

Multi-State Collaborative (MSC) to Advance Learning Outcomes Assessment

Pilot Year Study Findings and Summary

These slides summarize results from a proof-of-concept pilot study involving 59 institutions in nine states using common rubrics to assess more than 7,000 student work products. The sample of student work in the pilot represented the near-graduation students across the participating institutions in the nine states only; therefore, the results are not generalizable for all students in each participating state or nationwide.



MSC Pilot by the Numbers

- MSC states: Connecticut, Indiana, Kentucky, Massachusetts, Minnesota, Missouri, Oregon, Rhode Island, Utah
- 59 public institutions uploaded artifacts
- By sector:
 - 28 four-year, including 8 research institutions
 - 31 two-year

These results are not generalizable across participating states or the nation in any way. Please use appropriately.

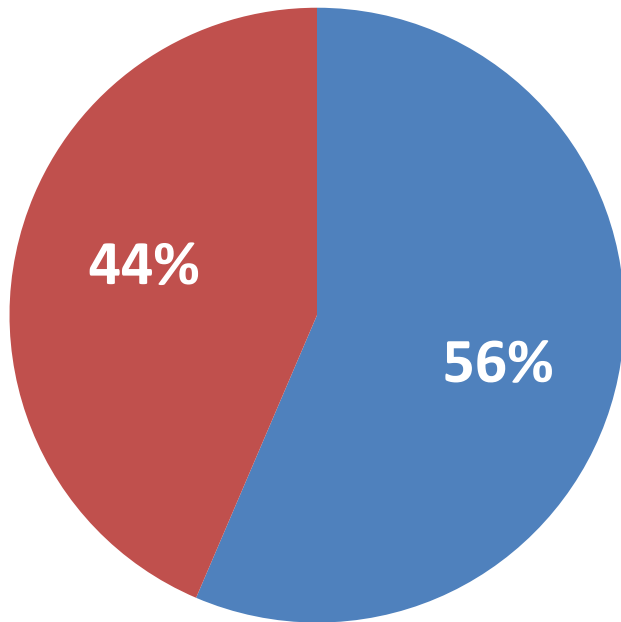
MSC Pilot by the Numbers

- **7,215 pieces of student work were submitted**
[number of pieces of work approximates number of student participants]
 - Students had to be 75% of the way to completion of institutional degree requirements
 - 2,642 artifacts scored twice (36.6%) in order to measure inter-rater reliability
- **1,166 assignments were submitted**
[number of assignments approximates number of faculty participants]

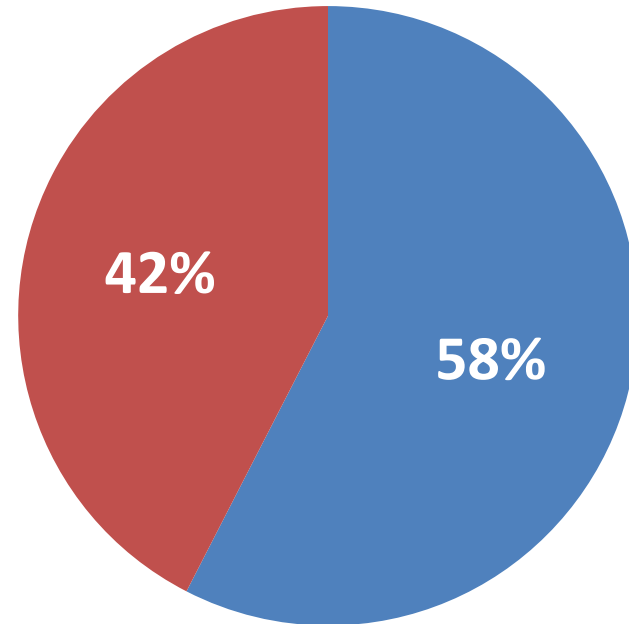
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MSC Pilot Study Student Population Sample by Gender Relative to Graduating Students in Participating Institutions

MSC Sample



Population Estimate

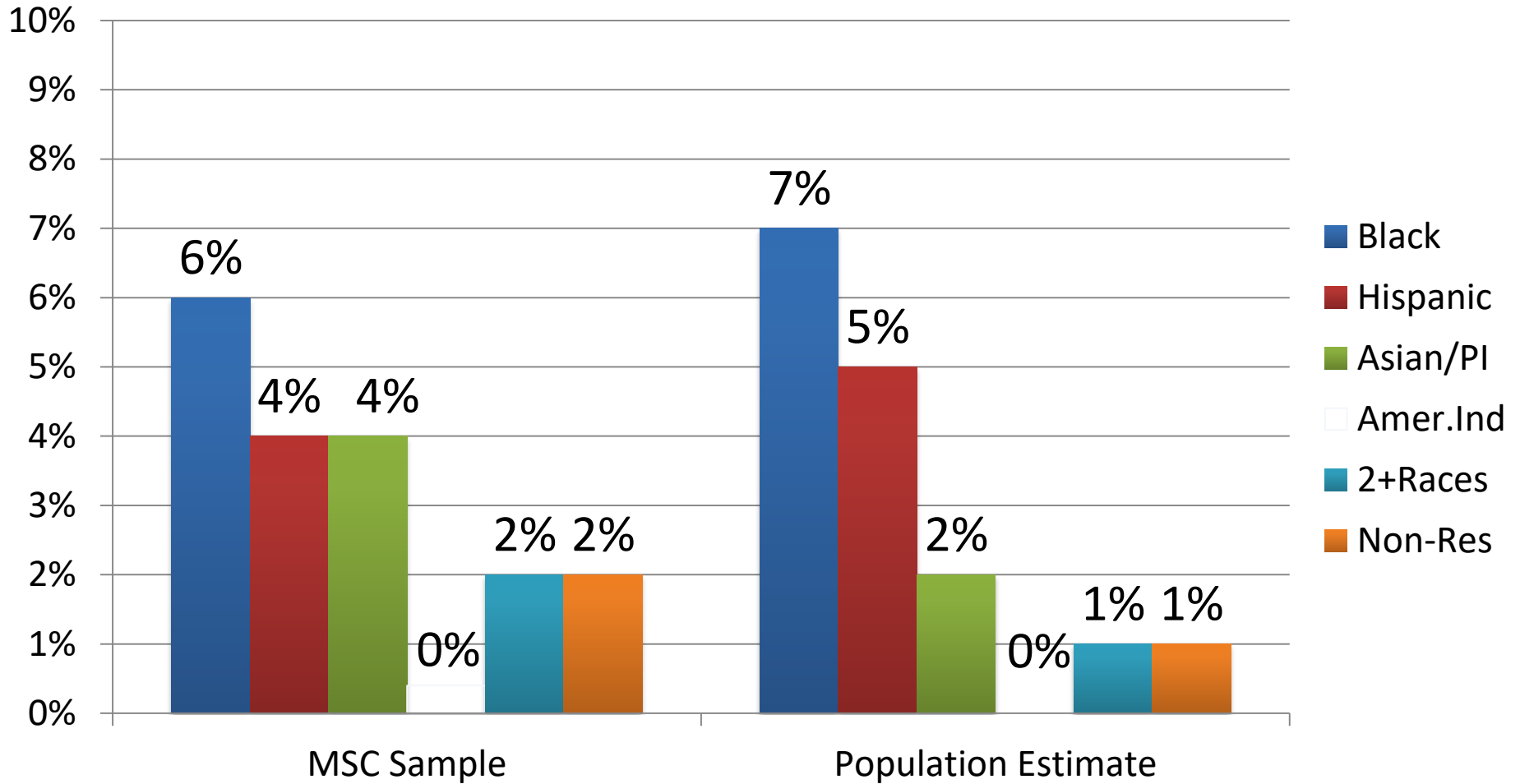


Female Male

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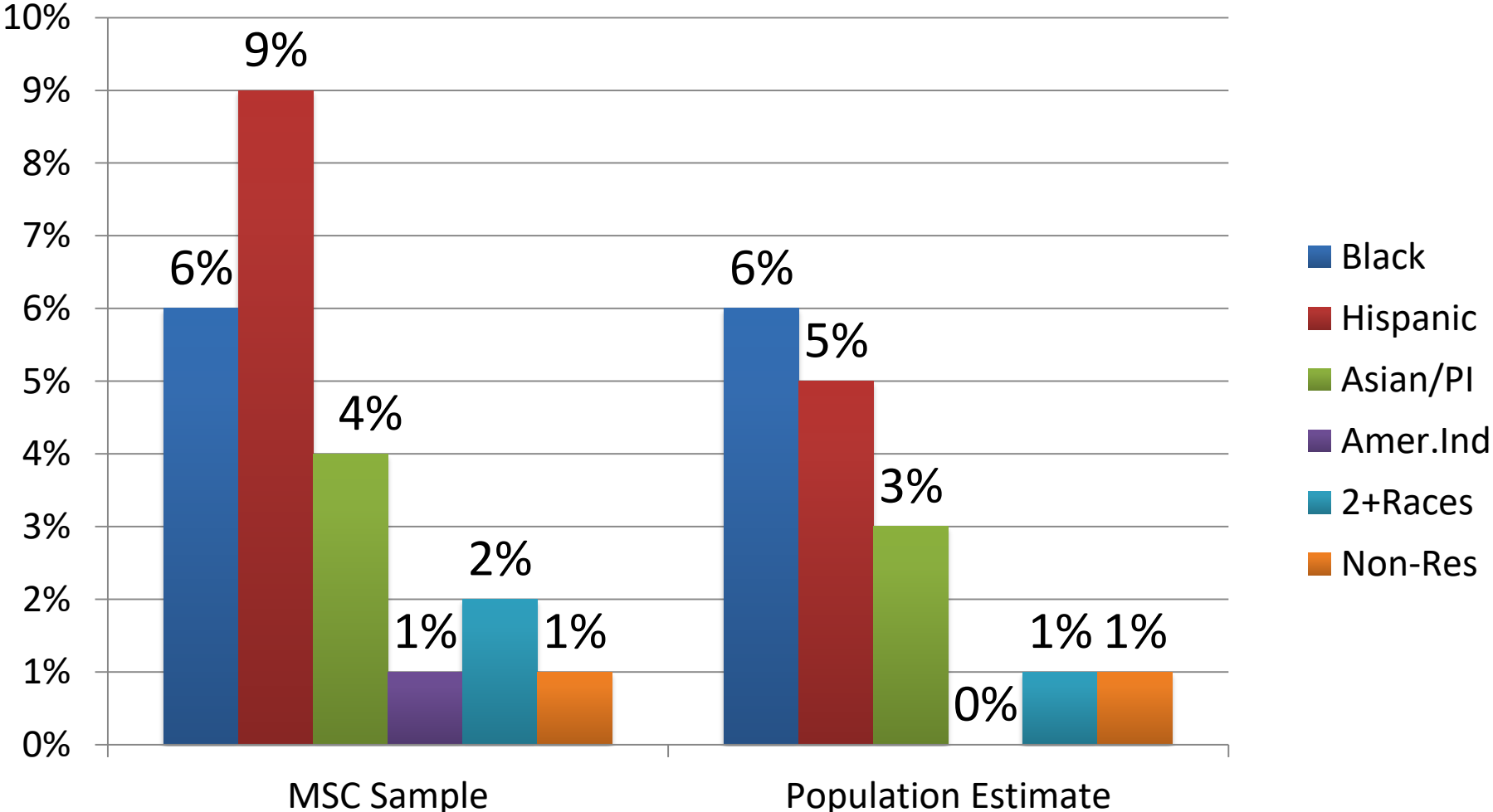
MSC Pilot Study Four-Year Student Population Samples by Race

82% of students in MSC sample were White; 80% of students in participating institutions were White



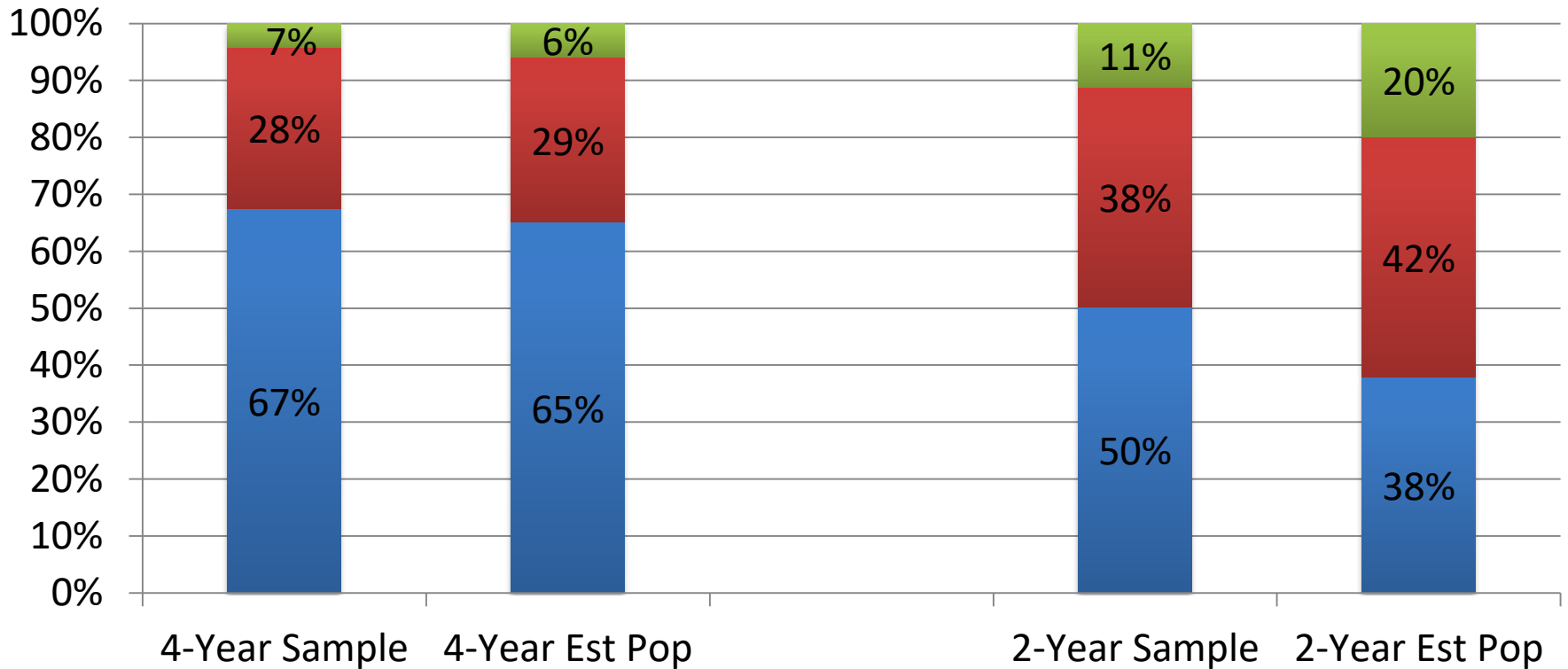
MSC Pilot Study Two-Year Student Population Samples by Race

77% of MSC sample were White students; 81% of students in participating institutions were White



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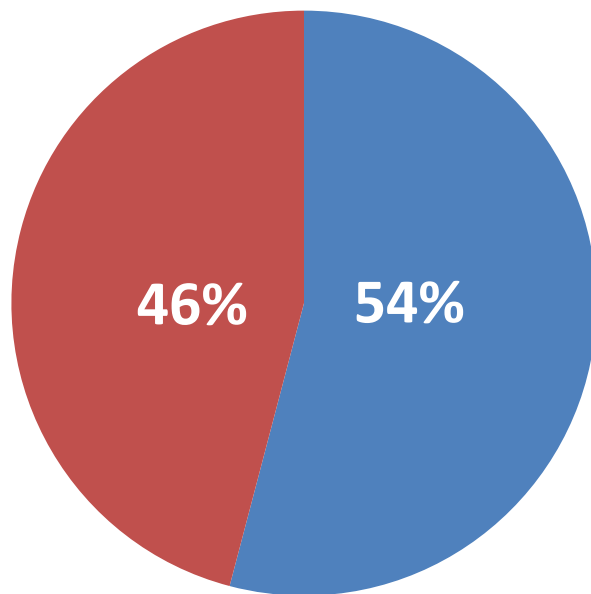
MSC Pilot Study Student Population Sample by Age Relative to Students at Participating Institutions



■ Ages, 18-24 ■ Ages, 25-39 ■ Ages, 40 and above

MSC Pilot Student Population of Pell-Eligible vs. Non Pell-Eligible Students

MSC Sample



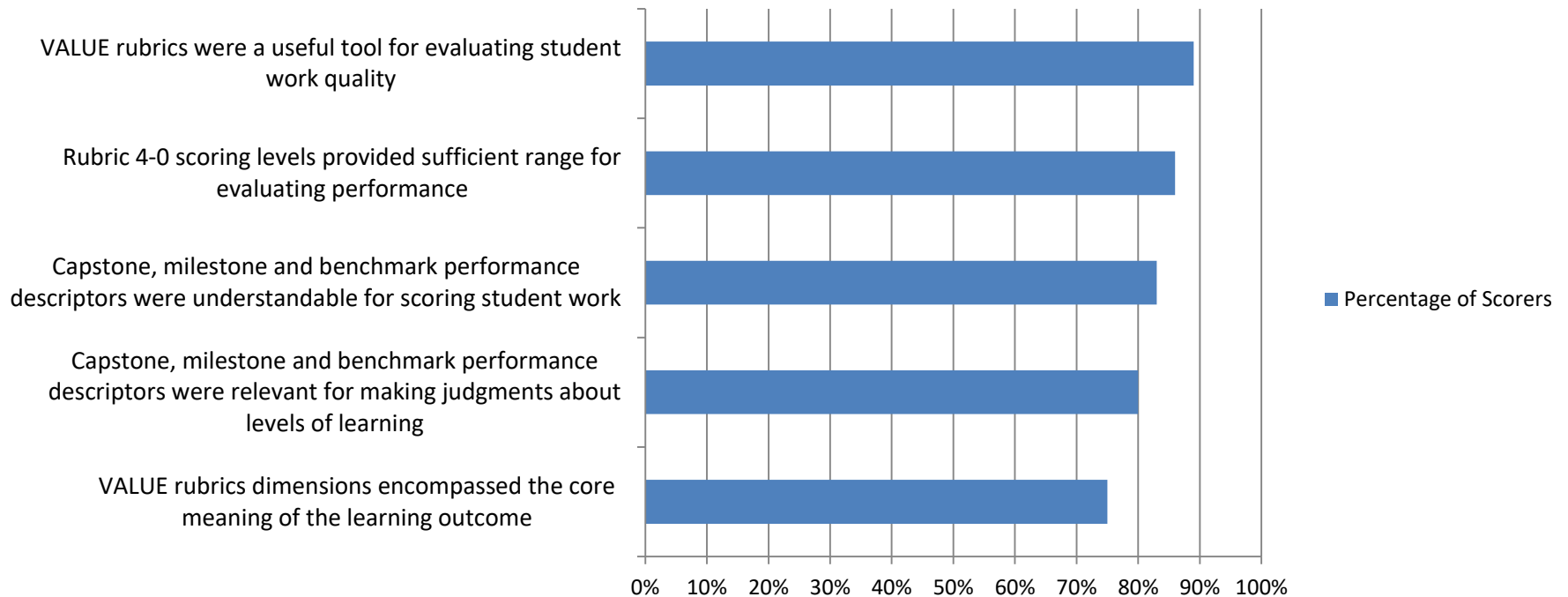
■ No ■ Yes

These results are not generalizable across participating states or the nation in any way. Please use appropriately.

Faculty and Staff Responses to Usefulness of VALUE Rubrics for Assessing Student Work

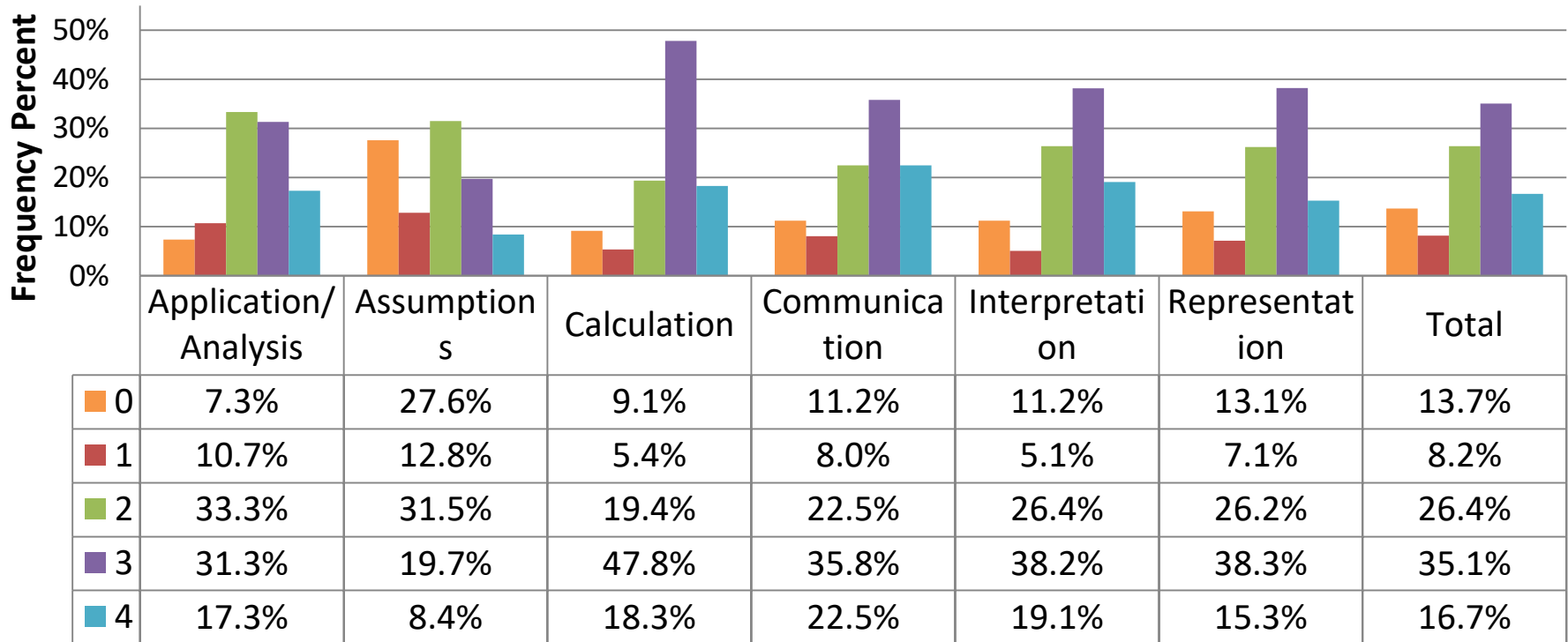
Percent of scorers who reported Strongly Agree or Agree with each aspect of rubric use

Percentage of Scorers



MSC Pilot Study Results—Quantitative Literacy Dimension 4-Year Institutional Score Distribution

% of student work products scored 4-0 by faculty scorers on each dimension of quantitative literacy

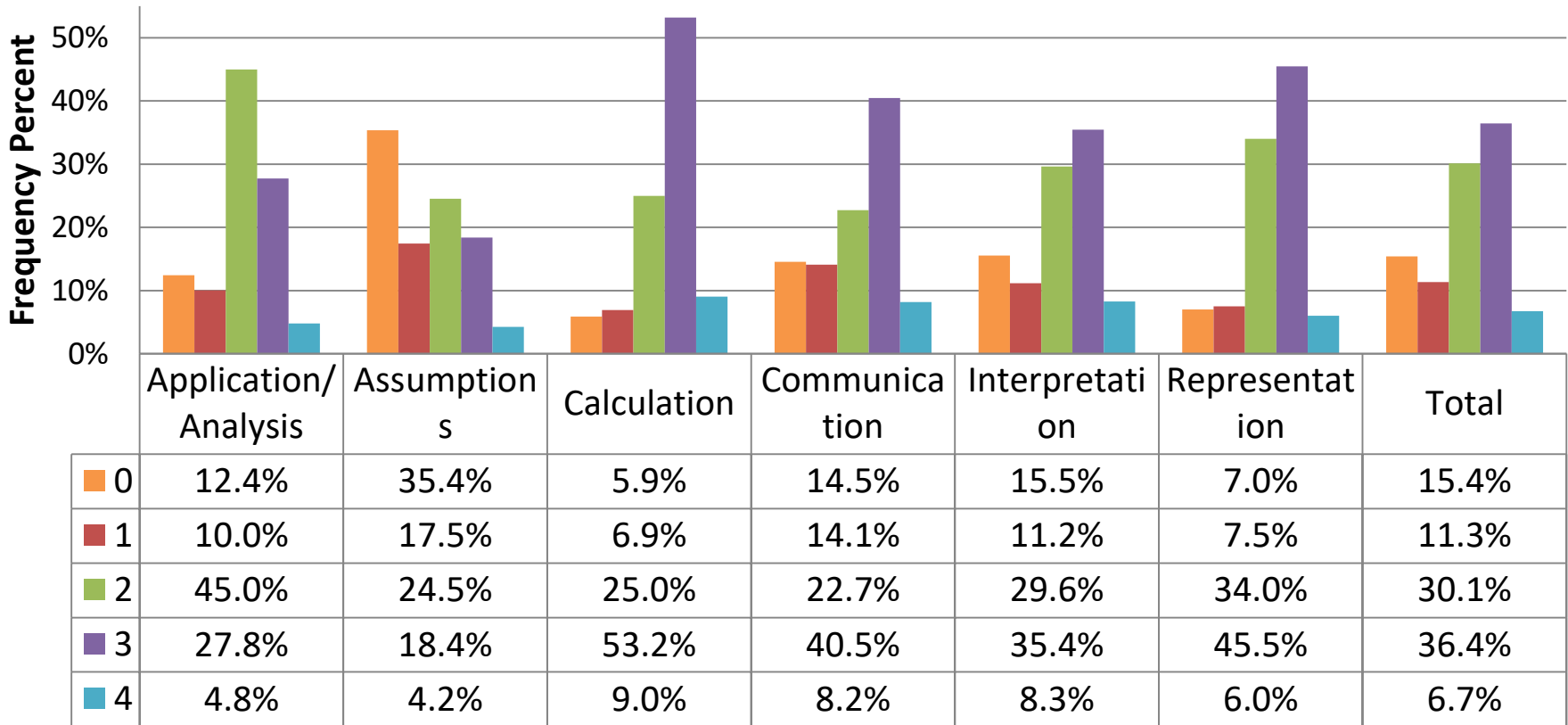


Note: Each work product was scored on 6 dimensions of quantitative literacy using a common AAC&U VALUE Rubric. See Slide 12 below for rubric dimension criteria. VALUE rubrics are available at www.aacu.org/value.

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MSC Pilot Study Results—Quantitative Literacy Dimension 2-Year Institutional Score Distribution

% of student work products scored 4-0 by faculty scorers on each dimension of quantitative literacy



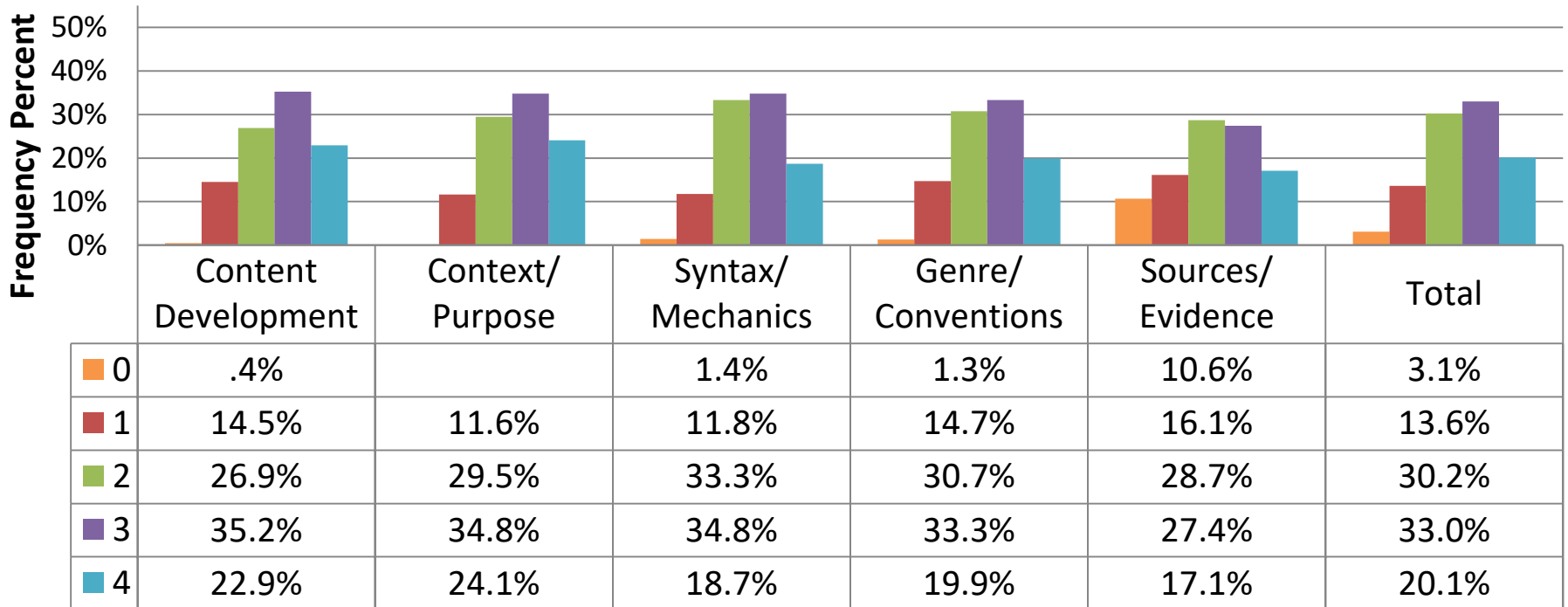
Note: Each work product was scored on 6 dimensions of quantitative literacy using a common AAC&U VALUE Rubric. See Slide 12 below for rubric dimension criteria. VALUE rubrics are available at www.aacu.org/value.

Quantitative Literacy Rubric Dimensions

	Capstone	Milestones		Benchmark
	4	3	2	1
Interpretation Ability to explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words)	Provides accurate explanations of information presented in mathematical forms. Makes appropriate inferences based on that information. For example, accurately explains the trend data shown in a graph and makes reasonable predictions regarding what the data suggest about future events.	Provides accurate explanations of information presented in mathematical forms. For instance, accurately explains the trend data shown in a graph.	Provides somewhat accurate explanations of information presented in mathematical forms, but occasionally makes minor errors related to computations or units. For instance, accurately explains trend data shown in a graph, but may miscalculate the slope of the trend line.	Attempts to explain information presented in mathematical forms, but draws incorrect conclusions about what the information means. For example, attempts to explain the trend data shown in a graph, but will frequently misinterpret the nature of that trend, perhaps by confusing positive and negative trends.
Representation Ability to convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words)	Skillfully converts relevant information into an insightful mathematical portrayal in a way that contributes to a further or deeper understanding.	Competently converts relevant information into an appropriate and desired mathematical portrayal.	Completes conversion of information but resulting mathematical portrayal is only partially appropriate or accurate.	Completes conversion of information but resulting mathematical portrayal is inappropriate or inaccurate.
Calculation	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented elegantly (clearly, concisely, etc.)	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem.	Calculations attempted are either unsuccessful or represent only a portion of the calculations required to comprehensively solve the problem.	Calculations are attempted but are both unsuccessful and are not comprehensive.
Application / Analysis Ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis	Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work.	Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work.	Uses the quantitative analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work.	Uses the quantitative analysis of data as the basis for tentative, basic judgments, although is hesitant or uncertain about drawing conclusions from this work.
Assumptions Ability to make and evaluate important assumptions in estimation, modeling, and data analysis	Explicitly describes assumptions and provides compelling rationale for why each assumption is appropriate. Shows awareness that confidence in final conclusions is limited by the accuracy of the assumptions.	Explicitly describes assumptions and provides compelling rationale for why assumptions are appropriate.	Explicitly describes assumptions.	Attempts to describe assumptions.
Communication Expressing quantitative evidence in support of the argument or purpose of the work (in terms of what evidence is used and how it is formatted, presented, and contextualized)	Uses quantitative information in connection with the argument or purpose of the work, presents it in an effective format, and explicates it with consistently high quality.	Uses quantitative information in connection with the argument or purpose of the work, though data may be presented in a less than completely effective format or some parts of the explication may be uneven.	Uses quantitative information, but does not effectively connect it to the argument or purpose of the work.	Presents an argument for which quantitative evidence is pertinent, but does not provide adequate explicit numerical support. (May use quasi-quantitative words such as "many," "few," "increasing," "small," and the like in place of actual quantities.)

MSC Pilot Study Results—Written Communication Dimension 4-Year Institutional Score Distribution

% of student work products scored 4-0 by faculty scorers on each dimension of written communication

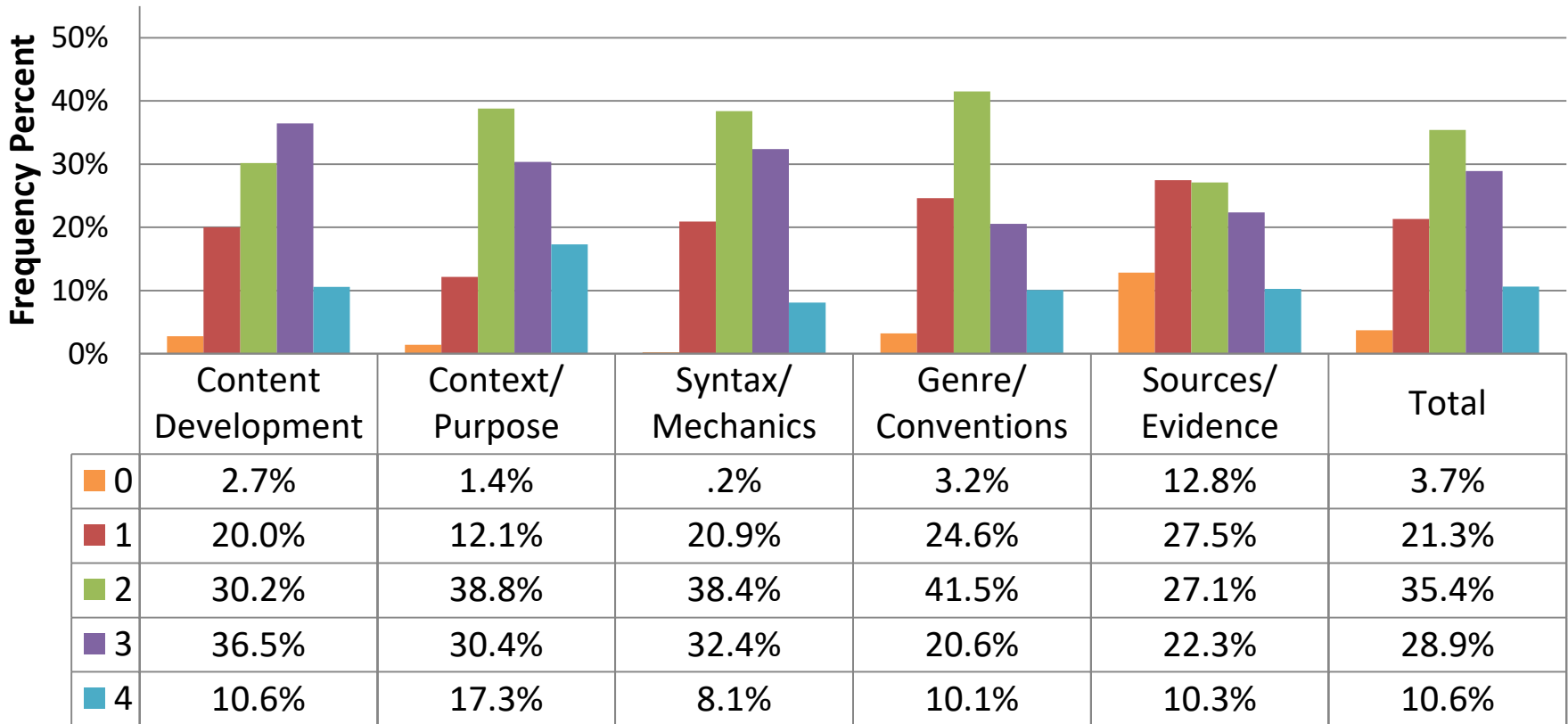


Note: Each work product was scored on 5 dimensions of written communication using a common AAC&U VALUE Rubric. See Slide 15 below for rubric dimension criteria. VALUE rubrics are available at www.aacu.org/value.

These results are not generalizable across participating states or the nation in any way. Please use appropriately.

MSC Pilot Study Results—Written Communication Dimension 2-Year Institutional Score Distribution

% of student work products scored 4-0 by faculty scorers on each dimension of written communication



Note: Each work product was scored on 5 dimensions of written communication using a common AAC&U VALUE Rubric. See Slide 15 below for rubric dimension criteria. VALUE rubrics are available at www.aacu.org/value.

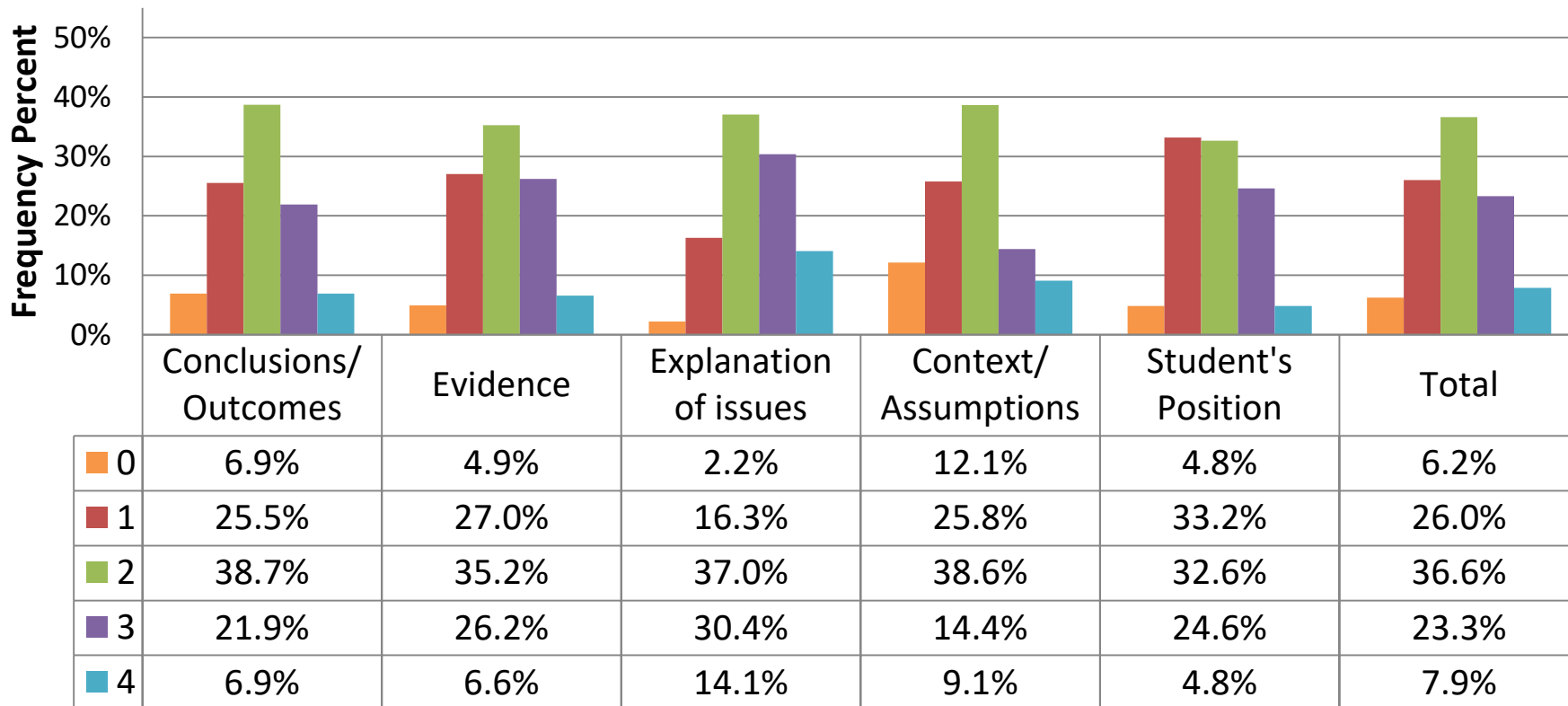
Written Communication Rubric Dimensions

	Capstone	Milestones		Benchmark
	4	3	2	1
Context of and Purpose for Writing Includes considerations of audience, purpose, and the circumstances surrounding the writing task(s).	Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work.	Demonstrates adequate consideration of context, audience, and purpose and a clear focus on the assigned task(s) (e.g., the task aligns with audience, purpose, and context).	Demonstrates awareness of context, audience, purpose, and to the assigned tasks(s) (e.g., begins to show awareness of audience's perceptions and assumptions).	Demonstrates minimal attention to context, audience, purpose, and to the assigned tasks(s) (e.g., expectation of instructor or self as audience).
Content Development	Uses appropriate, relevant, and compelling content to illustrate mastery of the subject, conveying the writer's understanding, and shaping the whole work.	Uses appropriate, relevant, and compelling content to explore ideas within the context of the discipline and shape the whole work.	Uses appropriate and relevant content to develop and explore ideas through most of the work.	Uses appropriate and relevant content to develop simple ideas in some parts of the work.
Genre and Disciplinary Conventions Formal and informal rules inherent in the expectations for writing in particular forms and/or academic fields (please see glossary).	Demonstrates detailed attention to and successful execution of a wide range of conventions particular to a specific discipline and/or writing task (s) including organization, content, presentation, formatting, and stylistic choices	Demonstrates consistent use of important conventions particular to a specific discipline and/or writing task(s), including organization, content, presentation, and stylistic choices	Follows expectations appropriate to a specific discipline and/or writing task(s) for basic organization, content, and presentation	Attempts to use a consistent system for basic organization and presentation.
Sources and Evidence	Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing	Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing.	Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.	Demonstrates an attempt to use sources to support ideas in the writing.
Control of Syntax and Mechanics	Uses graceful language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.	Uses straightforward language that generally conveys meaning to readers. The language in the portfolio has few errors.	Uses language that generally conveys meaning to readers with clarity, although writing may include some errors.	Uses language that sometimes impedes meaning because of errors in usage.

MSC Pilot Study Results--Critical Thinking Dimension

4-Year Institutional Score Distribution

% of student work products scored 4-0 by faculty scorers on each dimension of critical thinking



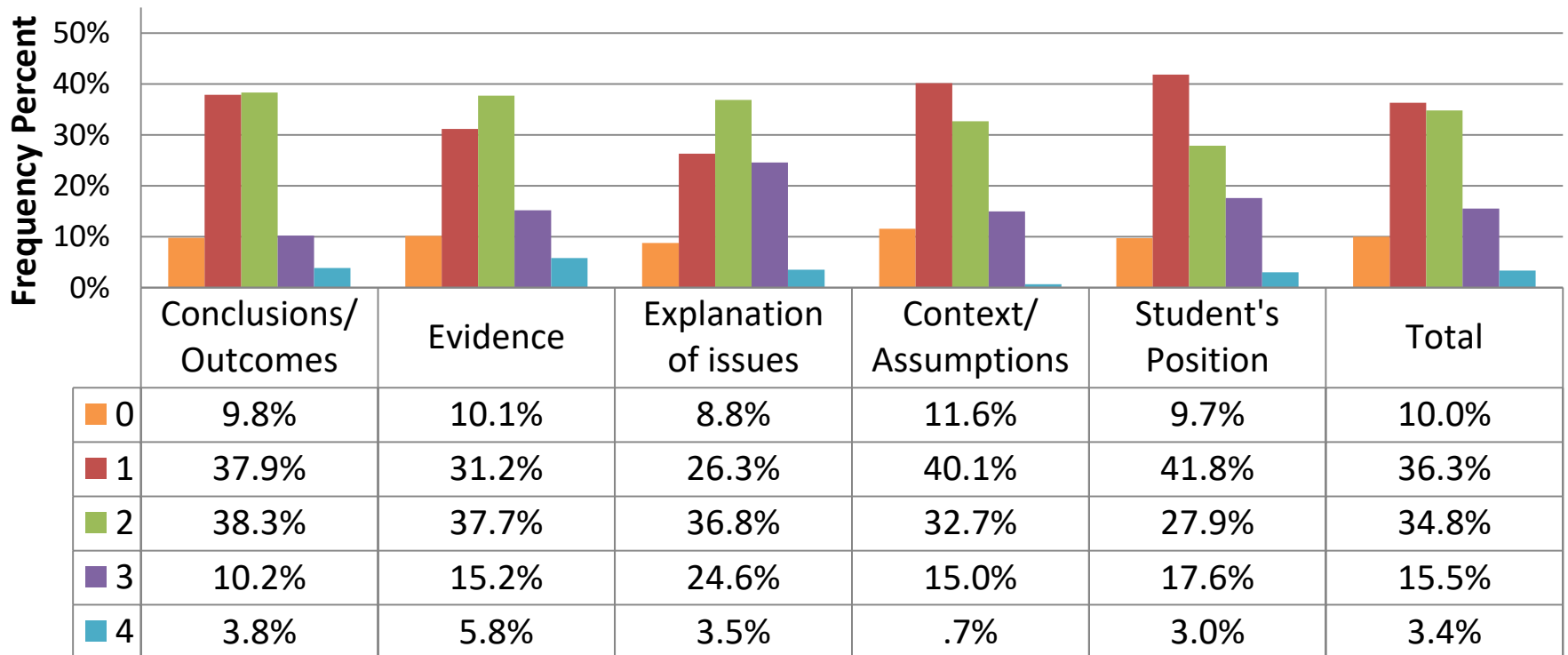
Note: Each work product was scored on 5 dimensions of critical thinking using a common AAC&U VALUE Rubric. See Slide 18 for rubric dimension criteria. VALUE rubrics are available at www.aacu.org/value.

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MSC Pilot Study Results--Critical Thinking Dimension

2-Year Institutional Score Distribution

% of student work products scored 4-0 by faculty scorers on each dimension of critical thinking



Note: Each work product was scored on 5 dimensions of critical thinking using a common AAC&U VALUE Rubric. See Slide 18 for rubric dimension criteria. VALUE rubrics are available at www.aacu.org/value.

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Critical Thinking Rubric Dimensions

	Capstone	Milestones			Benchmark
	4	3	2	1	
Explanation of issues	Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.	Issue/problem to be considered critically is stated without clarification or description.	
Evidence Selecting and using information to investigate a point of view or conclusion	Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/evaluation. Viewpoints of experts are taken as fact, without question.	
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.	
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis).	Specific position (perspective, thesis/hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/hypothesis) is stated, but is simplistic and obvious.	
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.	

Multi-State Collaborative (MSC) to Advance Learning Outcomes Assessment

Pilot Year Study Findings and Summary

The overall composition or selection of the Pilot Study sample is not sufficient to generalize within or across participating states or nationwide. However, the characteristics of the sample very closely represent students who had completed 75% of the credit hours to degree on all the demographic measures collected at participating institutions in the nine MSC states.

