

Ontology Summit 2010 Symposium:  
Creating the Ontologists of the Future

# **Current Requirements: What Training do Ontologists Need?**

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# Ask first: What are we training For?

Why? Because:

- Training should offer knowledge and skills needed
  - Already have problems
    - unqualified people in ontology jobs
    - employers can't find/recognize qualified people
  - Future ontologists will probably want jobs
  - Educators rarely tracking curriculum effectiveness
- and
- We don't know the answer already

# Why Current Requirements?

- Easier to identify current jobs than future
- Future probably exists in there somewhere
- See previous: Already have a problem
- Chance to build in good habits in curriculum design and maintenance
- We don't know the answer already

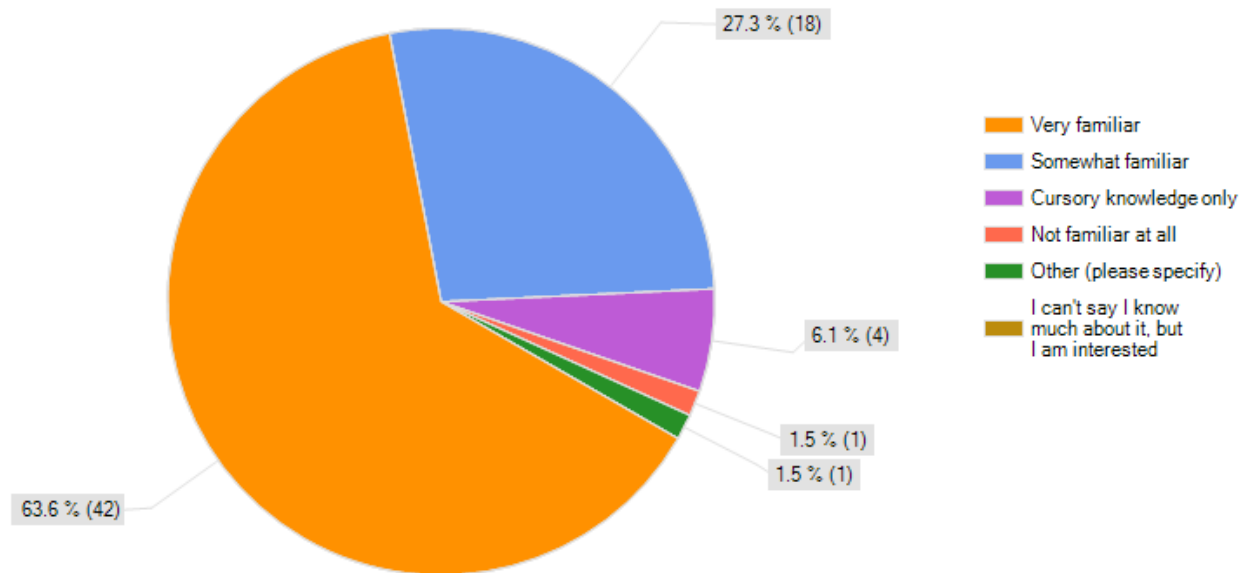
# How we asked

- In Virtual Discussions
  - Opportunities to opine/suggest during sessions early in the Summit series
  - Regular harvesting by Requirements Track Chair
- Expert Panel
  - Presentations by invited panelist with “industry,” applied experience
  - Most with multiple roles: developer/designer, leader, trainer, evaluator, other
- Survey
  - Developed in part from the input above
  - Broadcast solicitation beyond Ontology Summit Community

# Survey Respondents

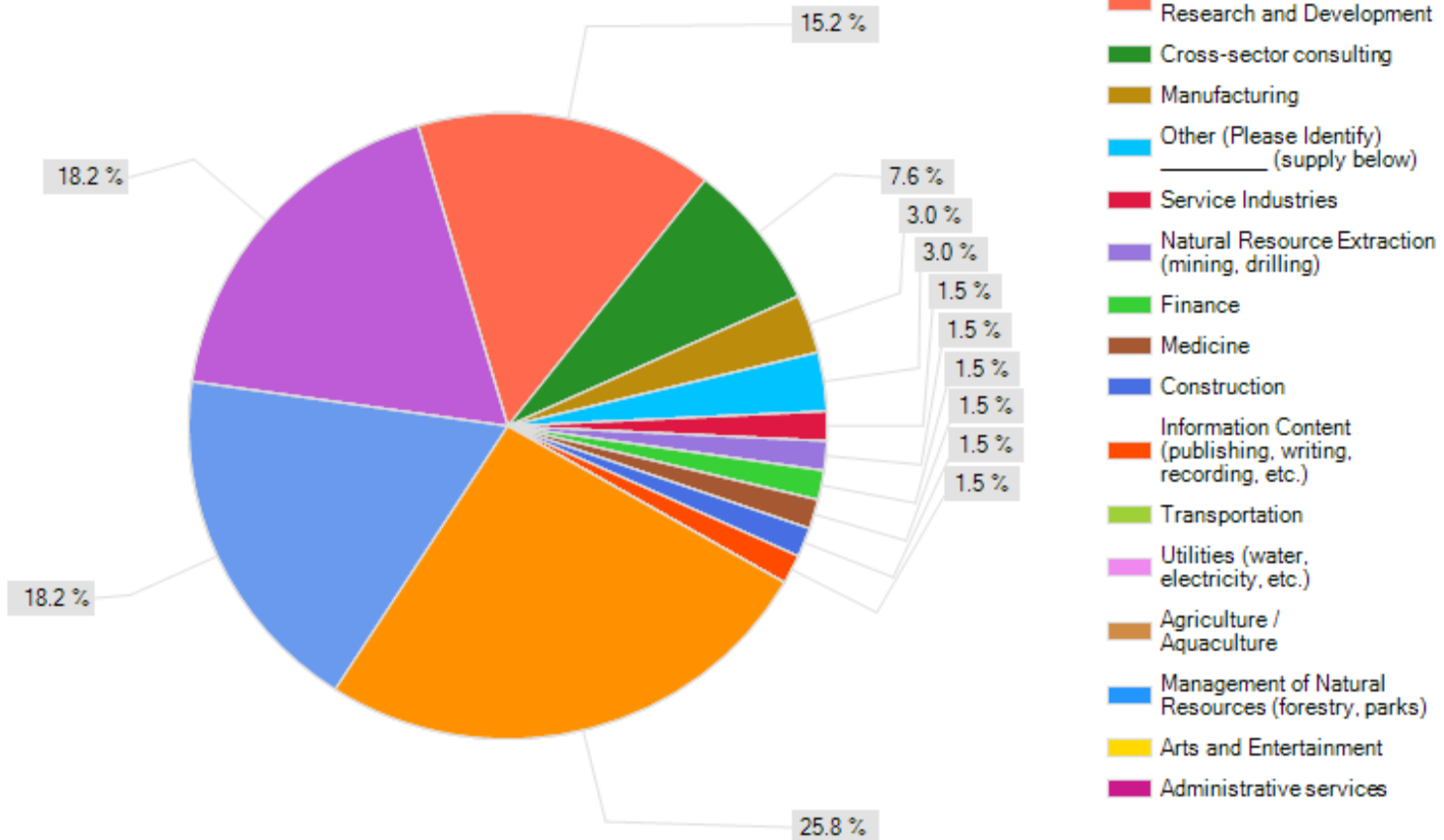
- 66 Respondents
- Familiar with field

FamiliarityWithOntologyForInformationScience. How familiar are you with the field and the disciplines of Ontology for Information Science, Formal ontology and Ontological Engineering?



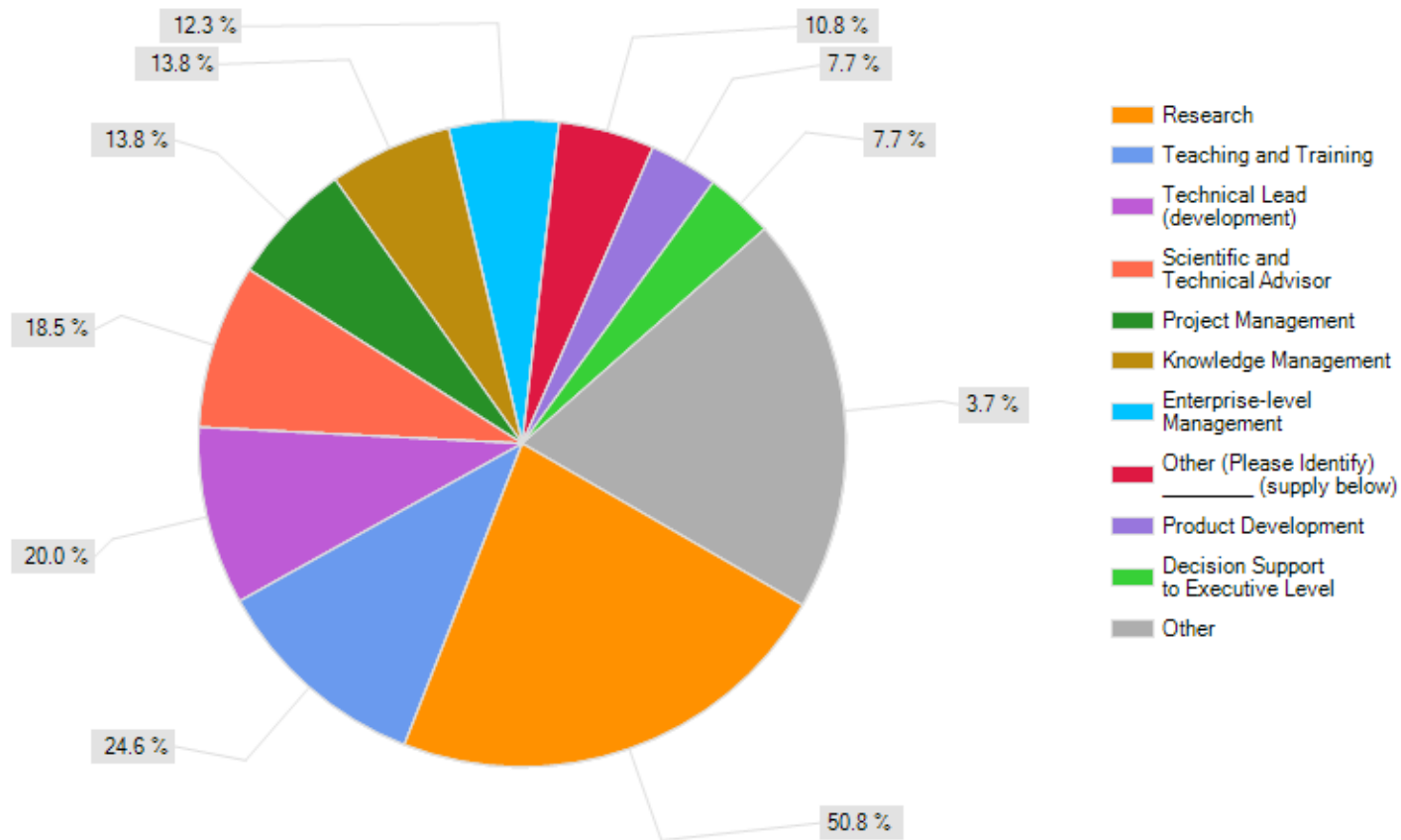
# Respondents: Sectors

RespondantPrimarySector. What is your Organization's primary Sector of operation? Please answer with reference to the organization you identified in 1a. A small collection of very general Sectors is given here. Please remember that here you are characterizing your organization, rather than your own specialty or function within it.



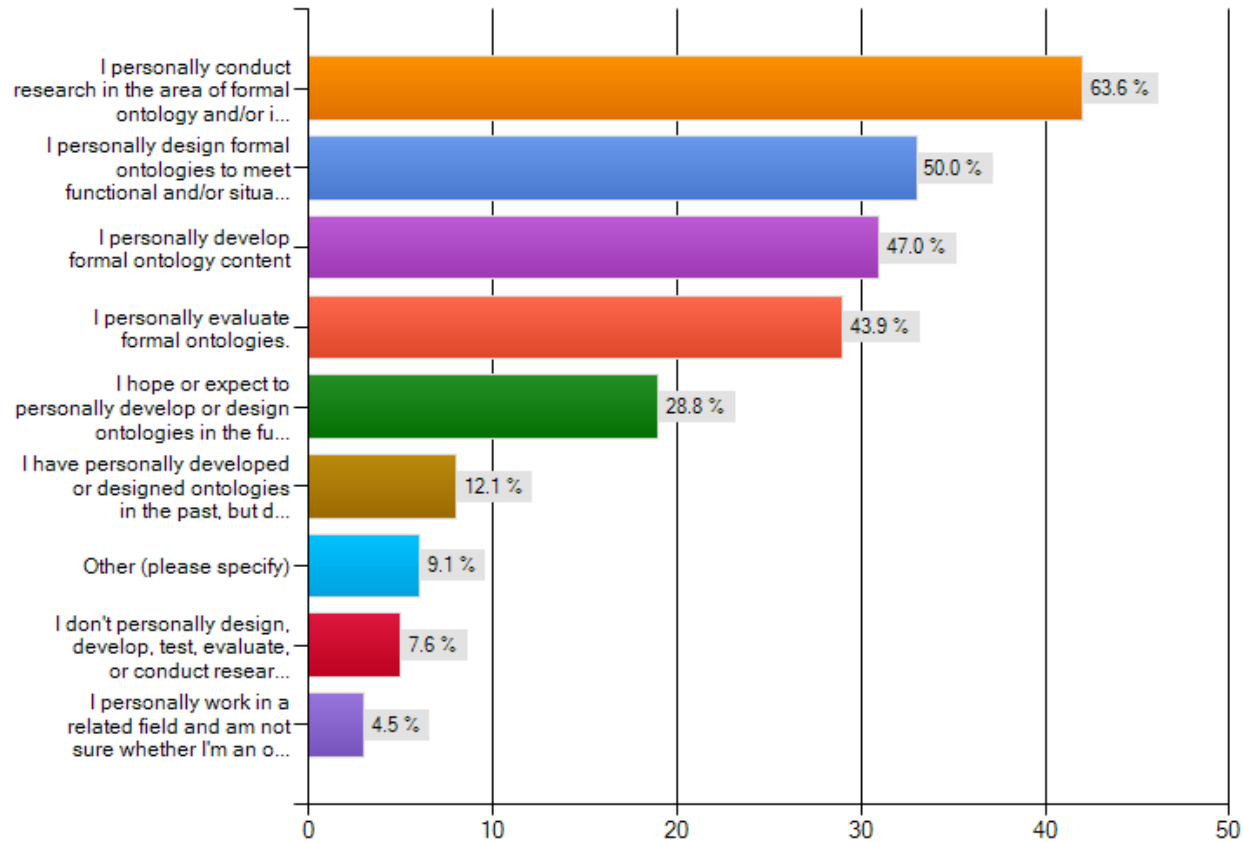
# Respondents: Roles

RepondantPrimaryFunction. What is your primary function within your organization? A small collection of common roles is given here; if none fit, please use the "other" option and specify,



# Respondent Roles, Ctn'd

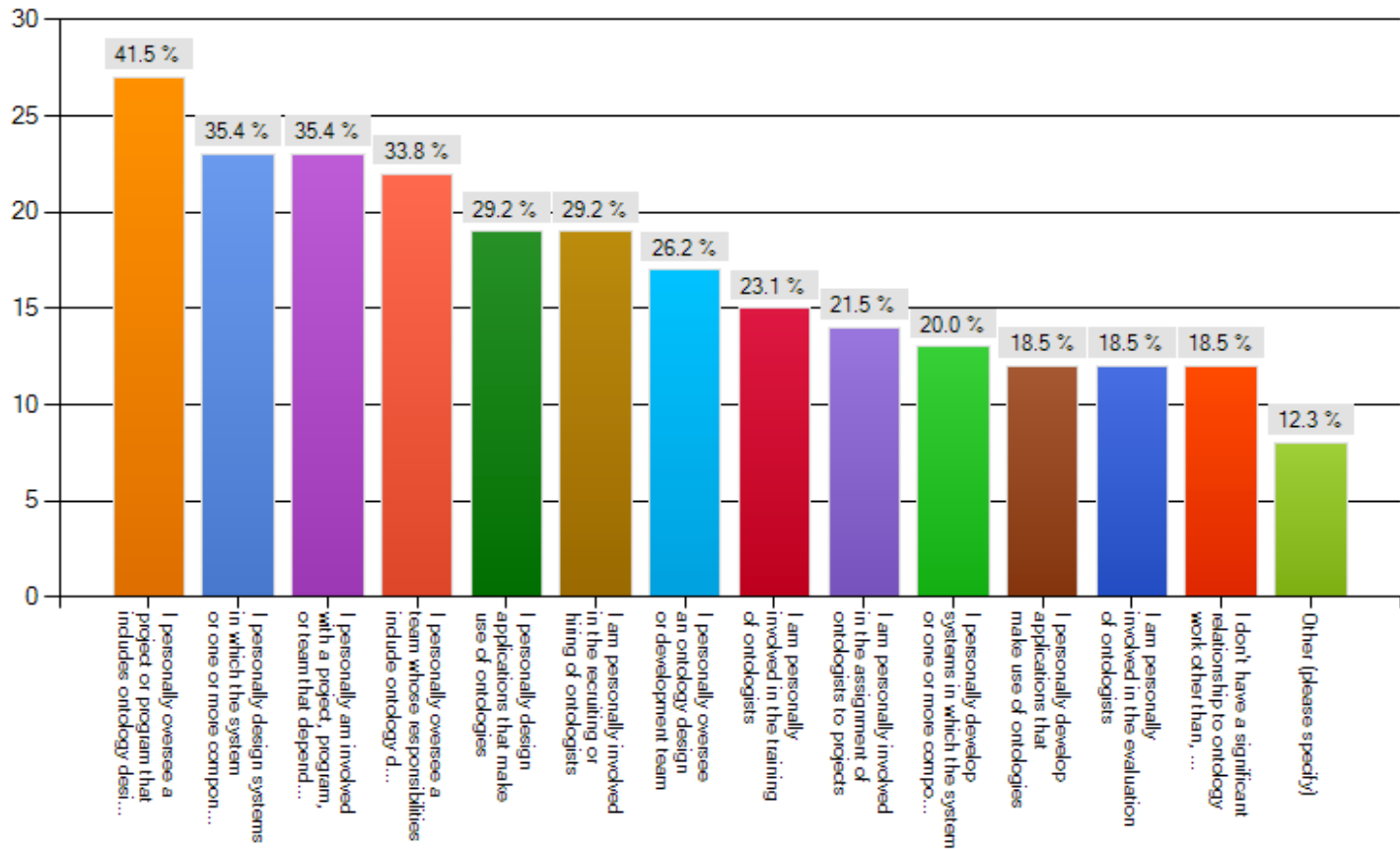
RespondantPersonalOntologyWork. Do you personally design, develop, test, evaluate, or conduct research on formal ontologies? Or, have you done significant work of this sort in the past? If so, please indicate the nature of the work. If not, please select "I don't ..."





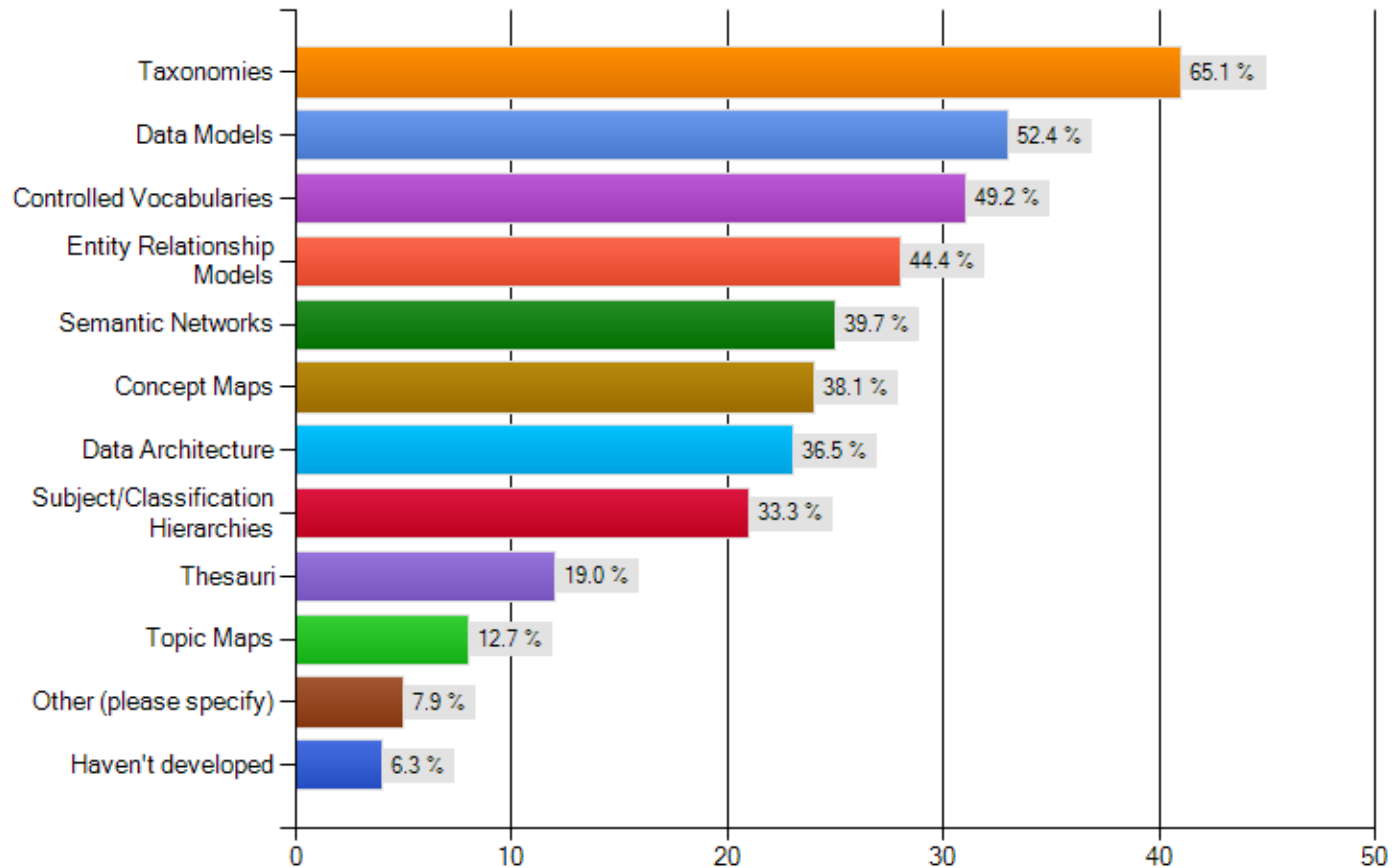
# Respondent Roles, Ctn'd

RespondantOtherRelationshipToOntologyWork. Within the organization and role you identified, do you have a relationship to ontologist and/or ontology work, other than or in addition to personally performing work as described in 1d? Or, have you had a significant relationship to ontology work in the past? If so, please indicate the nature of this relationship. If not, please select "I don't have ..."



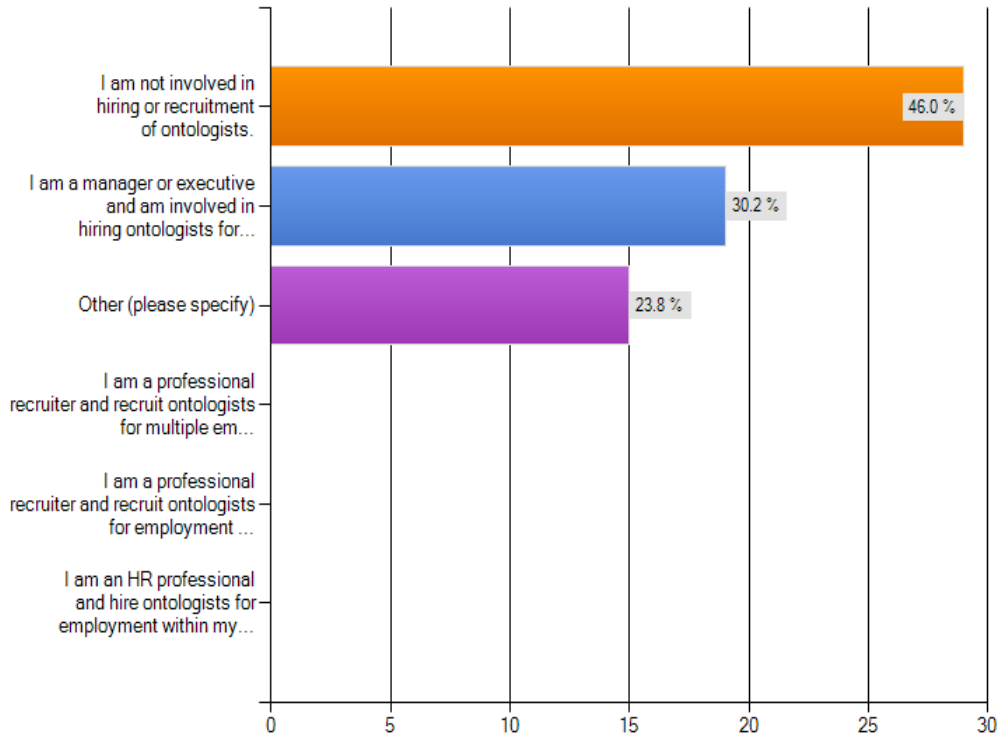
# Respondent Roles, Cnt'd

**RespondantWorkInNeighboringField.** Have you personally designed or developed taxonomies, thesauri, controlled vocabularies, classification systems, data models, knowledge models, category structures, or other Knowledge Organization Structures beyond (or in addition to) full formal ontologies? Or, have you done significant work of this sort in the past? If so, please indicate what kinds of KOS or models you have developed:



# Respondent Roles, Non-Technical

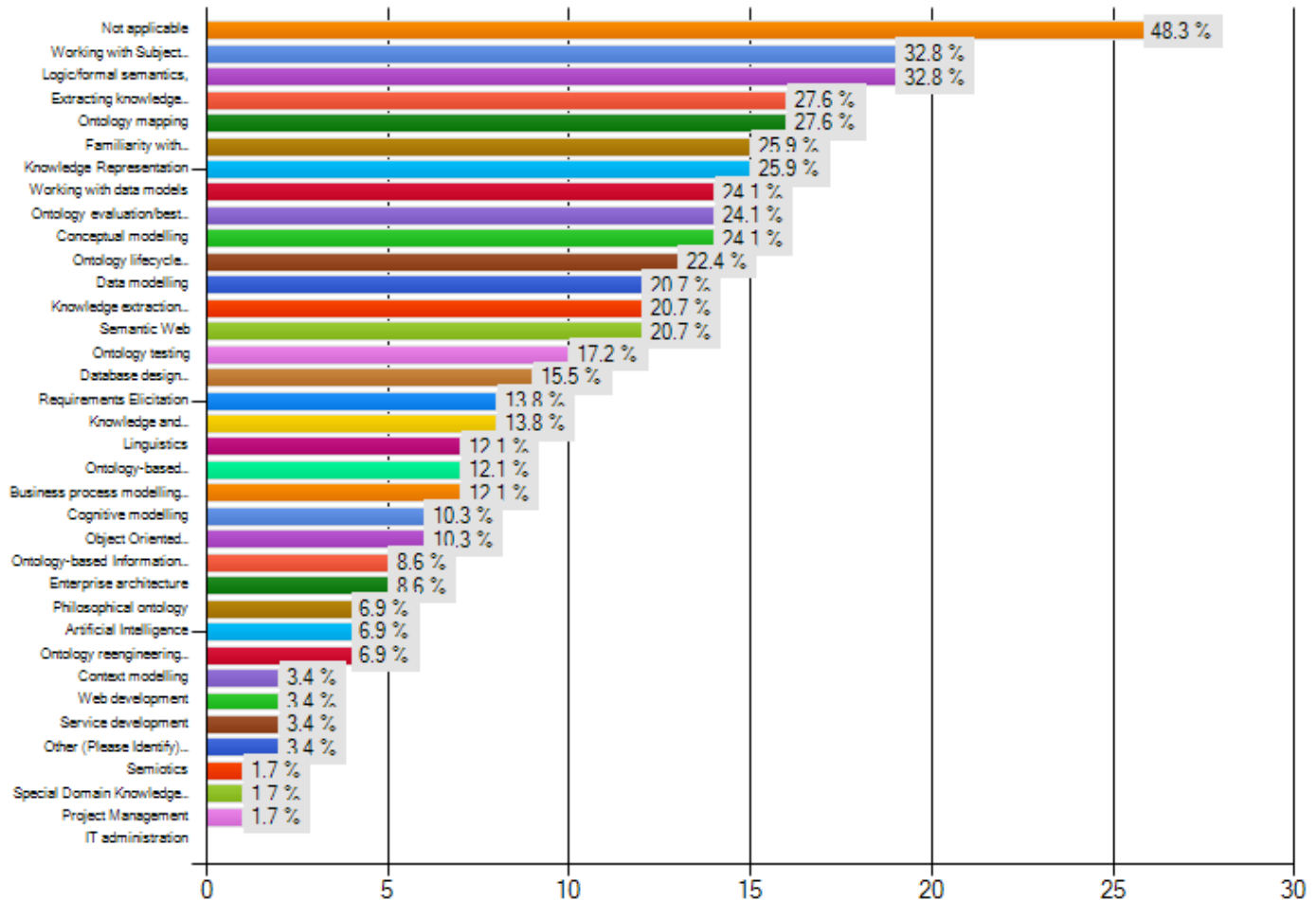
RespondantHiringOfOntologists. Are you involved in the hiring or recruitment of ontologists? Or, have you done so in the past? If so, please indicate nature of this activity. If not, please choose the last option.



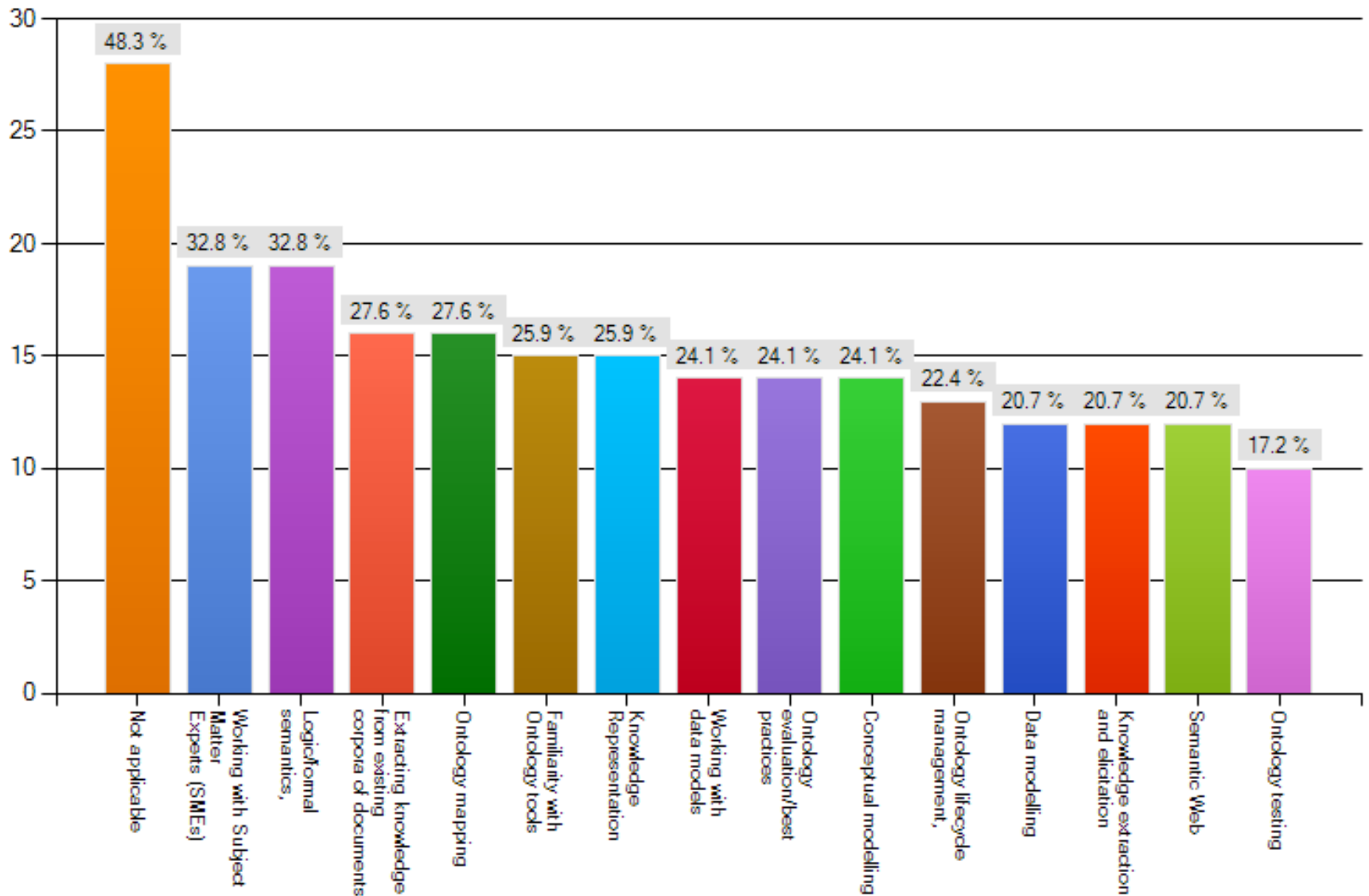
- Project director
- i am not involved in hiring
- I specifey requirements for skilled personnel
- I am an ontologist looking to grow staff in this area
- I am involved in identifying the right experts and to invite them to brief and have a dialog with our community members, and to contribute to our collective body-of-knowledge
- I have communication with ontologists professionals in the job market
- I advise City Council and Staff on projects and project management options - including skill sets required
- I have participated in interviews and provided evaluations.
- I was on the hiring committee for [Major Corporation]'s Knowledge Services section
- I recruit students to work on research projects
- pos graduate student not applicable.
- I have recruited and hired in the past. Currently, I am often asked to advise on hiring by organizations we support.
- Technical Interview/Recommendation
- I could sit on interview committees for job applications with ontology skills as part of the person description.

# Requirements: from Evaluators

**RespondentEvaluationOfOntologists.** Are you involved in the evaluation of ontologist skill, knowledge, and/or performance? If so, please indicate what knowledge, skills, and characteristics you think are important for ontologist quality and success. If not, please choose the last option.



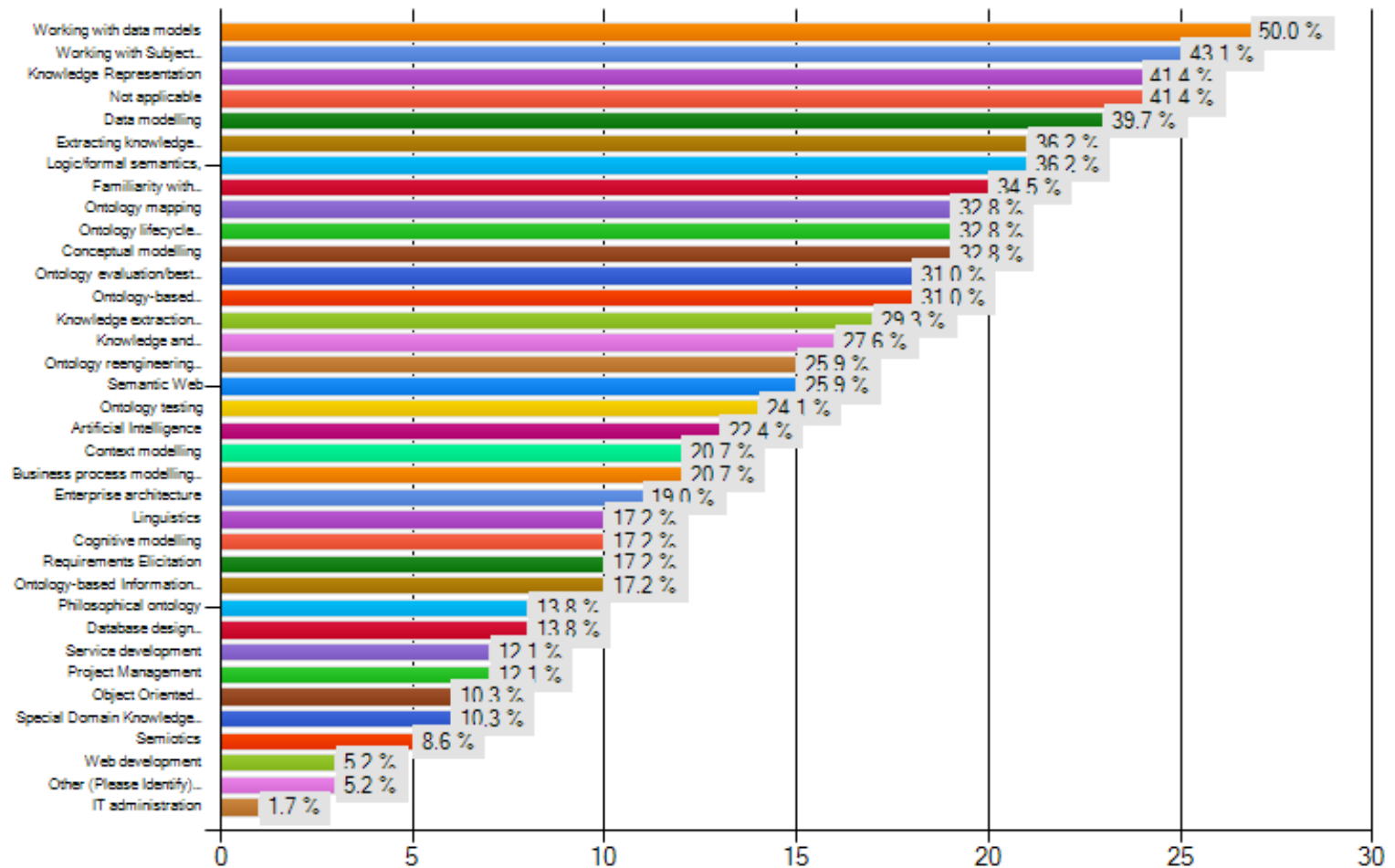
**RespondentEvaluationOfOntologists.** Are you involved in the evaluation of ontologist skill, knowledge, and/or performance? If so, please indicate what knowledge, skills, and characteristics you think are important for ontologist quality and success. If not, please choose the last option.



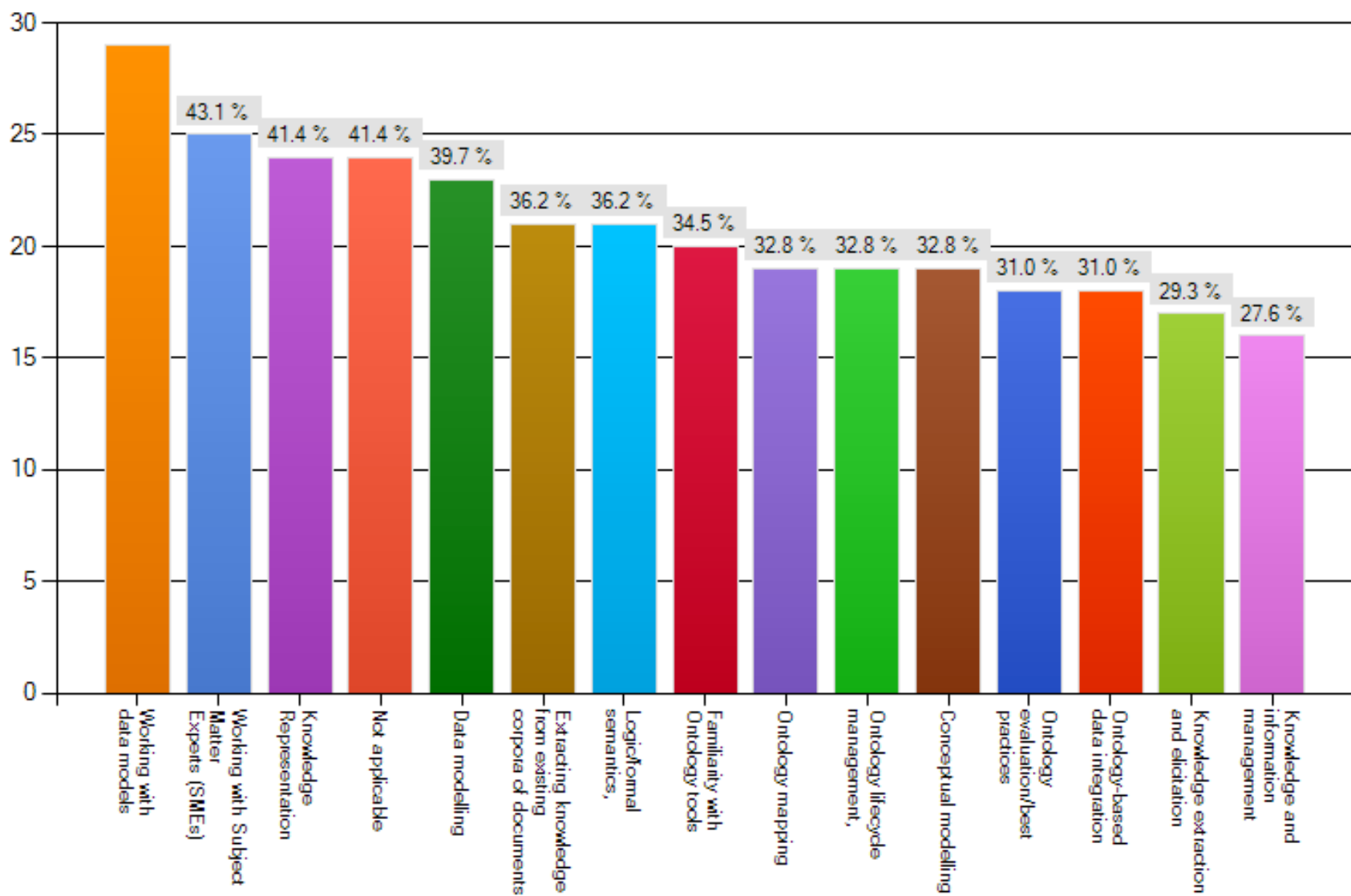
# Requirements: from Employers

DesiredAreasOfTrainingOrExperience.

If you are involved in hiring or recruiting ontologists, please indicate what knowledge, skills, experience, and/or characteristics you look for in an ontologist candidate. If you are not involved in hiring or recruiting, please choose the last option.

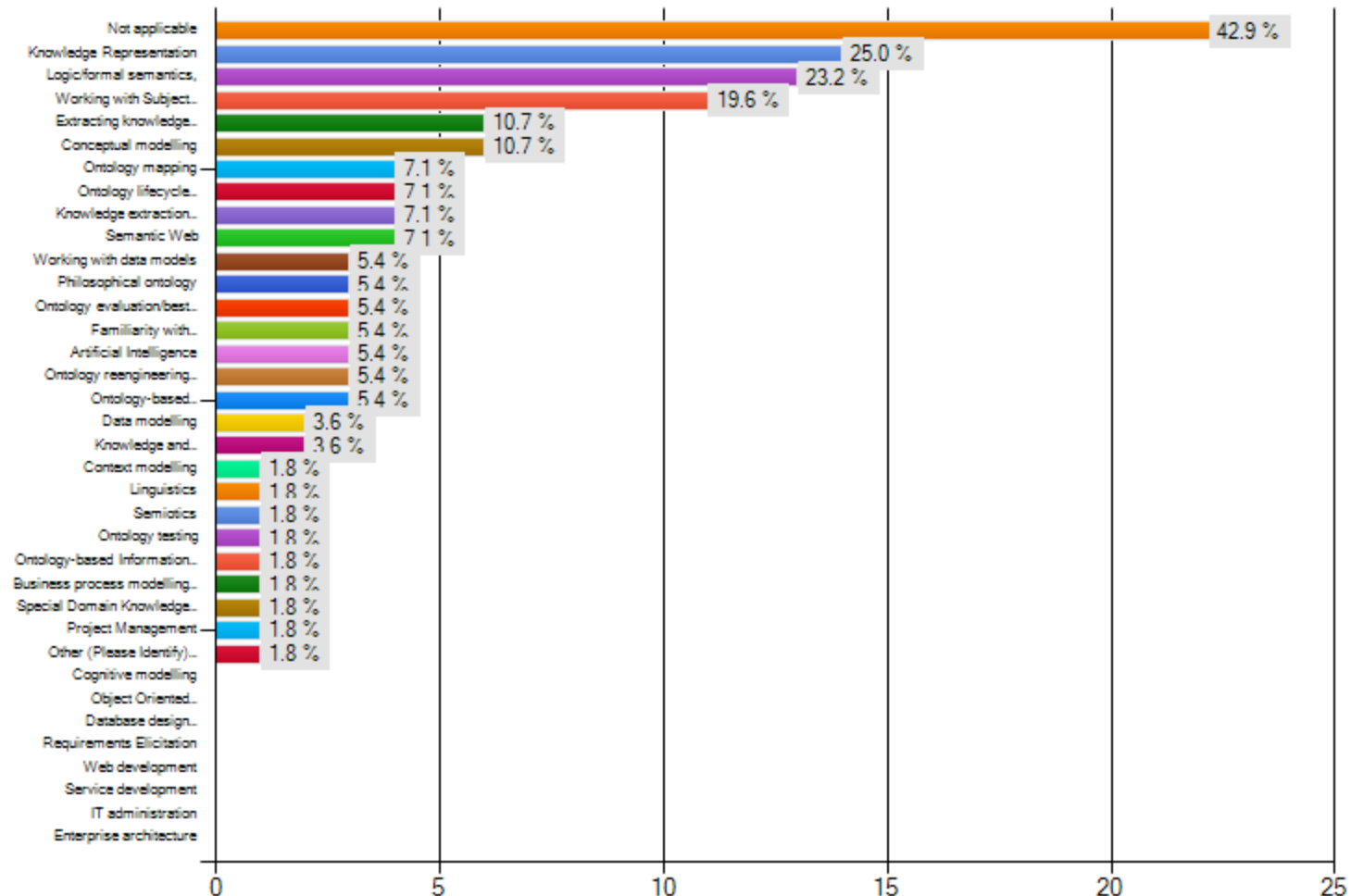


**DesiredAreasOfTrainingOrExperience.** If you are involved in hiring or recruiting ontologists, please indicate what knowledge, skills, experience, and/or characteristics you look for in an ontologist candidate. If you are not involved in hiring or recruiting, please choose the last option.



# Employer Priorities

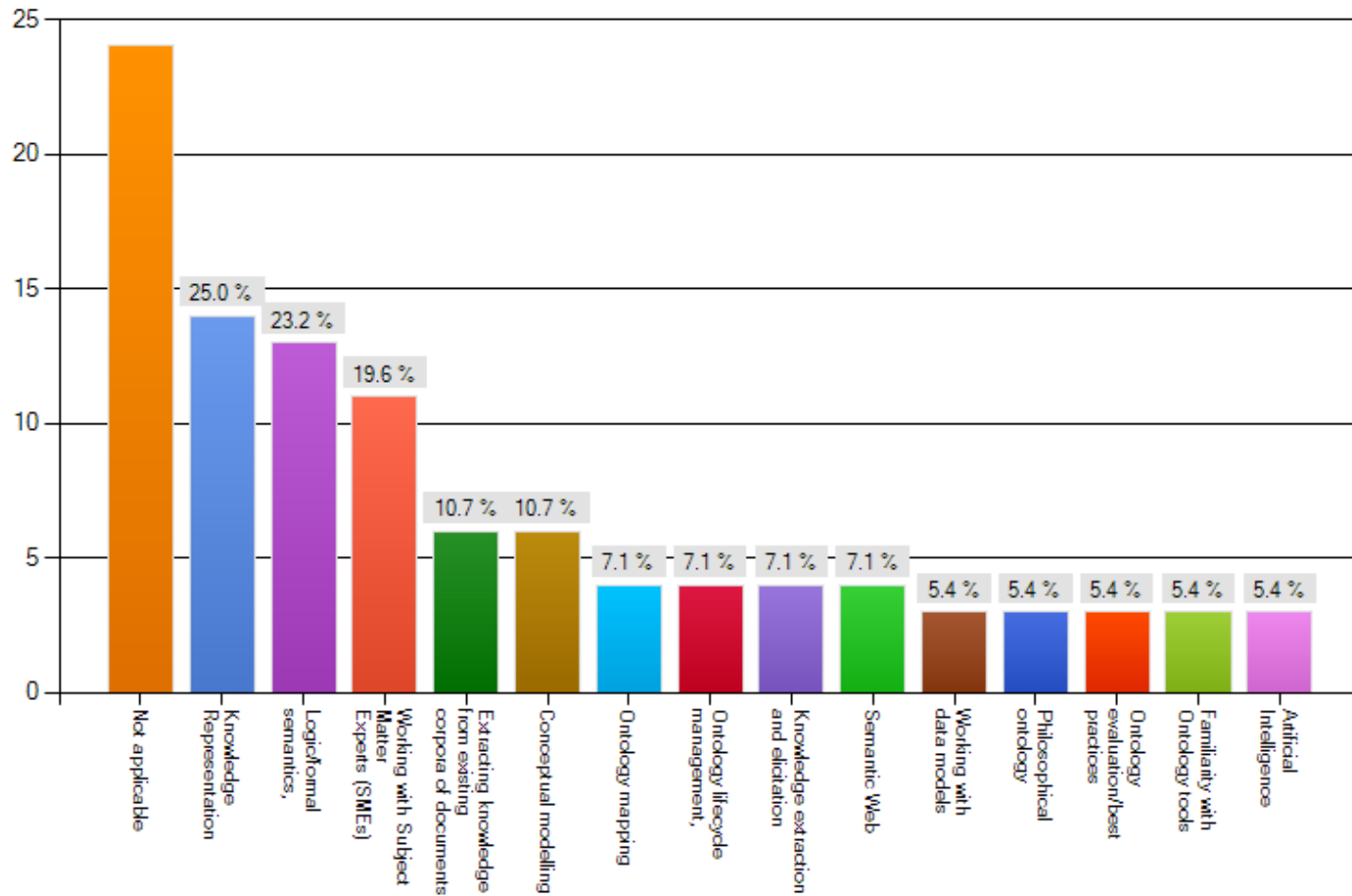
**Top Priorities When Hiring Ontologists.** If you identified some areas as desirable in 21 (Desired Areas of Training or Experience), please select \*just three\* that you would rank as most important in your hiring decisions. If you are not involved in hiring, please select the last option.





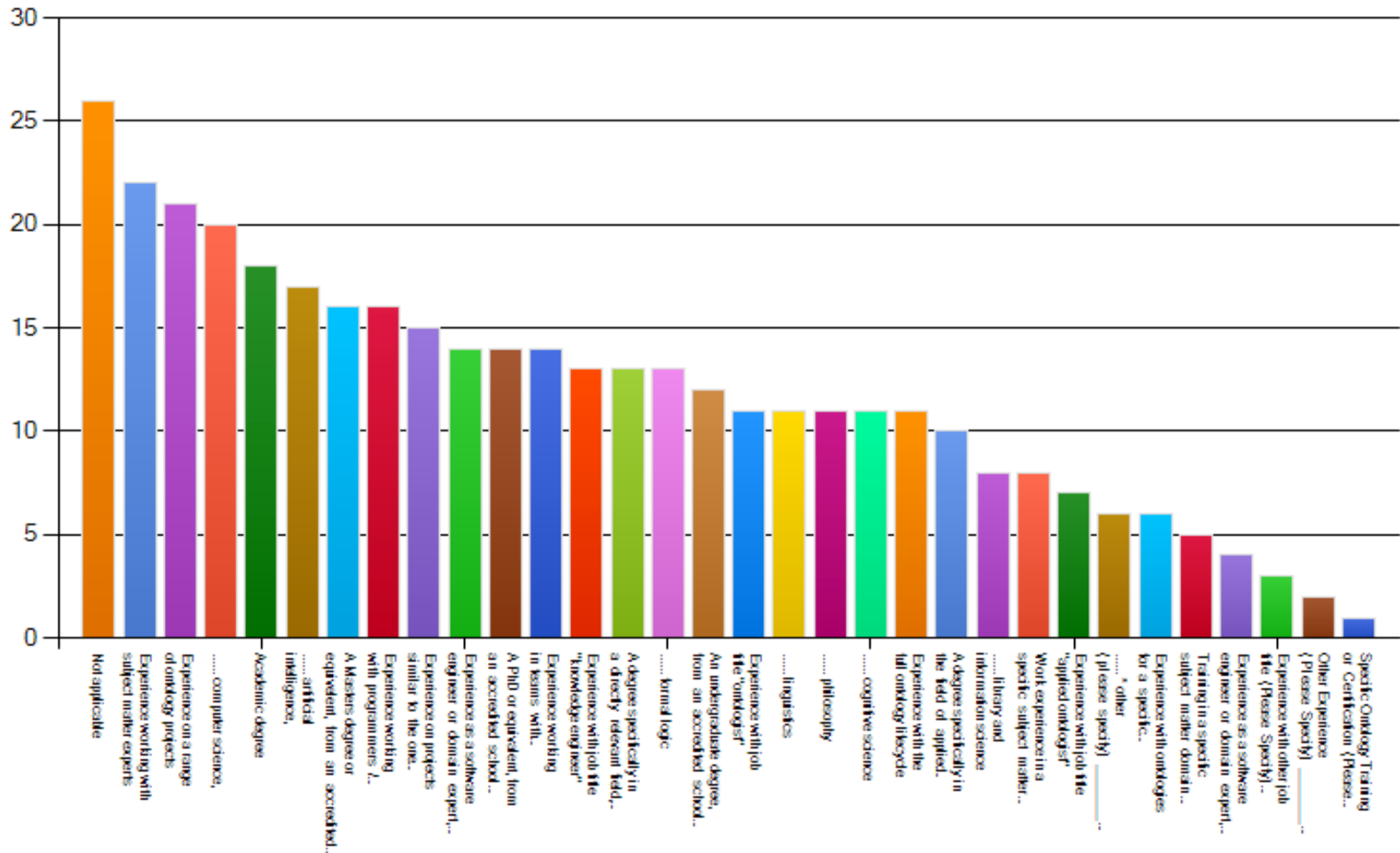
# Employer Priorities, Top 15

TopPrioritiesWhenHiringOntologists. If you identified some areas as desirable in 21 (DesiredAreasOfTrainingOrExperience), please select \*just three\* that you would rank as most important in your hiring decisions. If you are not involved in hiring, please select the last option.



# Desired Depth of Training

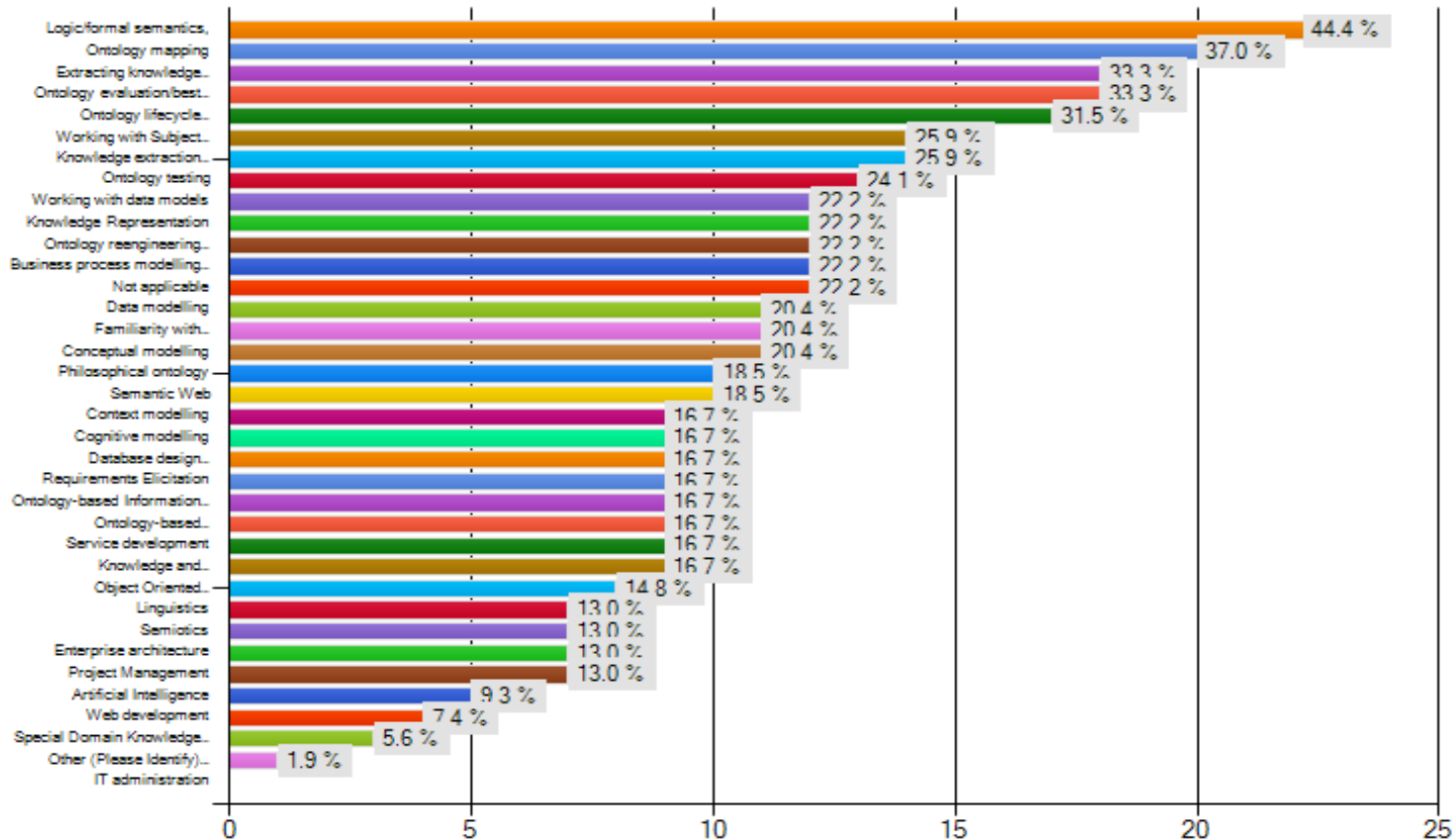
**DesiredDepthOfTraining.** If you are involved in hiring or recruiting ontologists, or have been so in the last several years, please indicate what level of training or experience you look for in an ontologist candidate. If you are not and have not recently been involved in hiring or recruiting, please choose "not applicable."



# Ontologists' Needs

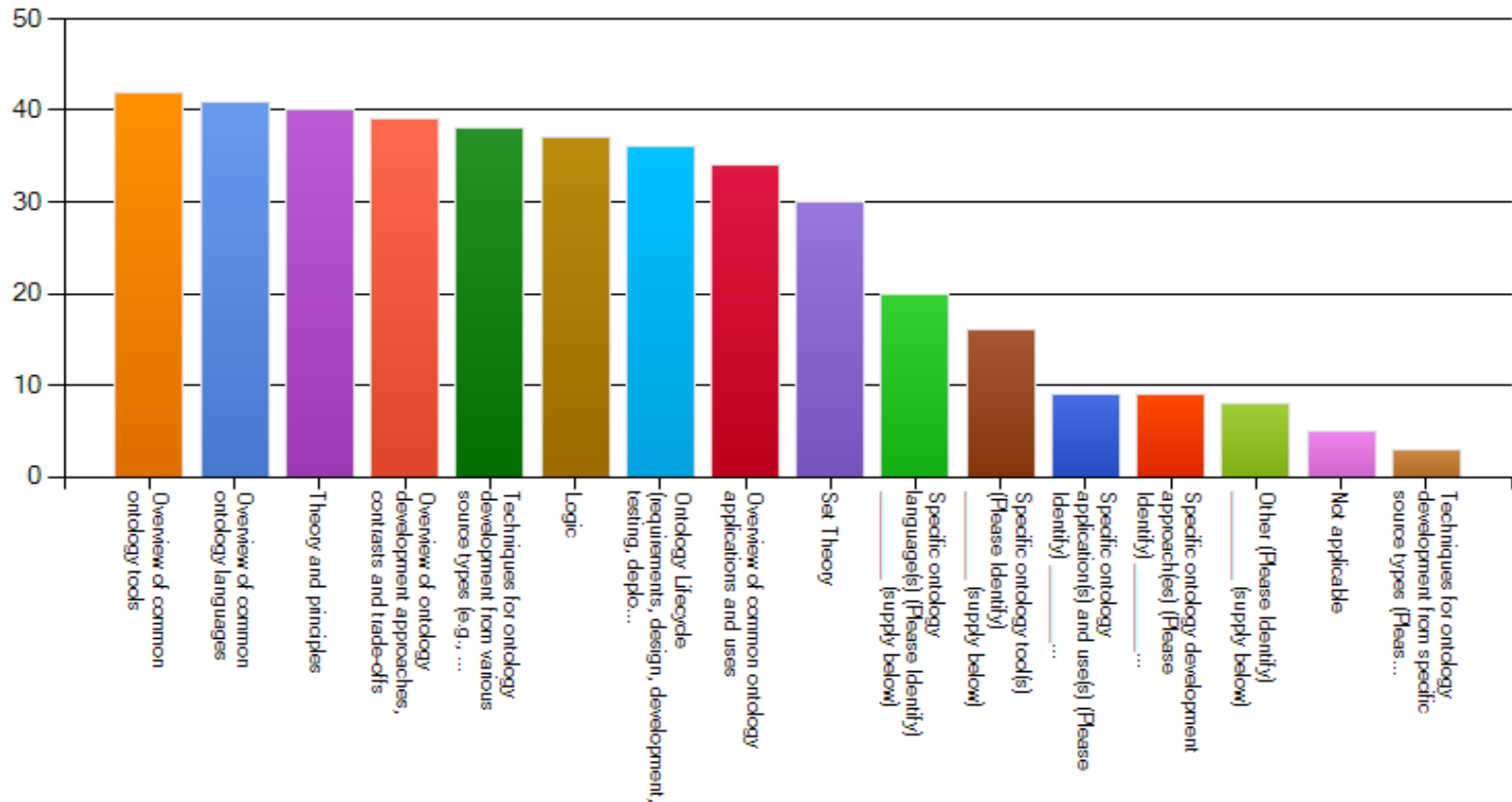
OntologistSelfIDTrainingNeeds.

If you are a working ontology developer, are there areas of training you wish you had, for current, past, or possible future ontology positions? If so, please identify them from the list below or add under "Other" if they are not listed. If you do not personally perform ontology work, please select the last option.



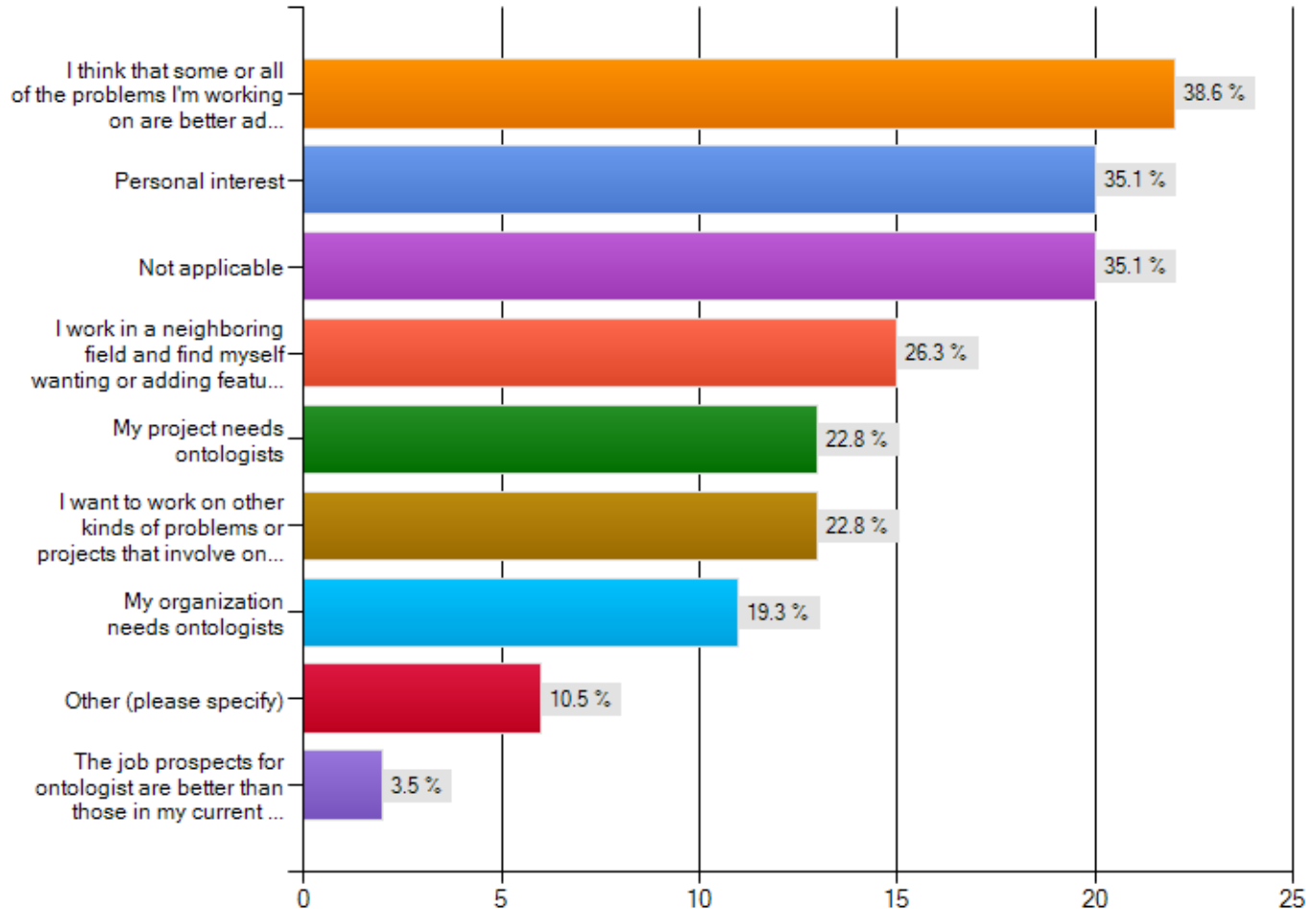
# Potential Trainee Needs

**PotentialTraineeNeeds.** If you are considering training in ontology or are looking for training for your current or future employees, which of the following areas of knowledge or skill are you looking for? In other words, if you were selecting a training program today, what content would you expect it to have? A small set of commonly mentioned content areas is given, but is not exhaustive. Please use the "other" option to specify additional areas needed. If you are not considering training, for your self or others, please choose "not applicable".



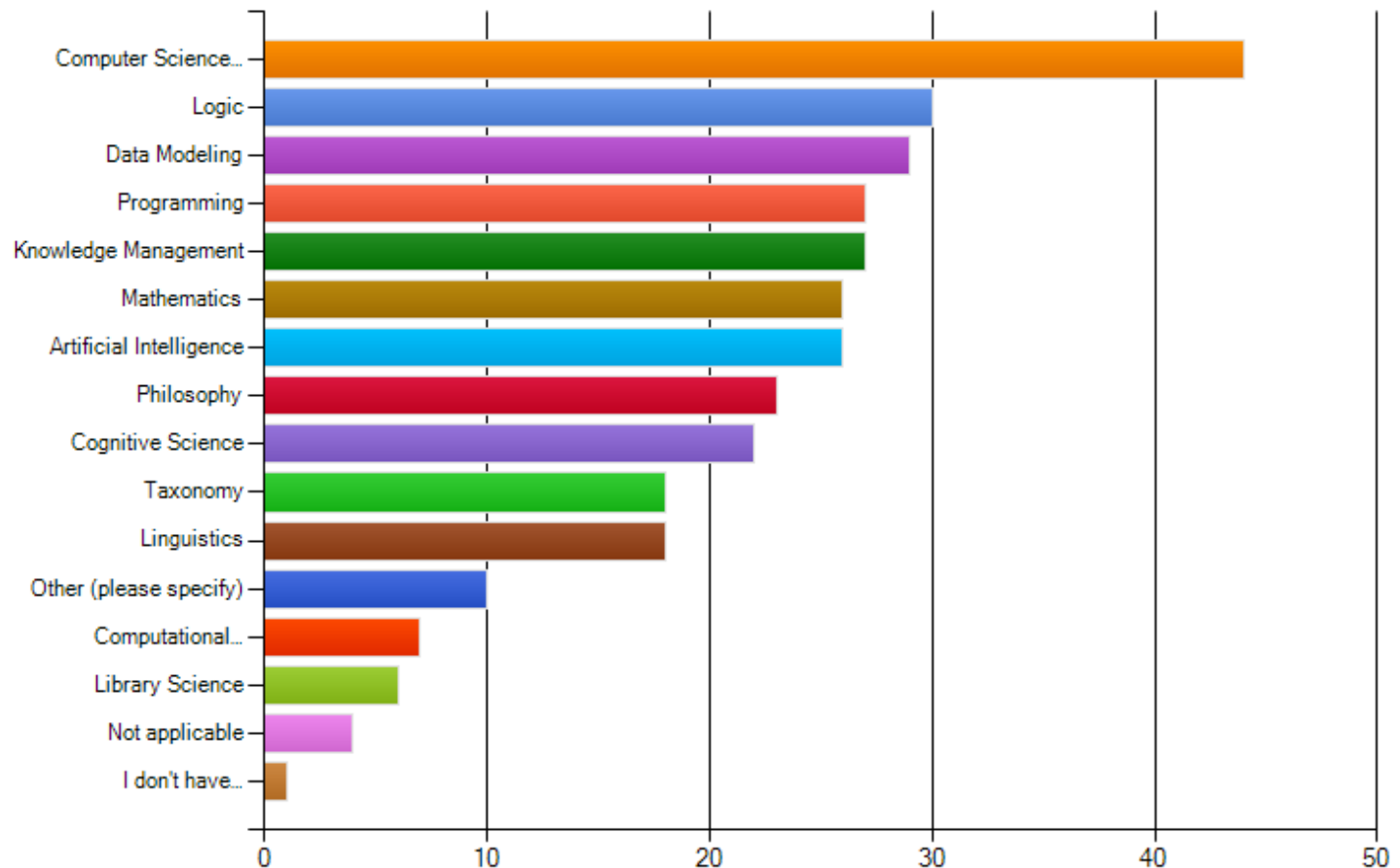
# Potential Trainee Motivations

**ReasonForInterestInOntology.** If you are considering training in ontology, what is the reason for this interest? If you are not considering such training, please choose "Not applicable."



# Ontologists Background

**RespondantRelatedBackgroundArea.** If you are currently an ontologist or are considering training in ontology, do you have prior background (formal training and/or experience) that, in your view, helps you understand or perform ontology work? If so, please state the nature of this background. A small sample of fields sometimes considered related is given; please use the "other" field to name helpful background not on the list. If you are not an ontologist or considering ontology training, please choose "not applicable."



# A few Conclusions

- Lots of demand, even from folks already working
- Current ontologists learn a lot of what they need via on the job training, self-study, and “frying pan fire” method
- Needs vary widely; not likely one design for all
- *Perceived* needs vary widely
- Many mismatches with current training content
- Well worth the trouble to survey