

## Appendix D: Valid competency relationships

Earlier in this Guide, in the element “Relation,” information regarding different kinds of relationships among learning objectives allowable in the XML were described. Recall that competency relationships are defined within the <CompetencyFramework> tag using a <Relation> tag. In the MedBiquitous Competency Framework, there are three types of relationships which may be expressed in the “Relation” section of the CI XML file:

1. related (“is related to concept”)
2. narrower (or “has narrower concept”)
3. broader (or “has broader concept”)

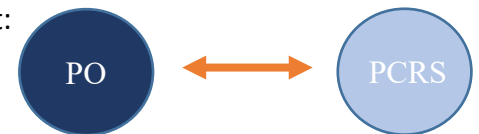
### Related relationships

When documenting the **relationships between your school’s program objectives and individual PCRS competency statements** in the “Relation” portion of your CI XML, the only type of relationship that can be used is *related*. If any other type of relationship (e.g., narrower, broader) is used to for school’s program objectives and the PCRS, an error will occur. At least one relationship between each of your school’s program objectives and the PCRS is required.

Where to use the “ <u>related</u> ” relationship tag among my CI’s learning objectives?						
	PCRS domains (e.g., 1.00 Patient Care)	PCRS competency statements	Program objective domains	Program objectives (i.e., program-level -competency)	Course/module objectives (i.e., sequence-block-level-competency)	Event objectives (i.e., event-level-competency)
PCRS domains (e.g., 1.00 Patient Care)	X	X	X	X	X	X
PCRS competency statements	X	X	X	✓	X	X
Program objective domains	X	X	X	X	X	X
Program objectives (i.e., program-level -competency)	X	✓	X	X	X	X
Course/module objectives (i.e., sequence-block-level-competency)	X	X	X	X	X	X
Event objectives (i.e., event-level-competency)	X	X	X	X	X	X

For the purposes of your XML, stating that a given program objective (PO) is related to a given PCRS means the same thing as stating that a given PCRS is related to a given program objective. For example, the following two examples of ‘related’ relationships are logically equivalent:

<PO> skos:related <PCRS> → where <PCRS> is related to <PO>  
 <PCRS> skos:related <PO> → where <PO> is related to <PCRS>



Whether your XML is organized such that your program objectives or the PCRS competency statements come first in each listing of the “Relation” element in your XML may depend on your software and how the developers chose to organize your curricular content. From an AAMC CI data standpoint, either approach is acceptable.

### Narrower and broader relationships

For school’s learning objectives relationships among each other (e.g., this 1 program objective has these 5 course/module learning objectives linked underneath it, the narrower or broader relationships can be

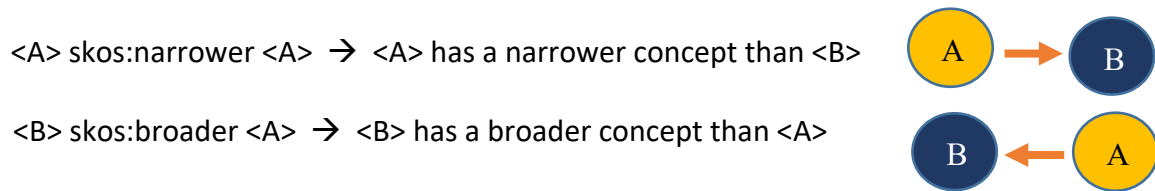
used. Remember that there are three relationships among your school’s learning objectives to document:

- Project objective domain > Program objective
- Program objective > Course/module objective
- Course/module objective > Event objective

In math, documenting  $2 < 5$  means the same thing as  $5 > 2$ . From an XML perspective, you can document in either direction (narrower, or broader). It is recommended to choose one consistent approach to ease human readability and evaluation. Continuing the hypothetical example in this Guide, your XML could reflect:

1. The program objective domain **Patient care** contains a *narrower* concept, and it is the program objective **Educate and counsel patients to maintain and improve health and prevent disease**, OR
2. The program objective **Educate and counsel patients to maintain and improve health and prevent disease** contains a *broader* concept, and it is the program objective domain **Patient Care**.

Here are two shorthand examples of hierarchical relationships among your learning objectives:



These tables and diagrams below depict relationships between competencies.

✓ indicates a valid relationship per the CI profile of the MedBiquitous CI standard.

✗ indicates an invalid relationship. An error is generated if an invalid relationship is detected, as described above in the ‘<Relation> Tags’ section.

Where to use the “ <b>narrower</b> ” relationship tag among my CI’s learning objectives?						
B	PCRS domains (e.g., 1.00 Patient Care)	PCRS competency statements	Program objective domains	Program objectives (i.e., program-level-competency)	Course/module objectives (i.e., sequence-block-level-competency)	Event objectives (i.e., event-level-competency)
A						
PCRS domains (e.g., 1.00 Patient Care)	✗	✗	✗	✗	✗	✗
PCRS competency statements	✗	✗	✗	✗	✗	✗
Program objective domains	✗	✗	✗	✓	✗	✗
Program objectives (i.e., program-level-competency)	✗	✗	✗		✓	✗
Course/module objectives (i.e., sequence-block-level-competency)	✗	✗	✗	✗	✓ (for nested course/modules)	✓
Event objectives (i.e., event-level-competency)	✗	✗	✗	✗	✗	

Where to use the “ <b>broader</b> ” relationship tag among my CI’s learning objectives?						
B	PCRS domains (e.g., 1.00 Patient Care)	PCRS competency statements	Program objective domains	Program objectives (i.e., program-level -competency)	Course/module objectives (i.e., sequence-block-level-competency)	Event objectives (i.e., event-level-competency)
A						
PCRS domains (e.g., 1.00 Patient Care)	X	X	X	X	X	X
PCRS competency statements	X	X	X	X	X	X
Program objective domains	X	X	X	X	X	X
Program objectives (i.e., program-level -competency)	X	X	✓		X	X
Course/module objectives (i.e., sequence-block-level-competency)	X	X	X	✓	✓ (for nested course/modules)	X
Event objectives (i.e., event-level-competency)	X	X	X	X	✓	