



Aalto University

# Avoiding Weak Verbs



## Task 1

This short excerpt from a text that compares water circulation at two different temperatures contains many **weak verbs**. Can you spot where a *weak verb* could be replaced with a more specific active verb?

<sup>1</sup>The circulation of cooling water in ship engines is done at two temperature levels. <sup>2</sup>LT water is the lower temperature cooling water. <sup>3</sup>Its temperature is between 35°C and 50°C. <sup>3</sup>The higher temperature cooling water is HT water. <sup>4</sup>Its temperature is approximately 90°C. <sup>5</sup>There is a possibility of utilizing the waste heat of the cooling water onboard. <sup>6</sup>For example, the production of water onboard is often done in multi-staged evaporators, and HT water can provide the primary heat for the process. <sup>7</sup>Currently, there is no simulation programme that can do the calculation of the thermal powers in the heat recovery cycle. <sup>8</sup>The aim of this study is the development of a simulation program for making reliable estimations of how much heat is released into the cooling water cycle by the main diesel engines.

# Put “action” into the Verb

## 1. Avoid “there is...”



**There are** several important factors **that** must be considered in the design of a nuclear power plant.



∅ Several important factors ∅ must be considered in the design of a nuclear power plant.

## 2. Avoid using \*generic verbs to hide action in noun phrases



An analysis of the framework **was performed** using standard criteria.



The digital framework was analyzed using standard criteria.

\* Typical examples of **generic verbs** to avoid include *to perform*, *to do*, *to make*, *to achieve*, and *to accomplish*.

## 3. Avoid using “to be” to hide action in noun phrases



The first developer of the JavaScript language **was** Netscape.



The JavaScript language **was** first developed by Netscape.

# Shift the “topic” to the Beginning of NPs

In addition to the above problems. The verb ‘to be’ often forces the writer to place the wrong information into topical position, thereby hiding the topic at the end of a noun phrase.

## 4. Avoid using “to be” to introduce numerical results

Notice how when presenting numerical data, English prefers to use a **partitive–of** structure, **have + a [variable] of**, rather than the verb “to be”:



The substrate thickness of the DVD **is** only 0.6 mm.  
(focus on new information ‘substrate thickness’)



The DVD **has a** substrate thickness **of** only 0.6 mm.  
(focus on familiar, topical information ‘DVD’)



## Task 2

The following sentences contain the problem of the weak verb. In some sentences, the action is hiding in the noun phrase. In others, unnecessary “there is”/it is structure is used. How would you make the sentences clearer and more effective?

1. The result of a long service interruption time **is** the loss of IP packets during the cell reselection procedure.  
.....
2. The most common use of holography **is** to display static 3-D pictures  
.....
3. **There is** a wide range of disciplines contributing to the developments in nanostructure science and technology worldwide.  
.....
4. The predictions of flawed computer climate models **were** that man-made global warming should have already begun to affect our climate in 1950.  
.....
5. The definition of plagiarism **is** the “use or close imitation of the language and thoughts of another author and the representation of them as one’s original work.”  
.....
6. The surface of the inkjet-printed films **was** relatively smooth, and the root mean square (RMS) average roughness of the surface **was** 3.5 nm.  
.....  
.....
7. Dramatic modifications **were made** to the model, as further analysis of the data revealed unexpected errors.  
.....
8. The reconstruction of the hammer-beam roof **was done** by a team of specialists in medieval architecture.  
.....
9. **There have been** significant improvements in performance and usability since the first models were introduced in 2001.  
.....
10. In all electric-generating wind turbines, **there are** four basic components: a rotor, electrical generator, speed control system, and a tower.  
.....

# When are **weak verbs** OK to use?

- **Definitions:**

Linux **is an** operating system **that**...

- **Labeling / categorizing:**

Speed **is** a major **factor** in accessing audio recordings.

- **With adjectives:**

It **is important** that...

- **Be + to + infinitive**

The purpose of the survey **is to identify** environmental risks.



## Task 3

Which of the **underlined verbs** in the following sentences should be modified to avoid a 'weak verb'? If so, how would you change them?

- a) The purpose of this study **was** to evaluate the effectiveness of different help systems while filling in forms.

.....

- b) In order to be competitive in the global market, it **is** necessary for the industry to embrace new manufacturing philosophies.

.....

- c) The studied properties **were** compressive strength, splitting tensile strength and modulus of elasticity.

.....

- d) There **has been** an increase in the concentrations of all of the major greenhouse gases since the beginning of the Industrial Revolution

.....

- e) A wireless receiver **is** an item of telecommunications equipment that receives radio messages from an outside source.

.....

# Relational Verbs

Formal academic English tends to avoid overuse of the **weak verbs** "to be" or "to have." One way to avoid these weak verbs is to use **action verbs**, which indicate the relationship between two concepts. The following verbs are commonly used to orient the reader by **categorizing** concepts or **describing** their characteristics and features in terms of their **behavior, composition, and function**. Since these characteristics concern facts or "eternal truths" about the concept described, these comments are usually expressed using the **present tense**.

<b>[PARTS] → [WHOLE]</b>	<b>[WHOLE] → [PARTS]</b>
compose constitute represent form *make up	is composed of comprise (UK) *is comprised of (USA) consists of contains embodies
*belong to pertain to	incorporates encompasses *covers
are involved in are included in serve as function as	subsumes integrates
	involves includes entails

*\* these verbs may be considered too informal for academic writing*

## Examples:

Canada, Mexico and the USA **constitute** an economic zone known as NAFTA.

Our solar system **comprises** one star, nine major planets, and numerous moons.

Reverse engineering **involves** taking a product or computer code, breaking it down, and analyzing it.

Robots together with various levels of expert systems **form/represent/constitute** the latest in automation on the plant floor.

<b>[FEATURE] → [CLASS]</b>	<b>[CLASS] → [FEATURE]</b>
corresponds to indicates implies signals	is characterized by accounts for + percent% totals

## Examples:

The modern climate of the middle Atlantic region **is characterized by** hot and humid summers and moderately cold winters.

## Definitional Verbs

In addition to these verbs, a number of other verbs are used to define phenomena, concepts, and categories. These verbs are occasionally accompanied by **quotation marks ("...")**. Examples of these include:

[MEANING] → [LABEL]	[LABEL] → [MEANING]
be referred to as be known as be designated as be called defines *stands for *means	denote designate refer to signify be defined as be known as

### Examples:

The production of a new part from the features of an existing part **is referred to as** reverse engineering.

Reverse Engineering **is defined as** the analysis of a device or object to determine its structure or function.

The acronym CAD **denotes** Computer Aided Design.

The skull and cross bones symbol **designates** substances that are toxic and should not come into contact with the human body

## Locational Verbs

Many novice writers also overuse the verb "to be" when describing the physical location of objects. To avoid this, use **Locational verbs**:

[OBJECT] → [LOCATION]
be located (at/in/on) be positioned (at/in/on) be fixed (to) be attached (to) be connected (to) be fastened (to) be joined (to)

### Examples:

Fifty seven percent of all tropical rainforests **are located in** Latin America.

The fuel cell is as large as a credit card and **is attached to** the back of a mobile phone.



## Task 4: verbs to replace weak verbs

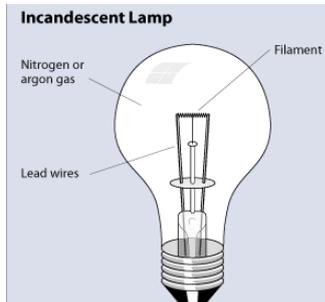
Each sentence below contains a weak verb. Replace the weak verb with a suitable action verb offered.

- The Great Barrier Reef **is** a network of some 900 islands and 2900 reefs and extends some 2300 kilometres along the east coast of Queensland.  
(a) comprises      (b) composes      (c) denotes      (d) accounts for
- In their most basic form, all digital computers **have** four fundamental blocks: a central processing unit, input unit, output unit and memory.  
(a) serve as      (b) form      (c) consist of      (d) constitute
- Most coniferous forests **are** in the Northern hemisphere, south of the Tundra.  
(a) are involved      (b) are located      (c) compose      (d) represent
- Typical waste materials that can be recycled **are** paper, plastics, and metals.  
(a) include      (b) form      (c) contain      (d) entail
- Due to the complicated nature of the e-business environment, the development of e-business strategies **is** a major challenge for managers.  
(a) is composed of      (b) composes      (c) involves      (d) constitutes
- End-of-life vehicles (ELVs) **are** yet another major environmental issue concerning passenger car transport and automotive industry.  
(a) contain      (b) represent      (c) consist of      (d) account for
- Swedish speakers **are** only five percent of the population in Finland.  
(a) include      (b) pose      (c) account for      (d) consist of
- User-centered design (UCD) **is** a process in which the needs, wants, and limitations of end users are given extensive attention at each stage of the design of a product.  
(a) is referred to as      (b) refers to      (c) accounts for      (d) represents
- SIMOX technology **is** an effective method for fabrication of high-temperature circuits.  
(a) offers      (b) composes      (c) involves      (d) is referred to as
- Thermal constraints **are** a new challenge to the creation of an efficient 3D floor-planning algorithm.  
(a) compose      (b) are composed of      (c) situate      (d) pose



## Task 5: Review

Read the comparison between **incandescent** and **LED light bulbs**. What changes would you suggest in terms of vocabulary, organization of given and new information, and style?



<sup>1</sup>One of the easiest ways to decrease our dependence on fossil fuels is simply to cut down on the amount of power we use. <sup>2</sup>Since lighting consumes over 20% of the electricity produced in Finland, we could bring down our carbon footprint a lot by replacing incandescent light bulbs with light-emitting diodes (LEDs). <sup>3</sup>There are big differences in how efficiently these two technologies use energy, how long they last, and how easily they can be damaged. <sup>4</sup>The main weakness of the incandescent light bulb is that it is not efficient in turning electricity into light, since about 90% of the input energy is given off as heat, rather than visible light. <sup>5</sup>Traditional light bulbs are also limited by their short lifespan of only 1000 hours, so that constant monitoring and replacement of incandescent bulbs is required. <sup>6</sup>Despite incandescent bulb's lower price, these weaknesses in design make incandescent bulbs more expensive to run in the long term.

<sup>7</sup>Also, the incandescent light bulb is not very durable, since it consists of a fragile tungsten filament protected by a thin glass shell, both of which can be easily damaged. <sup>8</sup>In contrast to incandescent bulbs, the light from an LED lamp is generated in a solid object, a semiconductor, rather than in a vacuum or gas tube, and so it doesn't produce almost any heat and allows energy efficiencies 10 times higher than the energy efficiencies with the incandescent bulb. <sup>9</sup>In addition, the lifespan of a single LED can be more than 10 years (30,000 hours), which is the equivalent of using 30 incandescent bulbs. <sup>10</sup>Its longer lifespan and higher energy efficiency makes LEDs 10-20 times less expensive to operate than ordinary light bulbs. <sup>11</sup>Finally, since LEDs do not contain any fragile parts and are embedded in clear epoxy material, they are less prone to mechanical damage and more durable than traditional glass bulbs. <sup>12</sup>So, the LED lamp is a better technology for reducing our carbon footprint because the energy efficiency is higher, lifespan is longer, and the durability greater.