99	▉
4	☐	LEVEL	3161		113089	2.80	5.94	▉
5	☐	BLOOD	2093		74673	2.80	5.94	▌
6	☐	RISK	1822		77077	2.36	5.70	▌
7	☐	HEAT	1769		60584	2.92	6.00	▌
8	☐	QUALITY	1696		60350	2.81	5.95	▌
9	☐	ENOUGH	1617		198460	0.81	4.16	▌
10	☐	COURT	1610		123185	1.31	4.84	▌
11	☐	ABOVE	1607		92240	1.74	5.26	▌
12	☐	DEGREE	1532		42569	3.60	6.30	▌
13	☐	HEELS	1268		9443	13.43	8.20	▌
14	☐	POINT	1207		204593	0.59	3.69	▌
15	☐	COST	1147		80102	1.43	4.97	▌
16	☐	RATES	1062		50856	2.09	5.52	▌
17	☐	SPEED	1055		37675	2.80	5.94	▌
18	☐	EXPECTATIONS	969		21555	4.50	6.62	▌

➢ **WEBCORP**

• accesses the World Wide Web as a *corpus*

• tool constantly revised

• provides more specific and detailed linguistic search

• results are presented in concordance lines (link to the web page)

Online access: http://www.webcorp.org.uk

WebCorp
Linguist's Search Engine

BIRMINGHAM CITY University

| WebCorp LSE | Login | User Guide | WebCorp Live | Publications | Feedback |

Tweet G+ Like 574

The WebCorp Linguist's Search Engine is a tool for the study of language on the web. The corpora below were built by crawling the web and extracting textual content from web pages. Searches can be performed to find words or phrases, including pattern matching, wildcards and part-of-speech. Results are given as concordance lines in KWIC format. Post-search analyses are possible including time series, collocation tables, sorting and summaries of meta-data from the matched web pages.
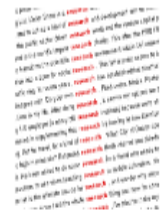
Synchronic English Web Corpus

470 million word corpus built from web-extracted texts. Including a randomly selected 'mini-web' and high-level subject classifaction.
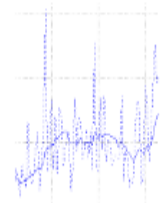
Search ▶

About

Diachronic English Web Corpus

130 million word corpus randomly selected from a larger collection and balanced to contain the same number of words per month.

Search ▶

About

Birmingham Blog Corpus

630 million word corpus built from blogging websites. Including a 180 million word sub-section separated into posts and comments.

Search ▶

About

Anglo-Norman Correspondence Corpus

4474 instances of **'tall {N*}'** (0 min 18 sec).

#	Left context	Node	Right context
1:	McCain, or sidewalks would be unsafe as libs leapt from	tall buildings	and psychologists lined up to explain that media professionals don't
2:	pitch their tents. Saddam had surrounded the area with a	tall brick	wall. There were only three points of entry. All the
3:	performing all their new tricks! Theres a competition jumping ring,	tall tunnel	slide, a three-tiered winners stage with trophies, ribbons and treats
4:	jZRY 1 CaP Go Diego Go Video HwNn Gr8s [www.ahluwalia-law.com],	tall women	porn a0Pc OTT Free Huge Collection Adult Movie Clips 2
5:	in the centre. DIDYMOS and RASTOS, in. frock-coat costumes and	tall hats	, come down and. do a lively dance. KI-RAM. Colonel, what
6:	right hand toward a chair on wheels, standing before a	tall writing	cabinet close shut up I am able to attend to
7:	wheeled by Jeremiah Flintwinch of the cut-down aspect to her	tall cabinet	. When she had unlocked and opened it, and had settled
8:	with her hands laid separately upon the desk, and the	tall cabinet	towering before her, she looked as if she were performing
9:	No, not I. Madame, you are always right,' returned the	tall Swiss	Doubtless you were enraged against that man, madame Ay, yes,
10:	the landlady Biraud, is it not Rigaud, madame,' returned the	tall Swiss	Rigaud! To be sure.' The traveller's soup was succeeded by
11:	and what doesn't. Nothing too complex, just having fun. A	tall bow	stand will be set up for an O.P. then rovers
12:	mine girl over action. across where he, behind his mousy	tall vinegar	, had venerated us. an intensification. We have no hostage that
13:	101. Sketches by Boz unlooked-for visitor. It was a singularly	tall woman	, dressed in deep mourning, and standing so close to the
14:	end of his journey. Mrs Wilfer was, of course, a	tall woman	and an angular. 35 Her lord being cherubic, she was
15:	mamma's cherished hopes that I should become united to a	tall member	of society. It may have been a weakness, but if
16:	one historian of His day described Him as being a	tall man	with chestnut-colored hair, parted in the middle, with short hair
17:	Tanya? Quite a big girl, I expect Yes, she's very	tall," Darya	Alexandrovna answered shortly, surprised herself that she should respond so
18:	several voices began to talk all at once, and the	tall nobleman	with the ring, getting more and more exasperated, shouted more
19:	a servant to take to somebody. In the evening a	tall man	, with long, grey hair and a white beard, entered the
20:	case containing the icon glittered, illuminated on all sides by	tall candles	ornamented with golden spirals. The candelabra was filled with tapers,
21:	past, and then all was still. The shadow of a	tall poplar	fell on the ground just opposite the window, and all
22:	behind the big stove was not long enough for a	tall person	to stretch out on. "And on this very bed," Nekhludoff
23:	but got mixed, being used to senseless soldiers' talk. A	tall man	with a small beard, a long nose, and a bass
24:	only the payment is according to our strength," said the	tall man	with the bass voice, evidently foreseeing how the matter would
25:	and there, all alone, she found the medical assistant, a	tall man	, with a blotchy face, who had for a long time
26:	what the general had said. The prison inspector was a	tall, imposing-looking	man, with moustaches and whiskers that twisted towards the corners
27:	linen shirt and trousers on; it was that of a	tall man	with a small beard and half his head shaved. The
28:	a probability function. Let de ne a fuzzy set of	tall men	. Then say we are given a precise value of the
29:	masked." "But, Olivia's last name isn't Laveau," Xander objected. The	tall man	led Olivia onto the dance floor as the music began
30:	trash, that one Yes!" A remarkable change came over the	tall woman	. "He perverts the old ways in his lust for power!"

50 ▾ per page

Show POS tags: ☐

Jump to 1 [Go]

Span: 10 ▾

Unlimited ▾ results/doc

Display Info: Number ▾

Table ▾

Table Of Results ⓘ

Case insensitive: ☐ ⓘ

POS: Ignore ▾ ⓘ

Min frequency: 5 ⓘ

Top 1000 results. ⓘ

[Summarise] ⓘ

http://wse1.webcorp.org.uk/cgi-bin

4474 instances of **'tall {N*}'** (0 min 18 sec).

New Query | Clone | Help | Profil

Query Summary

	Result	Frequency	Number of Documents
☐	tall women	209	74
☐	tall order	175	158
☐	tall man	173	126
☐	tall buildings	173	137
☐	tall grass	132	108
☐	tall terror	102	102
☐	tall tales	101	85
☐	tall trees	84	78
☐	tall building	70	58
☐	tall figure	64	41
☐	tall tale	57	46
☐	tall woman	54	41
☐	tall glass	52	46
☐	tall ship	43	26
☐	tall models	39	39
☐	tall tree	39	37
☐	tall grasses	35	29
☐	tall fescue	33	13
☐	tall people	33	22
☐	tall dark	29	27
☐	tall Australian	28	22

View Concordances

50 ▼ per page

Show POS tags: ☐

Jump to 1   Go

Span: 10 ▼

Unlimited ▼ results/doc

Display Info: Number ▼

Table ▼

Table Of Results   ⓘ

Case insensitive: ☐   ⓘ

POS: Ignore ▼   ⓘ

Min frequency: 5   ⓘ

Top 1000 results.   ⓘ

Summarise   ⓘ

http://wse1.webcorp.org.uk/cgi-b

We should have in mind:

1- What lexical patterns is the word part of?

2- Does the word regularly associate with particular other meanings?

3- What structure(s) does it appear in?

4- Is there any correlation between the word's uses/ meanings and the structures in which it participates?

5- Is the word associated with (any position in any) textual organization?

(Hoey, 1997)
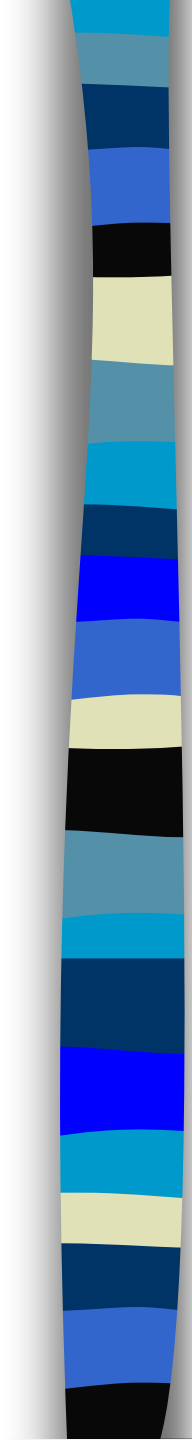
BUT WHAT EXACTLY SHALL WE EXPLORE?
DISCOVERING PATTERNS

➤ Collocation

A recurrent lexical combination which is non-idiomatic and cohesive; its elements are contextually restricted and co-occur arbitrarily. (Tagnin, 1998)

"The way words combine in a language to produce natural-sounding speech and writing." (Oxford Collocations Dictionary, 2002)

Classification	Base	Collocate	Example
Nominal collocation	noun	noun	credit card labor pains
Adjectival collocation	noun	adjective	upright piano outside chance
Verbal collocation	noun	verb	pay a visit muster courage
Adverbial collocation	verb	adverb	pay dearly lie outright
Adverbial collocation	adjective	adverb	awfully sorry deeply hurt

➢ **Colligation**

The relation between a pair of grammatical categories → a pairing of lexis and grammar. Example: *cases* + quantifiers - *in some cases, in many cases*:
cases <some, many, most, more, both, several>

<div align="right">(Stubbs, 2001)</div>

"The interrelation of grammatical categories in syntactical structure."

<div align="right">(Firth apud Tognini-Bonelli, 2001:5)</div>

The verb 'undergo'

passive or modal	+undergo	+adjective (typical adj.)	+abstract noun (typical lexical fields)
forced to required to must etc.		further extensive major severe etc.	medical procedure testing training change a trauma etc.

➢ **Frame**

• a discontinuous sequence of two words, positioned at one word remove from each other

• highly selective of their collocates. Examples:

  - a + ? + of

  - an + ? + of

  - be + ? + to

  - too + ? + to

  - for + ? + of

  - had + ? + of

  - many + ? + of

AN + ? + OF:

- Measurement and quantifiers (army, average, inch, ounce)

- Indicating part of something (edge, end, evening,hour)

- Specification of an attribute (array, index)

- Support for the noun following *of* (act, example, expression, object)

- Indicating an activity (extension, explanation, invasion)

- Indicating a quality or circumstance (absence, awareness)

- Indicating a relationship (enemy, officer)

(Hunston & Francis, 2000)

➢ SEMANTIC PROSODY

"(…) many uses of words and phrases show a tendency to occur in a certain semantic environment. For example, the verb *happen* is associated with unpleasant things - accidents and the like."

(Sinclair apud Hoey, 1997)

CAUSE AND PROVIDE: EXAMPLES

➢ **CAUSE** → frequently with words for unpleasant events: problems, death, damage, concern, trouble, cancer, disease, etc.

➢ **PROVIDE** → with words denoting things which are desirable or necessary: information, service(s), support, help, money, protection, food, care, etc.

(Stubbs, 2001)

BUT WHY ARE PATTERNS IMPORTANT?

➢ **sharing patterns and meaning**

Verb+at+noun:

• speaking loudly and unpleasantly:
"I just laughed at him."   "I shouted at her."

• communicating with a facial expression or gesture:
"We just smiled at each other."
"You used to wave at me."

→ Arranging words in groups which share a meaning helps making sense of and remembering the pattern.

➢ **patterns are a source of mistakes**

• important to accuracy and cause a lot of mistakes when mis-used. Example:

The noun *objective*:

 * Teachers have the objective to help learners acquire natural English.

Pattern to be used:

'**noun + of + -ing**' **-** the objective of helping (aim, function, purpose and role)

➢ **knowing a word with its patterns encourages fluency**

• learners can produce not just one word, but a series of words, a phrase, together.

➢ **Patterns in the classroom**

• Teachers should make sts aware that words have patterns which are meaningful → we should not try to teach all of them, but show them and emphasize their importance.

(Hunston, 2001)

Going back to the *corpora* online...

Some uses for concs (teaching):

➢ **band**

  - different meanings of the same word

➢ **well**

  - different functions of one same word

➢ **shelter**

  - different grammatical roles of the same word

➢ **depend**

  - the co-occurrence of grammatical patterns

Now considering the keywords listed in the next slides:

➢ can you guess what the material is about?

➢ Do they belong to the same area/text typology?

N	Key word	Freq.	%	RC. Freq.	RC. %	Keyness	P
1	#	219513	12,78843689	1604421	1,61304605	525899,875	0.0*
2	TBSP	11259	0,655929267	569		87326,48438	
3	MINS	9261	0,539529383	575		71195,13281	
4	OZ	9633	0,561201453	1283		70734,53125	
5	MINUTES	13556	0,78974843	17662	0,017756946	68495,21094	
6	ADD	11541	0,672358096	8162		67718,97656	
7	CHOPPED	8690	0,506263912	1037		64328,43359	
8	PAN	8586	0,50020504	1862		60316,16406	
9	BUTTER	8547	0,497933	2086		59270,89844	
10	OIL	10511	0,612352133	10158	0,010212608	57460,625	
11	PEPPER	7202	0,419575691	951		52908,8125	
12	INGREDIENTS	7235	0,421498209	1242		51997,95313	
13	HEAT	8621	0,502244115	5794		51103,83984	
14	TSP	6491	0,378154099	394		49941,17188	
15	SALT	7606	0,443112016	2932		49685,11719	
16	UNTIL	13004	0,757589877	40128	0,04034372	48350,22266	
17	COOK	7230	0,421206921	3543		45452,01563	
18	COOKING	6844	0,398719251	2592		44821,87891	

N	Key Word	Freq.	%	RC. Freq.	RC. %	Keyness	P
1	SHALL	8787	1,354663849	19817	0,019923532	53643,37109	0.0*
2	OR	19341	2,981740475	370166	0,372155935	46328,03906	
3	AGREEMENT	6116	0,942884266	13242	0,013313186	37717,21875	
4	ANY	11025	1,69968915	122180	0,122836813	36809,73438	
5	SUCH	6016	0,927467585	107326	0,107902959	15037,39648	
6	FRANCHISEE	1448	0,223233551	46		14186,47754	
7	COMPANY	3024	0,466200471	35947	0,036140244	9689,033203	
8	HEREUNDER	775	0,119479284	45		7463,502441	
9	LENDER	824	0,127033457	380		6809,098145	
10	FRANCHISOR	696	0,10730011	24		6805,135742	
11	HEREOF	700	0,107916772	35		6774,625977	
12	PURCHASER	1006	0,155091822	1676		6613,243652	
13	SELLER	999	0,15401265	1640		6589,92041	
14	APPLICABLE	946	0,145841807	1413		6376,626465	
15	BORROWER	742	0,114391781	280		6282,437988	
16	DATE	1758	0,27102527	17192	0,017284421	6238,036133	
17	NOTICE	1422	0,219225213	9028		6138,090332	
18	THEREOF	757	0,116704285	466		6010,709961	

Other uses for keyword lists:

➢ to explore some vocabulary before reading a text

➢ to ask sts what they think the text is about

Phraseologies in ESP - results of a *corpus*-based research

Phraseology (I)	Equivalent form (P)
finely chopped	bem PICADO, (bem) PICADINHO
peeled and **finely** chopped	DESCASCADO e (bem) PICADO
seeded and **finely** chopped	sem sementes, PICADO; PICADO (e) sem sementes
onions, **finely** sliced	cebolas (cortadas) em rodelas (bem) finas; cebolas (cortadas) em fatias (bem) finas; cebolas cortadas fino/fininho
finely grated	ralado
freshly ground black pepper	pimenta-do-reino moída na hora
freshly grated nutmeg	noz-moscada ralada na hora
freshly chopped parsley	salsa/salsinha (bem) picada na hora; salsa/salsinha picadinha na hora
cover and simmer **gently**	tampe (a panela) e cozinhe em fogo baixo/em fogo brando/lentamente/em fogo lento

simmer **gently** for a few minutes	cozinhe em fogo baixo/em fogo brando/ lentamente/em fogo lento por alguns minutos
over a pan of **gently** simmering water	em banho-maria
heat **gently** until melted	aqueça em fogo baixo até dissolver/derreter; aqueça ligeiramente/levemente até dissolver/ derreter
gently fry	fritar/frite ligeiramente/levemente/rapidamente; dê uma ligeira fritada; refogar/refogue rapidamente/ levemente/ligeiramente
gently bring to the boil	cozinhe em fogo baixo até ferver/levantar fervura; leve ao fogo baixo até ferver/levantar fervura
lightly floured surface	superfície levemente/ligeiramente polvilhada com farinha; superfície levemente/ligeiramente enfarinhada
until **lightly** browned	até começar a dourar; até que comece a dourar; até dourar levemente/ligeiramente
lightly oiled bowl	tigela untada com um pouco de óleo
thinly sliced	CORTADO em fatias (bem) finas
peeled and **thinly** sliced	DESCASCADO e CORTADO em fatias (bem) finas
thinly spread	espalhe uma camada fina de + *ingrediente*

Adverbial collocations in Business - some examples

➢ **basic and intermediate levels:** work closely (with)

➢ **advanced level:** adversely affect, fall sharply, highly competitive, mainly due to (?), rapidly grow, rise sharply, work closely (with)

(Santos, 2011)

Work closely with – basic level

➢ **Step 1:** present six concs (one at a time) – headlines (news)

Each line of business works closely with Risk Management through its own risk committee

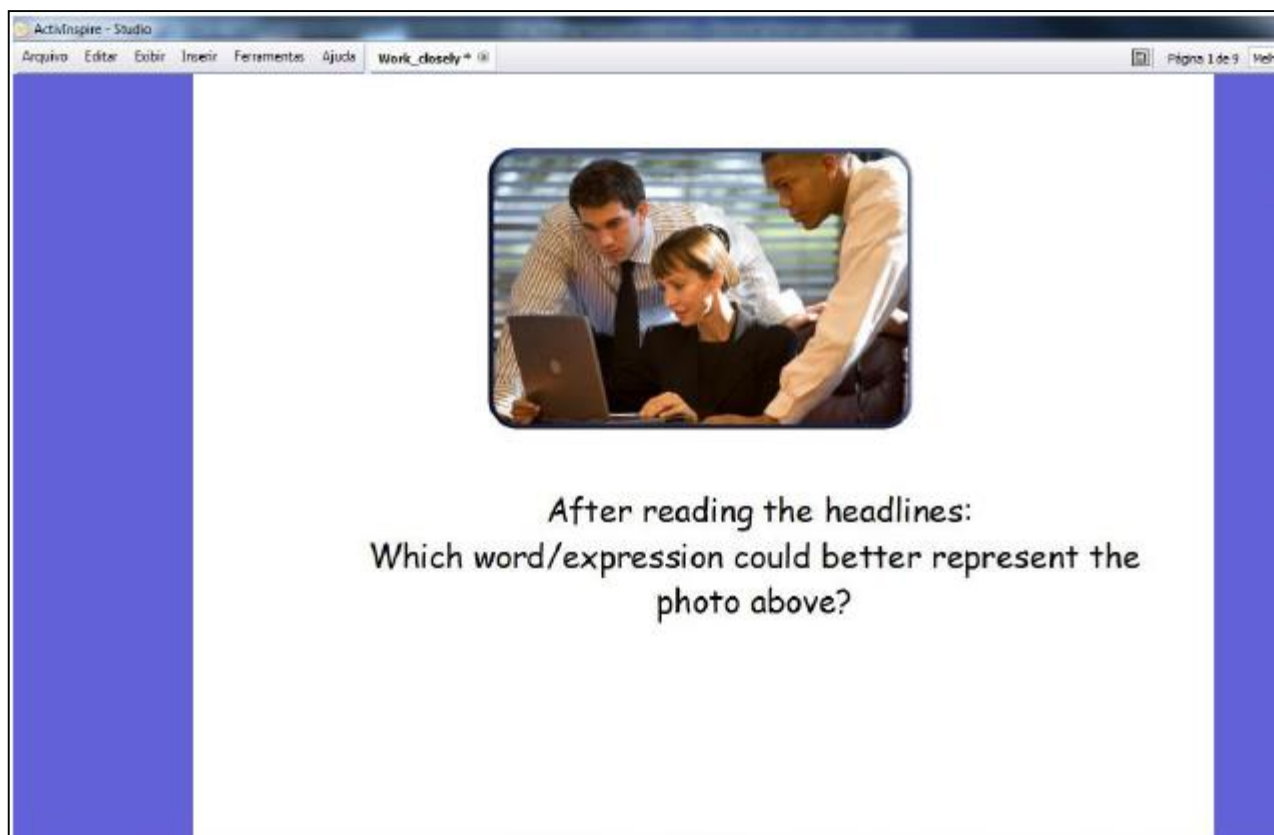Contractors from Spain and Ireland, and Ulster Bank worked closely with GBM in Madrid

The Centre works closely with HSBC's Global Research sector heads

The Group Chairman works closely with the Company Secretary to ensure that accurate, timely and clear information flows to the Board.

LeMasters said he would work closely with Replay's entertainment-industry investors to devise schedule formats for Replay

Mr Matsuo worked closely with the Cabinet Secretariat deciding politicians' travel budgets

➢ **Step 2:** using visual aids, present the picture/question below, so that sts shall come up with the unit:

After reading the headlines:
Which word/expression could better represent the photo above?

➢ **Step 3:** present the concordances together:

EXERCISES

N Concordance

1   its own risks. Each line of business works closely with Risk Management through

2   from Spain and Ireland, and Ulster Bank worked closely with GBM in Madrid, the

3   for the bank and its clients. The Centre works closely with HSBC's Global Research

4   to the Board. The Group Chairman works closely with the Company Secretary to

5   do in the future." LeMasters said he would work closely with Replay's

6   Japan's most senior politicians. Mr Matsuo worked closely with the Cabinet Secretariat

1. Look at the lines above. They were taken from the texts you've read. What can you observe about the verb "work"?

➢ **Step 4:** provide some gap-filling exercise for practice

Complete the sentences below with:

a) a verb:

We have also _____ closely with the U.S. government and with a number of other institutions.
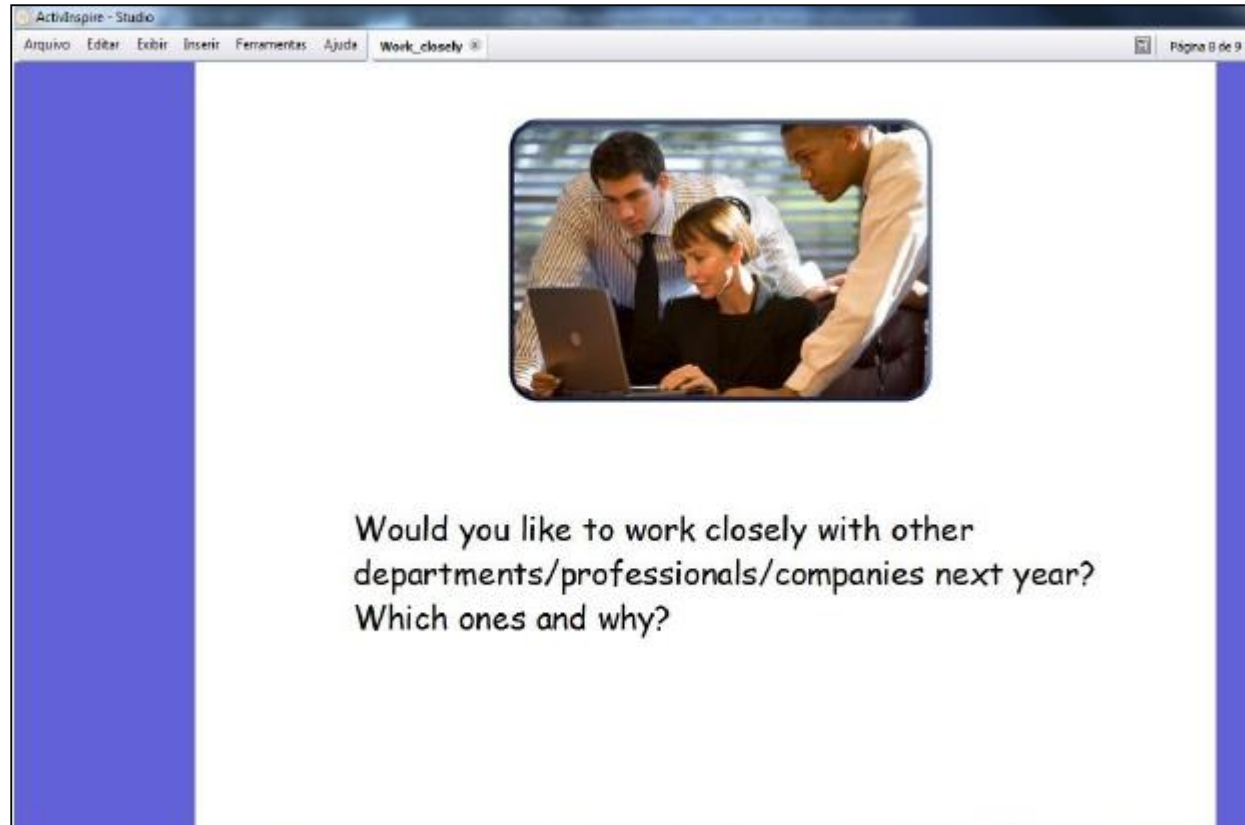
b) an adverb:

We will work _____ with UNITE and other employee representatives to reduce staff number.

c) a preposition:

A Group Corporate Sustainability unit was formed in 2007 to work closely _____ individuals and businesses in all customer groups.

➢ **Step 5:** sts use the phraseology to talk about their reality:

Would you like to work closely with other departments/professionals/companies next year? Which ones and why?

(Santos, 2011)

Checklist for developing *corpus*-based activities:

• Have a clear idea of the point that you want to teach;

• Select the *corpus* that is the best resource for your lesson;

• Explore the *corpus* completely for the point you want to teach;

• Make sure that your directions are complete and easy to follow;

• Make sure that your examples focus on the point that you are teaching;

• Provide a variety of ways for interacting with the materials;

• Use a variety of exercise types;

• If you are using computers, *always* have na alternative plan or activity in the event of computer glitches.

(Reppen, 2010)

And now let's analyze some concordance lines…

Thanks!!

Helmara