## Links between YSO and Wikidata

Links between General Finnish Ontology YSO and Wikidata have been added and maintained since 2019 by YSO maintenance. Wikidata property "YSOtunniste" (Property:P2347) is used to indicate the links, and a reference "YSO-Wikidata linking" (Q89345680) is used to authenticate these links.

## First set of links

First share of linking was carried out in 2019-2020 with a set of 7359 YSO concepts (of ca. 30000 in total). An automatically generated list of YSO concepts with link suggestions to Wikidata was .checked manually by YSO maintenance by either approving or disapproving each link suggestion. After this, approved links were automatically imported to Wikidata. The suggestion list was generated using these three sources:

- 1) List of Library of Congress Subject Headings with links to both YSO concepts and Wikidata items.
- 2) List of general subject headings used by Finnish Broadcasting Company Yle with links to both YSO concepts and Wikidata items.
- 3) List of the most often used YSO concepts in indexing, according to metadata from Finnish search service Finna, with labels matching in Wikidata.

Out of the 7359 concepts on the list, a link was added to 4740 (64,4%), leaving 2619 (35,6%) concepts unlinked. Links were added based on a single automatically provided suggestion for each YSO concept. No links were added e.g. based on further research for better-matching items. For the remaining unmatched 2619, better-matching items may be found and linked manually later. Going trough the list was for the most part fairly straightforward, but some concepts and suggestions, roughly 400 or between 5 to 6 percent, were more or less complicated requiring extra research and discussion with the YSO team. These usually included e.g. unmatching terms or content between YSO and Wikidata or inconsistent content within a Wikidata item (e.g. different meaning in different languages).

## Mix'n'match

After the first set, links have been added by using Mix'n'Match linking tool.

## Guidelines

Linking YSO concepts to Wikidata is done according to these guidelines:

- · Linking is done by using the SKOS property skos:closeMatch.
- Linking is done by finding the semantically most accurate match in Wikidata for the YSO concept.
- When no suitable match is found, no link is added.
- One YSO concept can be linked to several Wikidata items, when YSO concept's meaning covers these items.
- · Several YSO concepts can be linked to the same Wikidata item, when the item's meaning covers these YSO concepts.
- No links are added between YSO concepts and Wikidata items linked to a Wikipedia disambiguation page.
- · Guidelines for linking YSO concepts to Library of Congress Subject Headings (in Finnish) are followed when suitable.
- Wikidata items and Wikipedia articles can be edited when there is a direct benefit for linking YSO concepts to Wikidata (ie. through editing the Wikidata item becomes more accurate making it possible to add a link between a YSO concept and the item). General Wikidata guidelines are followed in this. Editing concerns correcting straightforward errors and inaccuracies with a goal of improving the item's quality and semantic unity. Editing is only done to Finnish, Swedish or English content and is limited to the following:
  - Editing, adding or removing a Wikidata label, definition or alias.
  - Adding, removing or changing a link to a Wikipedia article.
  - Merging two Wikidata items by using Wikidata's merge function.
  - Changing the headline of a Wikipedia article linked to a Wikidata item.