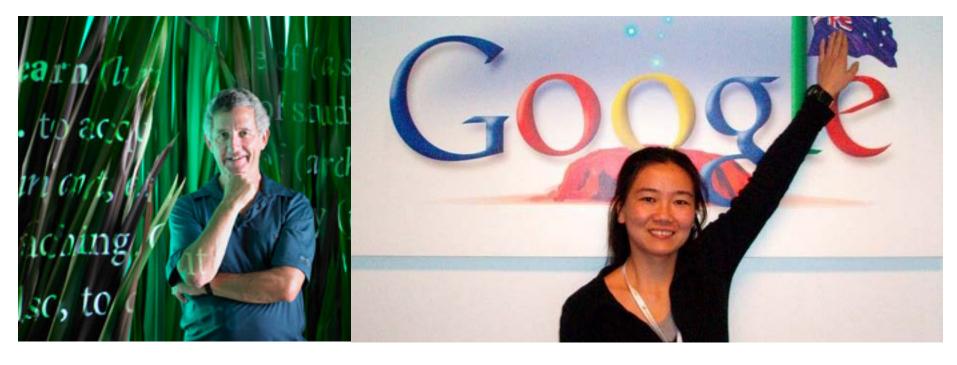


FLAX Language Project at the Greenstone Digital Library Lab, Waikato University NZ



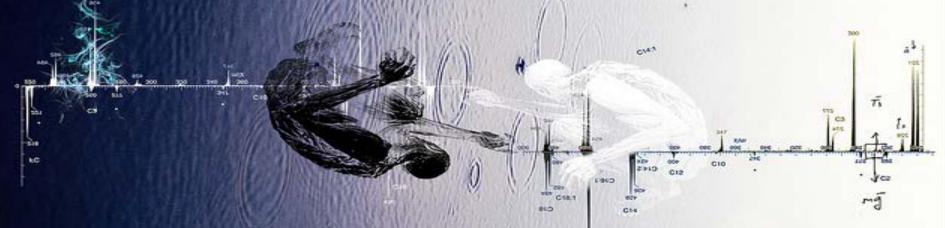
Professor Ian Witten FLAX Project Lead

Dr Shaoqun Wu FLAX Project Lead Researcher & Developer





Resources at the Interface of Openness for Academic English



Alannah Fitzgerald OpenCourseWare Consortium Global Conference 2014

Global OER Graduate Network (GO-GN)-Research Track

http://www.slideshare.net/AlannahOpenEd/resources-at-the-interface-of-openness-for-academic-english





FLAX Menu Du Jour

- Multilingual software for interactive language learning
- Simple Interfaces for language learners and teachers
- Collocations, Word Lists, Lexical Bundles, Links to Wikimedia, Google Linguistic Data and the Live Web
 - Search, Save, Play
- Collections Building, Activities Development
- Platforms for Hosting FLAX Collections

OPEN SOURCE LANGUAGE DEVELOPMENT

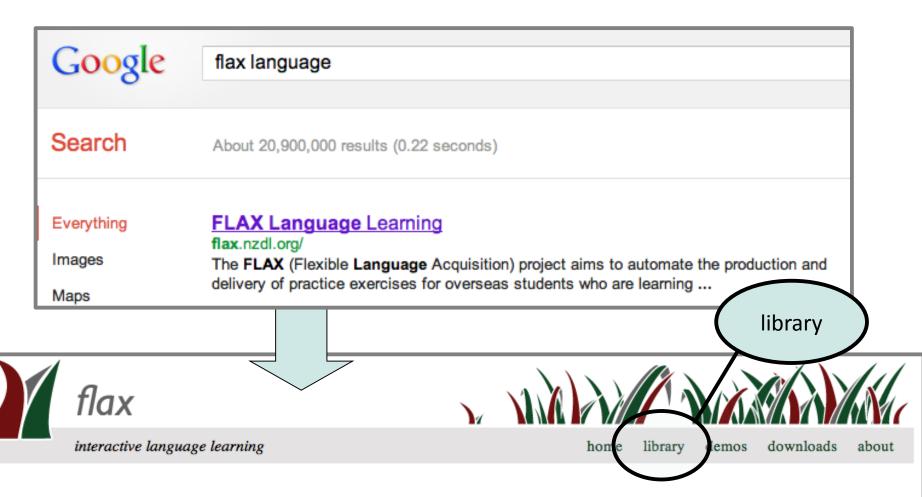
Developing Language Collections in the Open

The open source dictum: 'release early and release often', in fact has morphed into an even more radical position, 'the perpetual beta', in which the product is developed in the open, with new features slipstreamed in on a monthly, weekly, or even daily basis. It's no accident that services such as Gmail, Google Maps, Flickr, del.icio.us, and the like may be expected to bear a 'Beta' logo for years at a time. (O'Reilly, 2005)

FLAX Language at Waikato University

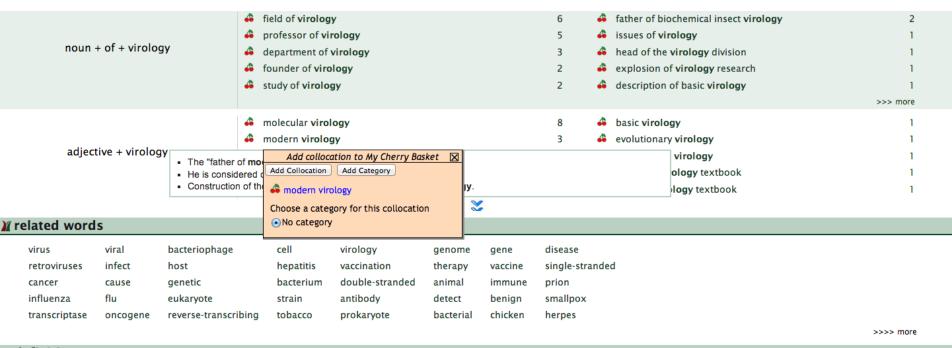


FLAX – Flexible Language Acquisition



The **FLAX** (*Flexible Language Acquisition*) project aims to automate the production and delivery of practice exercises for overseas students who are learning English. Exercise material comes from digital libraries, which can supply a virtually endless supply of collaborative and competitive language activities. (*All software produced by this project is open source, issued under the GNU General Public License.*)

Simple FLAX Interface Designs



M definitions

Virology is the study of viruses and virus-like agents: their structure, classification and evolution, their ways to infect and exploit cells for virus reproduction, the diseases they cause, the techniques to isolate and culture them, and their use in research and therapy. [Wikipedia]

extended definitions from wiktionary

₩ related topics in Wikipedia

Animal virology
Thomas Huckle Weller
Tobacco mosaic virus
Jonas Salk
Prion
Viral replication

John Franklin Enders Harald zur Hausen Bacteriophage

A **bacteriophage** (from 'bacteria' and Greek φἄγεῖν *phagein* "to eat") is any one of a number of viruses that infect bacteria.

Herpes simplex virus

The traditional text analysis software interface for working with large language collections (corpora) has been the Key Word In Context (KWIC) interface. Corpus linguistics researchers and developers of KWIC interfaces have claimed over the years that learners of a language can deduce language use patterns by examining KWIC lines. This method is also known as data-driven learning.

the UK, Australia and Germany, were disclosed by Paul Griffiths, professor of virology at the Royal Free Hospital, London. The trial was halted after one year

Ivanovsky, published in 1892 and often regarded as the beginning of the science of virology, describes how a disease of tobacco plants can be transmitted by the sap after

the power to reproduce themselves and to become immune to infecting organisms. Advances in virology became inseparably linked with the new science of molecular biology, and the discovery of

What is quite clear is that any success will rest on the basic sciences of virology and molecular biology, and that, without research into obscure aspects of these subjects

viruses such as measles and influenza virus to infect the cells is considerably reduced (Virology, 1980, vol 105, p 205). Of course the true potential

his MD degree from New York University Medical School. (deleted:name)' s enthusiasm for virology went back to his postdoctoral years at The Rockefeller Institute where he was working under

the management of patients. Postgraduate Doctor The AIDS epidemic: Epidemiology; Immunology; Virology: The definition of AIDS; The antibody response to HIV; the HIV antibody

Atlas of AIDS in the Tropics Contents: AIDS in the Tropics; History; Virology; Epidemiology of AIDS in the Tropics; Early Clinical Manifestations &; AIDS

located approximately 11 kilometres from the city centre. It contains laboratories for Helminthology, Virology, Entomology, Bacteriology, Protozoology and Animal Production. The accommodation for

, dermatophilosis, rickettsioses including heartwater infection; microbiology -- particularly bovine tuberculosis and diagnostic virology; helminthosis -- cestode zoonoses and trematodes. Research of

the pathological sciences and has closely co-ordinated research interests in Immunology, Molecular Biology, Virology and Microbiology, both in veterinary species (especially the sheep, pig, cat

the third year, three courses cover the fundamental aspects of microbiology, immunology and virology, while fourth-year study covers molecular aspects of infection and immunity, with major employed

first- and second-year courses. Two third-year courses then cover the fundamentals of microbiology and virology in one course and aspects of applied microbiology and biochemistry in another. The

COLLOCATIONS, WORD LISTS, POSTAGGING, LINKING CORPORA

Training Videos for FLAX on YouTube

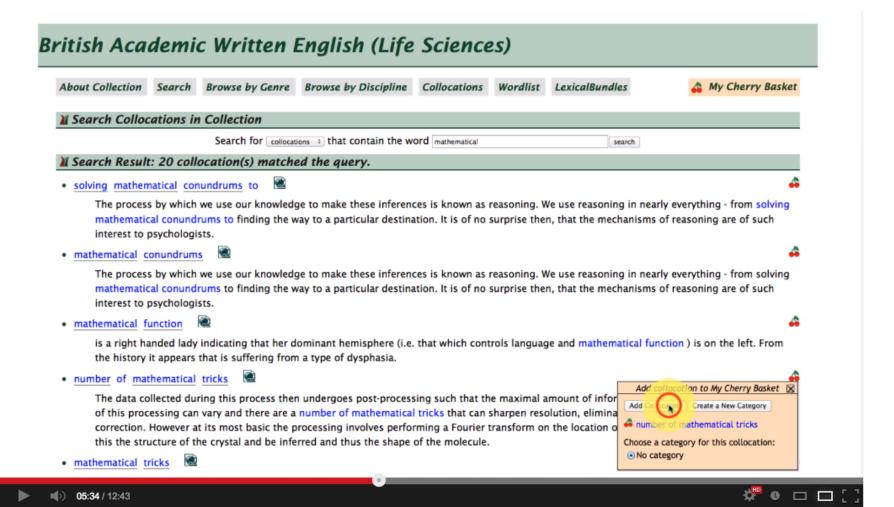


Learning Collocations in FLAX: in response to 'where are the good published

collocations resources?'

- Research shows that the successful use of collocations in student writing and speaking supports not only improved levels of accuracy but also improved levels of fluency in their use of English (Wray, 2002; Nesselhauf, 2003).
- Constraints with published collocations resources
 - Publication issues = the number and specificity of collocations examples that can be assigned to print and CD-ROM formats.

FLAX British Academic Written English (BAWE) Collections



British Academic Written English corpus: browse by genre or discipline





British Academic Written English (Arts and Humanities)

About Collection

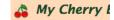
Search

Browse by Genre

Browse by Discipline

Collocations

Wordlist



M Browse Documents by Discipline

Archaeology
Classics
Comparative American Studies
English
History
Linguistics
other
Philosophy

- What approaches have been adopted for the study of megalithic monuments in Europe? What are their strand weaknesses?
- Contrast TWO absolute dating methods and discuss with reference to archaeological case-studies how the be used for obtaining dates for artefacts or contexts.
- no title [Pollard on settlement in the Neolithic]
- Compare and Contrast Two Towns From Different Parts of the Empire, Discussing Both Ancient and Model Factors
- Mollusc lab report
- How might archaeologists demonstrate the presence of deliberate Neanderthal burials?
- What are main kinds of inferences made by archaeologists from the material remains of the disposal of th dead? Illustrate your answer with a case study.
- Skeletal Report

BAWE sub corpus wordlists





British Academic Written English (Arts and Humanities)

About Collection	Sea	rch B	rowse by Genre	Browse	by Disc	ipline	Collocations	И	Vordlist		*	My C
sort by frequency 💠												
theory	> K	1536	evidence	≥ K	1229	create	>	K	1188	role	 	111
individual	\geq	1038	structure		1031	period	€	K	1029	process		908
approach	26	819	context	38	735	econoi	mic 🗟	K	728	feature		727
site	26	706	focus	\geq K	699	concer	ot 🗟	K	699	image	X	694
factor	26	672	conclusion	\geq K	668	metho	d ∋	K	645	function	**	630
similar	26	616	despite	\geq K	606	aspect	€	K	602	issue	\geq	601
contrast		586	revolution	\geq K	586	identit	y 🗟	K	584	community	\geq	584
cultural	\geq	573	source	38	561	establi	ish 🝃	K	559	involve		534
interpretation	\geq	526	status	38	522	eleme	nt 🝃	K	513	require		504
link		498	notion	\geq K	498	signifi	cant 🝃	K	495	style		491
research	\geq K	466	authority	36	461	princip	ole 🗟	K	458	define		457
section	\geq	434	highlight		434	demor	nstrate 🗟	K	431	achieve		429
theme	\geq K	418	policy	$\geq K$	409	conflic	:t ∋	K	404	maintain	\geq K	404

The BAWE sub corpus text collections: POS-tagging phrases

Search Browse by Genre Browse by Discipline Collocations Wordlist

Ent list

folio

wordlist wikify adjective noun p

ion Source of referral and a summary of key informationn

E on the with symptoms of increasing shortness of breath. She had been feeling 'unwell' for the few days prior to pring history of asthma; her current dysphoea was however unresponsive to the regular inhalers and nebulisers she use not information gathered from the patient about the presenting illness, co-existing problems, current treatment, signed the social and family background. The patient's view of the nature of the problem and their expectations for trailing.

ting Complaint.

worsening shortness of breath and wheezing in the 2-3 days prior to presentation at A+E. Dyspnoea was at its workation at A+E at 4am on the she was gasping for breath. Dyspnoea was described as 'not being able to catch my be ociated chest tightness. This presenting episode of dyspnoea came on suddenly on the and has progressed in severie. 'came and went' limiting her ability to manage the single flight of stairs in her home and to generally move are surresponsive to either her regular nebulised or inhaled medication but was said to improve following administration at A+E.

Search and store collocations

wordlist wikify adjective

of referral and a summary of key informationn

th symptoms of increasing shortness of breath. She had been feeling 'unwell' for the few day f asthma; her current dyspnoea was however unresponsive to the regular inhalers and nebul ion gathered from the patient about the presenting illness, co-existing problems, current treat and Add collocation to My Cherry Basket of the nature of the problem and their expectation.

Add Collocation Create a New Category

aint. Shortness of breath

Short Choose a category for this collocation:

Choose a category for this collocation:

Dyspnoea was described as 'not being able to

st tightness. This presenting episode of dysphoea came on suddenly on the and has progre and went' limiting her ability to manage the single flight of stairs in her home and to general sive to either her regular nebulised or inhaled medication but was said to improve following and IV hydrocortisone 200g in A+E.

Retrieve and save collocations



expectations for treatment.



British Academic Written English (Life Sciences)

About Collection Search Browse by Genre Browse by Discipline Collocations Wordlist

My Cherry Basket

Hide Samples Create a New Category

increasing shortness of x

presented at A + E on the with symptoms of increasing shortness of breath. She had been feeling 'unwell' for the few day presentation.

presenting illness x

She has a longstanding history of asthma; her current dyspnoea was however unresponsive to the regular inhalers and neb

home. History All relevant information gathered from the patient about the presenting illness, co-existing problems, curr significant past medical history and the social and family background. The patient's view of the nature of the problem and

Collocational links to further resources





Web samples

- Dyspnea (pron.: / d I s p ' n i: ə / disp- NEE -ə ; also dyspnoea ; Latin: dyspnoea ; Greek: δύσπνοια, dýspnoia), shortness of breath (SOI
- Shortness of breath can be a worrisome symptom. Follow this chart for more information about the causes of and conditions in which soccurs.
- Read about causes of shortness of breath and the medications used in treatment. Pinpoint your symptoms and signs with MedicineNet'
 Checker.
- Shortness of breath after only slight exertion or while at rest; Shortness of breath that wakes you up at night or requires you to sleep probreathe
- Shortness of breath causes will be from one of these four things.
- Don't just sit there scratching your head, find useful info on Shortness of Breath on eHow. Get essential tips and learn more about even
 Are the Most ...
- Difficulty in breathing (also known as shortness of breath, breathlessness, or dyspnea) is caused by various mechanisms related to diff

Wikify key words & phrases

Original wordlist wikify adjective noun preposition verb

Referral information Source of referral and a summary of key information

presented at A + E on the with symptoms of increasing shortness of breath. She had been feeling 'unwell' for the few days prior to presentation. She has a longstanding history of asthma; her current dyspnoea was however unresponsive to the regular inhalers and nebulisers she uses at home.

History All relevant information gathered from the patient about the presenting illness, coexisting problems, current treatment, significant past medical history and the social and family background. The patient's view of the nature of the problem and their expectations for treatment.

Presenting Complaint.

History of Presenting Complaint.

had progressively worsening shortness of breath and wheezing in the 2-3 days prior to presentation at A+E. Dyspnoea was at its worst last night ()

so that by presentation at A+ gasping' with associated ches variable in nature i.e. 'came a Her dyspnoea was unrespons salbutamol 5mg, atrovent 50

Despite having had asthma for stairs at home without any di flight of stairs. Her breathles emotional upset or stress. Sh Dyspnea (; also dyspnoea; Latin: dyspnoea; Greek: dyspnoia from dyspnoos), shortness of breath e to catch my breath, I was (SOB), or air hunger, is the subjective symptom of breathlessness. It is a normal symptom of heavy ogressed in severity since. It was exertion but becomes pathological if it occurs in unexpected situations.

Related topics in Wikipedia

- Chest pain
- Chest radiograph
- Cough
- Pulmonary edema
- Tachycardia

nerally move around the house. wing administration of

and is usually able to manage ficulty managing this same rbated by physical exertion, pitalisation was in . Her asthma

Word lists: general, academic, specific, key

Original

other words \$

Referral information Source of Referral and a summary of key information

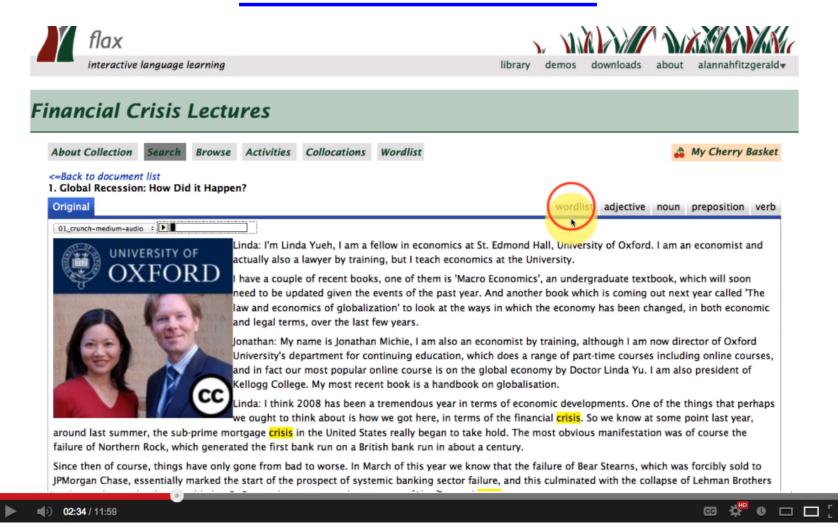
presented at A + E on the with symptoms of increasing shortness of breath. She had been feeling 'unw has a longstanding history of asthma; her current dyspnoea was however unresponsive to the regular in History All relevant information gathered from the patient about the presenting illness, co-existing promedical History and the social and family background. The patient's view of the nature of the problem Presenting Complaint.

History of Presenting Complaint.

had progressively worsening shortness of breath and wheezing in the 2-3 days prior to presentation a so that by presentation at A+E at 4am on the she was gasping for breath. Dyspnoea was described as gasping' with associated chest tightness. This presenting episode of dyspnoea came on suddenly on to variable in nature i.e. 'came and went' limiting her ability to manage the single flight of stairs in her her dyspnoea was unresponsive to either her regular nebulised or inhaled medication but was said to salbutamol 5mg, atrovent 500mg and IV hydrocortisone 200g in A+E.

FLAX COLLECTIONS BUILDING WITH INTERACTIVE ACTIVITIES

FLAX Do-It-Yourself Podcast Corpora with Oxford OER



FLAX Do-It-Yourself Podcast Corpora 2: Building interactivity into your collections



I Language activities								
. Scrambled Sentences	exercises	create an exercise						
The words of sentences are scrambled and students must sort them into their original order.								
This activity helps you study sentence structure by providing you with genuine text and allowing you to select suitable materials to practice on.								
Type: Individual								
Instructions: Put the bold words in	n the correct ord	er by drag-drop them into the correct position.						
2. Word Guessing	exercises	create an exercise						
Students enter words in the gaps,	Students enter words in the gaps, based on the context within a given article, individually or collaboratively.							
This activity helps improve your co	mmunication sk	ills and vocabulary.						
Type: Individual or Group collabor	ation							
Instructions: Click on the gap and	type in a word.							
3. Completing Collocations	exercises	create an exercise						
Learners fill in a blank to form a va	alid word combin	nation.						
Type: Individual								
Instructions:								
4. Scrambled Paragraphs	exercises	create an exercise						
The paragraphs of a document are scrambled and students must sort them into their original order.								
This activity helps you study paragraph structure by providing you with genuine text and allowing you to select suitable materials to practice on.								
Type: Individual								
Instructions: Put the paragraphs in the correct order by drag-drop them into the correct position.								

create an exercise

exercises

Instructions: Drag and drap punctuations on the top and put them in the right position.

This activity helps you study the role of punctuation in language.

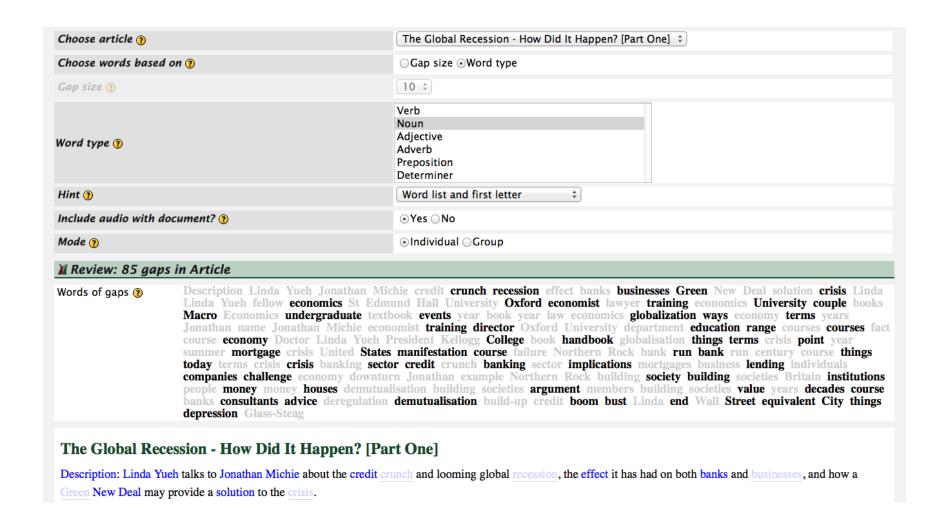
The punctuation of a paragraph is removed and students must insert the missing punctuation.

5. Punctuation and Capitalization

Type: Individual

5. Split Sentences	exercises	create an exercise						
A sentence is split in half and students must match the halves together.								
This activity helps you study sentence structure.								
Type: Individual								
Instructions: Click a box on the lef	t and then a	box on the right to make the correc	t sentence.					
7. Collocation Matching	exercises	create an exercise						
· ·	•	** * *	left and right parts; and shuffle each set of parts. For example, the secretary of state, hundreds of state course of dollars					
Learners must rematch them.								
Type: Individual								
Instructions:								
3. Collocation Dominoes	exercises	create an exercise						
This activity mimics the dominoes good book club club sandwich sandw		The state of the s	ecomes the first word of the next. Here is an example: bank cheque cheque book					
Learners are asked to complete coll	ocation dom	inoes						
Type: Individual								
Instructions:								
9. Related Words	exercises	create an exercise						
Pick several related words and some	e of their ass	ociated collocations; remove the wo	ords from the collocation text; and shuffle what is left. For example:					
pay make								
bill, effort, debt,	difference	1						
Learners are asked to choose the ri	ght word to o	omplete a collocation, e.g. pay bill,	make effort, pay debt and make difference.					
Type: Individual								
Instructions:								
0.Collocation Guessing	exercises	create an exercise						
Choose a target word and a number who must guess the target word. For			ord from the collocation text; and then reveal the remaining text gradually to a learner					
plain, dark, white, bitter, milk, bar of,								
Learners must guess the word that collocates with all of them (The answer is obvious to chocoholics).								
Type: Individual								

Developing podcast activities in FLAX



Close exercises in FLAX

Но
ing, boom, building, businesses, bust, challenge, City, College, companies, consultants, couple, course, course, courses, credit, crisis, crisis lirector, economics, economist, economy, education, end, equivalent, events, globalization, Green, handbook, houses, implications, institut ge, Oxford, point, range, recession, run, sector, society, States, Street, terms, terms, things, things, things, today, training, undergranted the control of the course of the cou
How Did It Happen? [Part One]
Jonathan Michie about the credit ¹ crunch and looming global ² , the effect it has had on both banks and ³ , and how a ⁴ No
llow in 6 at St. Edmund Hall, University of 7 I am an 8 and actually also a lawyer by 9, but I teach economics at the 2 Economics', an 13 textbook, which will soon need to be updated given the 14 of the past year. And another book which ' to look at the 16 in which the economy has been changed, in both economic and legal 17, over the last few years.
Michie, I am also an economist by ¹⁸ , although I am now ¹⁹ of Oxford University's department for continuing ²⁰ , which depar

Scrambled sentences in FLAX

Split Sentences					
Exercise name: Credit Crunch - part one					
Select a category: none ÷ Add a category					
Choose article 3	The Global Recession - How Did It Happen? [Part (
Number of words in sentence 3	Min 3				
Max sentences per page 3	10 ‡				
M Number of sentences available					
17					
M Review: 17 sentences selected					
I am also President of Kellogg College. Remove sentence					
My most recent book is a handbook on globalisation. Remove sentence					
Linda: I think 2008 has been a tremendous year in terms of economic developments.					
Since then of course, things have only gone from bad to worse. Remove sentence					
That roughly brings us to where we are today in terms of the financial crisis.					

Drag 'n' Drop exercises in FLAX

it Sentences

How to play Summary re

I am also President to be true, it probably is.

My most recent book doesn't mean no regulation.

Linda: I think 2008 has been a tremendous year of Kellogg College.

Since then of course, things have only gone from bad to worse.

That roughly brings us to where we are today in terms of economic developments.

And thirdly the government has extended to them guarantees of lending originating now.

Light touch regulation is a handbook on globalisation.

It means that if something looks slightly too good a financial sector problem becomes a real economy problem.

That is the lesson in terms of the financial crisis.

By doing policy too late, of the great depression.

Total score: 0 Question No. 1 out

Check Answer Previous question Next que:





Fernreader Demos Downloads

Learning Collocations

My Cherry Basket Activities Search Browse List exercises | Create an exercise **Collocation Guessing** Exercise name: law demo Select a category: Collocation guess 1 + Add a category **M** Exercise parameters Target words 3 arbitration, negotiation, company law, tribunal, regulation, policy verb + noun (tell the truth) noun + noun (rain forest) Collocation type (1) adjective + noun (heavy rain) noun + of + noun (slice of bread) Total number of collocations 3 20 ‡ **M** Activity parameters Display the questions in random order? 3 Yes ○ No Speed (1) Medium ‡ Display hint(s)? (1) Yes ○ No Number of Letters First Letter Select hint type(s) 1 Last Letter Word List Review 1 Display 1 Save 1

Collocation Guessing

							How to play
			Possible words:				
company	negotiation	regulation	arbitration	policy	tribunal	law	
	Show remaining colls	ocations			Bricks left: Attempts: 1		
1	egulation of s	exuality					
	costs of regu	lation					
	system of reg	ulation					
	form of regu	lation					

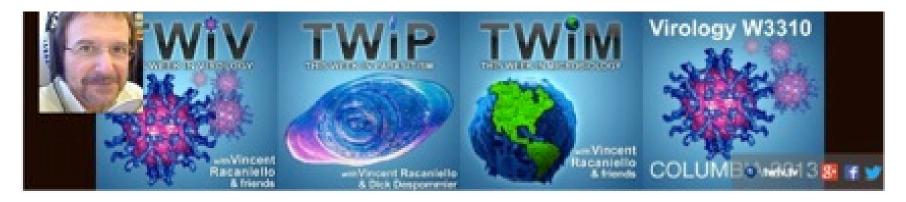
Well done! Your scored 17/20 for this question.

		Н	ow to play	Summary report				
Possible words:								
company negotiation regulation arbitration policy	tribunal	law						
regulation of insider	Bricks left: 16							
regulation of the activities	Attempts: 1							
regulation of behaviour								
year of audit regulation								
effects of regulation								
enforcement of regulation								
amount of regulation								
extent of regulation								
benefits of regulation								
lack of regulation								
mode of regulation								
 This lack of regulation does, however, extend to all hospitals, not just those in the private sector. As the game became more popular in the 1880s lack of regulation enabled the best footballers to play clubs off against and bid up their own wages. To take another example: Hong Kong's banks were rotten for lack of regulation five years ago, when a series of collapses frightened the government into spending billions of dollars of public money on rescues. This is a fantasy, but a fantasy with immediate ideological consequences; relations of consumption have become as important an aspect of class struggle as relations of production, as important an issue, , for state regulation (or lack of regulation), corporate investment and social control. 								
burden of regulation								
regulation of sexuality								
costs of regulation								
system of regulation								
form of regulation								

Well done! Your scored 17/20 for this question.

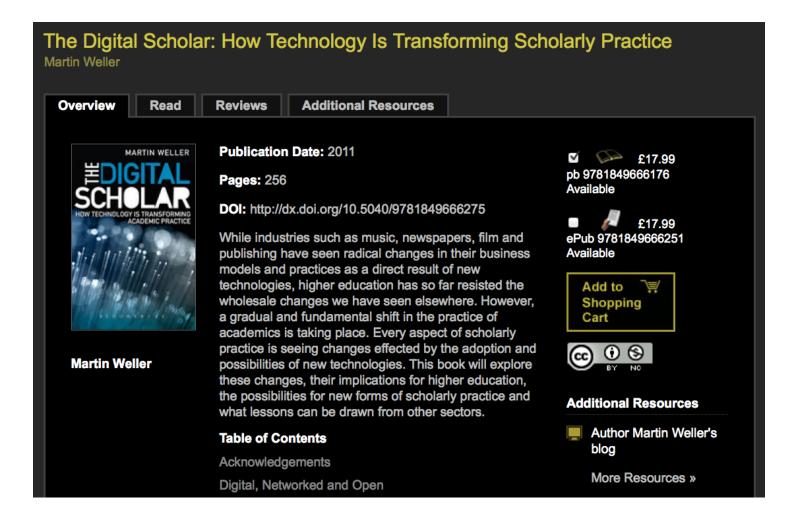
FLAX IN THE CONTEXT OF MOOCS

Earth's Virology Professor with Coursera MOOCs



"Natural science might be characterized as a discipline of discovery, identifying and describing entities that had not been previously considered. As a result, natural science employs a large set of highly technical words, like *dextrinoid*, *electrophoresis*, and *phallotoxins*. Most of these words do not have commonplace synonyms, because they refer to entities, characteristics, or concepts that are not normally discussed in everyday conversation." (Biber, 2006)

Digital Scholarship and Open Educational Practices



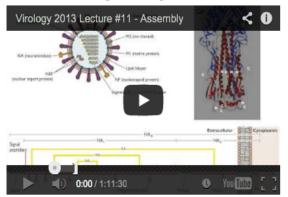
Type of media in the FLAX Virology Collection	Number of items in the FLAX Virology Collection
Podcast audio transcripts (<i>This Week in Virology</i>)	130
YouTube video transcripts (2013 virology course at Columbia, also in Coursera)	110
Academic blog posts (Virology Blog)	540
Open Access research articles (relevant to virology course and divided into paper sections)	40

Virology v1



<=Back to document list

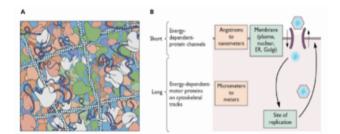
Lecture 11.2 Getting to the Right Place



Original wordlist wikify adjective noun verb

Lecture 11.2 Getting to the Right Place

Getting things to the right place



Getting things to the right places

So, throughout all our discussion, we're not going to make much reference to transport. But remember, all this movement that we're talking about requires energy. It requires typically the motor proteins of the cytoskeleton. And we talked about this for virus particles getting into the cell, whether it's a naked virus or an endosome moving from the plasma membrane towards the nucleus that requires movement along microtubules. And it's the same for

components for long range trans

Viral proteins

Membrane protein

Nuclear proteins go
 Nuclear localization se

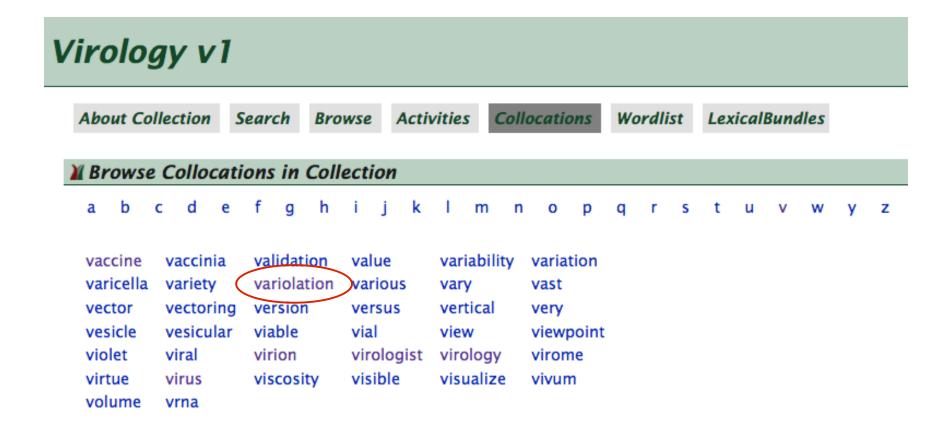
Signal sequences, fatt

Microtubules are a component of the cytoskeleton.

Related topics in Wikipedia

- Cytoplasm
- Phospholipid
- Neuron
- Cytoskeleton
- Endocytosis
- Membrane proteins
 Lipid bilayer
 - Endoplasmic reticulum
 - Vesicle (biology and chemistry)
- Viral mRNA or ribon
 Nuclear expect signals
 Eukaryote

Virology Collocations



Virology Terms and Concept Support

M definitions

Inoculation is the placement of something that will grow or reproduce, and is most commonly used in respect of the introduction of a serum, vaccine, or antigenic substance into the body of a human or animal, especially to produce or boost immunity to a specific disease. It can also be used to refer to the communication of a disease to a living organism by transferring its causative agent into the organism, the implanting of microorganisms or infectious material into a culture medium such as a brewers vat or a petri dish, or the placement of microorganisms or viruses at a site where infection is possible. The verb to inoculate is from Middle English inoculaten, which meant "to graft a scion" (a scion is a plant part to be grafted onto another plant); which in turn is from Latin inoculare, past participle inoculat-. This article covers variolation, inoculation as a method of purposefully infecting a person with smallpox (Variola) in a controlled manner so as to minimise the severity of the infection and also to induce immunity against further infection. [Wikipedia]

extended definitions from wiktionary

Edward Jenner

Lady Mary Wortley Montagu

Cowpox

Immunization

Vaccination

Longging Emperor

Cotton Mather

Immunity (medical)

Sir Edward Wortley Montagu

Smallpox

Mount Emei

Medicine in medieval Islam

Joseph Needham

Hans Sloane

Psychological resilience

Dhanvantari

Chancellor (China)

Mortality rate

Royal College of Physicians

George I of Great Britain

Microorganism

Infection

Mung bean

George II of Great Britain

University of Chicago Press

Kaifeng

Disease

Newgate Prison

Voltaire

Ming Dynasty

Domain-specific Collocations

We focus on lexical collocations with noun-based structures because they are the most salient and important patterns in topic-specific text:

- verb + noun
- noun + noun
- adjective + noun
- noun + of + noun

- e.g. detect virus particles
- e.g. tobacco mosaic virus
- e.g. negative strand virus
- e.g. genome of the virus

Lexical Bundles

"Lexical bundles" are multi-word sequences with distinctive syntactic patterns and discourse functions that are commonly used in academic prose (Biber & Barbieri, 2007; Biber et al, 2003, 2004). Typical patterns in the virology MOOC lectures include:

- •noun phrase + of
- •prepositional phrase + of
- <u>it + verb/adjective</u> phrase
- be + noun/adjective phrase
- verb phrase + that

- e.g. a DNA copy of
- e.g. at the end of
- e.g. it turns out that
- e.g. is an example of
- e.g. you can see that

FLEXIBLE USES ACROSS PLATFORMS

FLAX Across Platforms

- FLAX Website flax.nzdl.org for hosting open online language collections
 - Building directly onto the Web
- FLAX for downloading onto your PC to build collections out of sight
- FLAX for MOODLE plug-in
- FLAX for MOOC Platforms?
- FLAX in conjunction with translation technologies?



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