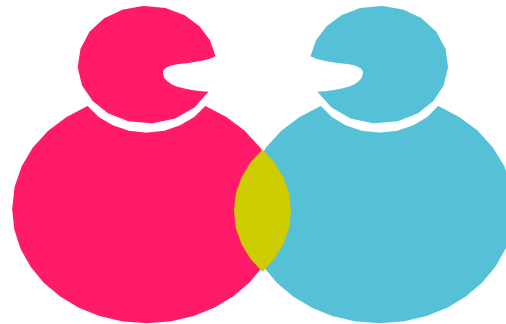


Could automatic text simplification assist correction-revision of scientific texts written by non-native English speakers?

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Bureau de Traduction de l'Université

Traduction

EN>FR>EN
ES>FR>ES
DE>FR>DE
PT>FR>PT
IT>FR>IT
CN>FR>CN
BR>FR>BR

Correction- révision/ relecture

anglais
français

Interprétariat

Simultané
Consécutive
Chuchotement
Traduction
de liaison

Audiovisuel

Sous-titrage
Enregistrements
Transcriptions
Voix-off

Assistance linguistique

Ateliers
d'écriture
Ateliers
sur mesure

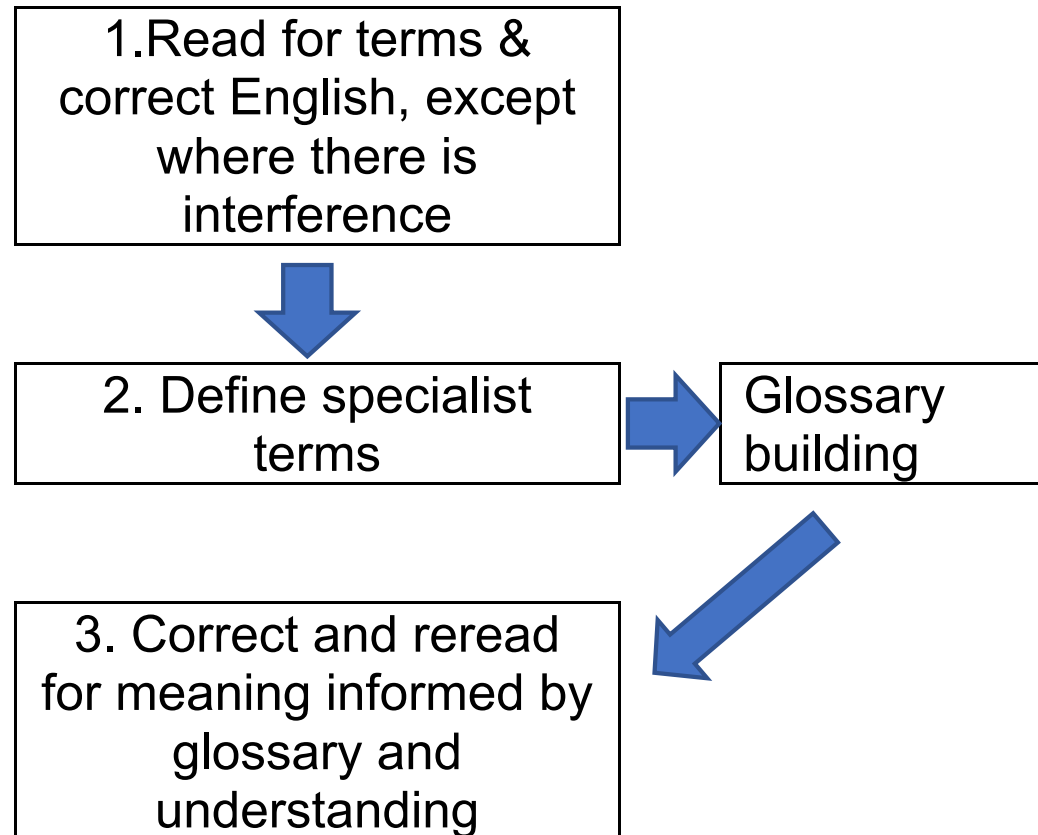
Text simplification in the work of the BTU

- Subtitles. Spoken to written. Mainly FR
- Pre-editing before MT. Mainly FR
- As an aid for understanding technical texts?

Correction-revision – the problem

- Technical texts with English errors
 - Lexical and syntactic aspects
 - Untangling technicity from errors
- The need for understanding to provide
 - English correction
 - Better expression choices (argumentation etc.)

Present workflow



Correction-revision – present strategies

- Integrated internet search tools:
 - e.g. Word + ‘Smart lookup’
- Bibliography-based
 - Ref ‘n’ Write
- Home-made glossaries

AutoSave OFF 20211505 Lira_et_al.EwE_ET_commented-1

Home Insert Draw Design Layout References Mailings Review View Tell me

Paste Times New... 12 A Aa A apple-conve... Normal No Spacing Heading 1 Heading 2 Heading 3 Styles Pane Dictate Open Ref-n-Write

1. Introduction


Food webs are composed of complex interactions and energy links among species and the environment (Thompson et al., 2012), creating ecosystems (complex systems) whose functioning is difficult to comprehend. Models try to replicate the major characteristics of the original system to resemble reality and, at the same time, are simple enough to be understood, being crucial in the clarification and understanding of this complexity (Brown et al., 2004).

Among the ecosystem models, the **Ecopath-Ecosim (EwE)**, and EcoTroph (Christensen et al., 2005; Gascuel, 2005) constitute a globally applied tool for modeling aquatic ecosystems (Colléter et al., 2015). The EwE approach describes the ecosystem resources and the interactions among different ecological groups, identifying and


Smart Lookup

Explore Define

Bing image search



Web search

 **Ecopath with Ecosim – Ecop...**
<https://ecopath.org>
Ecopath with Ecosim (EwE) is a free ecological/ecosystem modeling software suite.

Ecopath with Ecosim: methods, capabilities ...
<https://www.sciencedirect.com/science/article/pii/S030438000...>
The Ecopath with Ecosim (EwE) modeling approach combines software for ecosystem trophic mass balance analysis (Ecopath), with a dynamic ...

Correction-revision – present strategies

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and track disciplines (1,2,3). The maximal power output in cycling is described by a polynomial 2nd order power-pedaling rate relationship with a peak maximal value (P_{max}) reached at an optimal pedaling rate (V_{opt}) and an optimal torque (T_{opt}) (1,4,5,6). This means that athletes' P_{max} theoretically depends on both their “strength” and “velocity” capacities. Although some authors [have](#) reported a significant relationship between P_{max} and V_{opt} in heterogeneous populations (7,8), such a relationship was not observed in a population of male elite track [sprint cyclists](#) (1). However, regardless of training status and population, a strong relationship between P_{max} and T_{max} or T_{opt} is consistently observed (1,9), suggesting that the capacity to generate a high torque at the crank remains the main [determining factor](#) for maximal power output (1,9). The capacity to generate maximal torque in cycling is classically associated with the torque-generating capacities of the main lower-limb extensor muscle groups (6,10). For example, Driss et al. (11) reported a strong positive correlation between maximal cycling torque and the peak

Ref-n-Write

SEARCH

PANEL 1

PANEL 2

EXPAND

The crank **torque** represents the kinetics of the propulsive **torque** (N m) within the crank cycle. (Effect on the crank torque profile when changing pedaling cadence in level ground and uphill road cycling) (...) (≡)

The external **torque** produced was calculated as the sum of the frictional **torque** (given by the strain gauge) plus the **torque** necessary to accelerate the flywheel [14,23,32].(Doreletal.2005IJSM) (...) (≡)

They correspond to the intercept of the **torque** - velocity curve with the velocity and **torque** axes, respectively.(Doreletal.2005IJSM) (...) (≡)

In this study the DPtop was the crank angle when the **torque** was minimal in sector 1 (left crank arm near top position 315–45) while **torque** at DPtop represented the **torque** value at this crank angle. (Effect on the crank torque profile when changing pedaling cadence in level ground and uphill road cycling) (...) (≡)

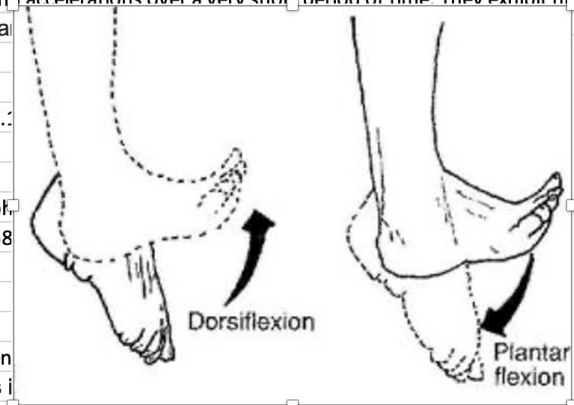
The DPbot was the crank angle when the **torque** was minimal in sector 3 (left crank arm near bottom position 135–225) while **torque** at DPbot represents the **torque** value at this crank angle. (Effect on the crank torque profile when changing pedaling cadence in level ground and uphill road cycling) (...) (≡)

The linear relationship obtained between **torque** and pedalling rate enables assessment of f_0 and T_0 , which have the dimensions of maximal pedalling rate at the zero **torque** axis and the **torque** corresponding to a zero pedalling rate, respectively (Fig 1).(Doreletal.2005IJSM) (...) (≡)

Correction-revision – present strategies

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	A	B	C	D	E	F	G	H	I	J	K
1	Term	definition/validation	source								
2	a P _{max} cycling sprint	word order ok									
3	afferent	Oxford: conducting or conducted inwards or towards something (for nerves, the central nervous system; for blood vessels, the organ supplied).									
4	afferent fibers groups III and IV	accepted lingo	https://www.researchgate.net/publication/272100725_Group_III_and_IV_Muscle_Afferents_Role_on_Central_Motor_Driv								
5	altered synergistic control	ok	https://www.sciencedirect.com/science/article/abs/pii/S0021929019303148								
6	ballistic contractions	WP:Ballistic movement can be defined as muscle contractions that exhibit maximum velocities and accelerations over a very short period of time. They exhibit high fi									
7	bi-articular muscles	Bi-articular muscles are commonly found in the upper and lower extremities of the human									
8	biofeedback of the torque signal	ok									
9	classical bipolar surface EMG	ok. Some use traditional									
10	classical torque-velocity test	See site for desc	https://journals.physiology.org/doi/full/10.1152/jappphysiol.00719.2017								
11	collected from/in participants	from is more comon									
12	common construct	ok for muscles	https://pubmed.ncbi.nlm.nih.gov/22987697/								
13	common drive	author sometimes uses as uncountab	https://journals.physiology.org/doi/abs/10.1152/jappphysiol.00719.2017								
14	common neural command	ame message, different muscle	https://journals.physiology.org/doi/full/10.1152/jn.0068								
15	contraction modalities	ok									
16	contralateral (ground electrode) and ipsilateral ankle	the part of the ankle									
17	converging onto the motor neuron pools	"on the neuron" is used									
18	convolution kernel compensation algorithm	https://www.researchgate.net/publication/220848255_Gradient_Convolution_Kernel_Compensation									
19	convolutive blind source separation method	It is a thing but most examples I have found come from audio signal separation. Is it									
20	convolutive kernel compensation method	A method of breaking down the data	https://ieeexplore.ieee.org/document/8474306								
21	cortical signature	most images are brain scans. It might be broader.									
22	corticospinal track	WP: The corticospinal tract is a white matter motor pathway starting at the cerebral cortex that terminates on lower motor neurons and interneurons in									
23	crank angular velocity	word order OK									
24	crank length	Connects pedal to gears									
25	cross-pollination (of research)	in use	https://www.researchgate.net/post/Does_anyone_have_any_examples_of_cross_pollination_of_ideas_leading_to_a_break								
26	cycle ergometer.	See site for desc	https://journals.physiology.org/doi/full/10.1152/jappphysiol.00719.2017								



Can text simplification help?

- Is the learning question the same
 - As when learning to read?
 - As when learning a language?
- What kind of corpus could help
 - Larger?
 - More specialized?
- What application?

The Mytilus complex of marine mussel **species** forms a **mosaic of hybrid** zones, found across **temperate regions** of the globe. This allows us to study 'replicated' **instances** of secondary contact between closely related **species**. Previous work on this complex has shown that local introgression is both **widespread** and highly **heterogeneous**, and has identified SNPs that are **outliers** of **differentiation** between **lineages**. Here, we developed an **ancestry-informative** panel of such SNPs.

Tips:

- ▶ Click the highlighted words to learn them and hear them. Click the non-highlighted words, too.
- ▶ Change how you learn on the [settings page](#). Also, you can print [vocab lists, quizzes, and more](#).
- ▶ When you log in, everything you rewordify is [auto-saved and can be easily shared](#).

species (group of similar living things)
a mosaic of an arrangement of
hybrid combination
temperate mild/not extreme
regions areas
instances events
widespread (existing all over a large area)
heterogeneous blended
outliers (things that aren't part of the main group)
differentiation (using different things)
lineages families
informative interesting

**Possible
workflow
with adapted
automated
simplification**

