## Checklist for Evaluation of the Model

For the Coverage and flexibility measure, participant need to fill-up below Table with the calculated value they derive in Method one (M1) process. The Table provided ideal value for each situation.

	Class Coverage	Class Flexibility	Attribute Coverage	Attribute Flexibility
CQ-Model	$\begin{bmatrix} 20.3 \\ 1 - \frac{ Cc - Mc }{ Cc } \end{bmatrix}$	$\begin{bmatrix} \frac{ Mc-Cc }{ Mc } \end{bmatrix}$	$\begin{array}{c} \mathbf{\approx 0.5} \\ 1 - \frac{ Cp - Mp }{ Cp } \end{array}$	$\begin{bmatrix} \mathbf{=0.5} \\ [ & \frac{ Mp-Cp }{ Mp } \end{bmatrix}$
DS-Model	$= 1 $ $ [1 - \frac{ Dc - Mc }{ Dc }] $	$\begin{bmatrix} \mathbf{a} 0 \\ \frac{ Mc-Dc }{ Mc } \end{bmatrix}$	$\begin{bmatrix} 1 \\ 1 - \frac{ Dp - Mp }{ Dp } \end{bmatrix}$	$\begin{bmatrix} \mathbf{a}0 \\ \left[ \frac{ Mp-Dp }{ Mp } \right] \end{bmatrix}$
CQ-DS	$\begin{bmatrix} \mathbf{c0.3} \\ 1 - \frac{ Cc - Dc }{ Cc } \end{bmatrix}$	<b>≃0.4</b> [	$\begin{bmatrix} \mathbf{c} - 0.1 \\ 1 - \frac{ Cp - Dp }{ Cp } \end{bmatrix}$	$\begin{bmatrix} 20.5 \\ \frac{ Dp-Cp }{ Dp } \end{bmatrix}$

Cc → total class in competency question

Cp → total properties is competency question

 $Mc \rightarrow total class in model$ 

Mp → total properties in model

Dc → total class in dataset

Dp → total properties in dataset

## Schema Level

- Does the model including cycles in the class hierarchy? NO
- Does the Model uses any polysemous terms for its class or property name? NO
- Is Multiple Domain / Range defined for any property ? YES, but no inconsistency
- Does any class have more than one direct parent class? NO
- Does the Model include multiple classes which have same meaning? NO
- Is the class Hierarchy over specified? NO
- Does the model use isA as a object Property or relation? NO
- Does the model have any leaf class for which there is no relation with the rest of the model? NO
- Did you use miscellaneous or others as one of the class name? NO
- Does the model have any chain of Inheritance in class hierarchy? NO
- Do all properties have explicit domain and range declarations? YES
- Does the model have any classes or properties which are not used? NO
- Are a collection of elements included as a group in a number of class/attribute? YES

## **Linguistic Level**

 Does all elements of the model (i.e. class and property) have human readable annotations? NO

- Do all elements of the model follow the same naming convention? YES
  Metadata Level
  - Is provenance information (Creator, Version, Date) available for the final protege model? NO
  - Is provenance information available for any property or class which is taken from some reference standard or ontology? **NO**