Q1.1.
We appreciate your willingness to review an updated version of our Perceptions of Online Learning Scale (POOLS). In this review, we ask you to review two components of our survey (1) the construct definitions and (2) the items related to each construct.

(1) For reviewing the construct definition, we would like to get your opinion on whether the construct is relevant to online learning. For this purpose, we have provided a response scale of Disagree, Agree, or Needs Revision. We welcome all comments on how to improve our definitions.

(2) For reviewing the items under each construct, we have provided the format we plan to use when administering the instrument. We would like your opinion on whether each statement is an appropriate indicator of the defined construct. For this, we have provided a response option of Disagree or Agree to the side of the actual response scale (this will not be included in the final survey). Again, any comments on how to improve each statement is also welcome.

For each statement, we ask respondents to describe their perceptions of online learning in relation to a more traditional face-to-face learning environment. The response is meant to depend on the individual respondent's experience with both environments of learning. We fully expect that an "it depends" would be the response individuals would give if applicable. However, we want to force respondents to make a relative judgement about these two learning environments. A major part of future research with this scale is to unpack the individual differences in perceptions of online learning based on their prior experience.

We greatly appreciate your willingness to review this survey about perceptions of online learning.

Q2.1. Construct: Effective Learning

Definition: Effective learning is defined as learning in which students masterfully acquire and utilize relevant new knowledge and/or skills, as witnessed through application and assessment that occur within or outside the immediate classroom.

Does the definition align with your experience of what makes Effective Learning?

- ○ Disagree
- ◉ Agree
- ○ Needs Revision

Q2.2. What comments do you have about the proposed definition of Effective Learning?

Q2.3. In your experience with traditional face-to-face (F2F) and online learning environments, when you compare F2F to online learning, you perceive that online learning...

	Item Response Format					Expert Rating of Item	
	Definitely less than F2F	Somewhat less than F2F	About the same as F2F	Somewhat more than F2F	Definitely more than F2F	Disagree	Agree
permits students to acquire content knowledge.	○	○	◉	○	○	○	◉
permits students to develop conceptual understanding.	○	○	◉	○	○	○	◉
is effective for learning about the topics in the curriculum.	○	○	◉	○	○	○	◉
is effective for building knowledge.	○	○	◉	○	○	○	○
supports student achievement.	○	◉	○	○	○	○	◉
prepares students for high stakes assessments.	○	○	◉	○	○	○	◉
prepares students for work.	○	○	○	◉	○	○	◉
accomplishes the goals of the curriculum.	○	◉	○	○	○	○	◉
promotes higher-ordered thinking skills such as analysis, synthesis, and evaluation.	○	○	◉	○	○	○	◉
effectively assesses student performance.	○	○	◉	○	○	○	◉
assessments provide teachers with reliable information on student progress.	○	◉	○	○	○	○	◉
encourages academic integrity and adherence to intellectual property standards.	○	◉	○	○	○	○	◉

Q2.4. What comments do you have about this set of items?

Q3.1. Construct: Student Centered

Definition: A student-centered approach is characterized by high levels of student-based activities, interactions, and assessments.

Does the definition align with your experience of what makes learning Student Centered?

- ○ Disagree
- ○ Agree
- ◉ Needs Revision

Q3.2. What comments do you have about the proposed definition of Student Centered?

I think student needs and interests should be in this definition.

Q3.3. In your experience with traditional face-to-face (F2F) and online learning environments, when you compare F2F to online learning, you perceive that online learning...

	Item Response Format					Expert Rating of Item	
	Definitely less than F2F	Somewhat less than F2F	About the same as F2F	Somewhat more than F2F	Definitely more than F2F	Disagree	Agree
is student centered.	○	○	◉	○	○	○	◉
offers students choices.	○	○	○	◉	○	○	◉
permits differentiation based on student needs.	○	○	○	◉	○	○	◉
supports flexible pacing for students.	○	○	◉	○	○	○	◉
supports learner-customized pacing.	○	○	○	◉	○	○	◉
aligns instruction to individual learning goals.	○	○	○	◉	○	○	◉
is personalized and adaptive.	○	○	○	◉	○	○	◉
encourages individualized assessment (as compared to standardized assessment).	○	○	○	◉	○	○	◉

Q3.4. What comments do you have about this set of items?

Q4.1. Construct: Interactive

Definition: Interactive learning involves three facets of interaction: (a) student to instructor, (b) student to student, and (c) student to content. These interactions contribute to effective learning singularly as well as in combination. All three facets of interaction can be present regardless of the learning mode (online or on-the-ground).

Does the definition align with your experience of what makes learning Interactive?

- ○ Disagree
- ◉ Agree
- ○ Needs Revision

Q4.2. What comments do you have about the proposed definition of Interactive?

Q4.3. In your experience with traditional face-to-face (F2F) and online learning environments, when you compare F2F to online learning, you perceive that online learning...

	Item Response Format					Expert Rating of Item	
	Definitely less than F2F	Somewhat less than F2F	About the same as F2F	Somewhat more than F2F	Definitely more than F2F	Disagree	Agree
supports student-to-student interaction.	○	○	◉	○	○	○	◉
permits students to collaborate on learning tasks.	○	○	○	◉	○	○	◉
encourages student-to-student discussion.	○	○	◉	○	○	○	◉
provides a space for students to work in teams.	○	○	◉	○	○	○	◉
permits one-on-one interaction with the teacher.	○	○	◉	○	○	○	◉
builds community among students.	○	○	◉	○	○	○	◉
encourages academic dialogue.	○	○	◉	○	○	○	◉
is collaborative.	○	○	◉	○	○	○	◉
facilitates interaction with course content.	○	○	○	◉	○	○	◉

Q4.4. What comments do you have about this set of items?

Q5.1. Construct: Engagement

Definition: Engagement includes the energy and effort that students present in their learning environment. Engagement can be observed in three areas: cognitive engagement, behavioral engagement, and affective

engagement. Engagement can be influenced internal factors as well as environmental factors. Engagement theory posits that higher levels of engagement support more efficient learning, retention, and transfer.

Does the definition align with your experience of what makes learning Engaging?

- ○ Disagree
- ◉ Agree
- ○ Needs Revision

Q5.2. What comments do you have about the proposed definition of Engaging?

Q5.3. In your experience with traditional face-to-face (F2F) and online learning environments, when you compare F2F to online learning, you perceive that online learning...

	Item Response Format					Expert Rating of Item	
	Definitely less than F2F	Somewhat less than F2F	About the same as F2F	Somewhat more than F2F	Definitely more than F2F	Disagree	Agree
connects learning to real work situations.	○	○	○	◉	○	○	◉
supports project-based learning.	○	○	○	◉	○	○	◉
supports creative thinking and innovation.	○	○	○	◉	○	○	◉
engages student in self-directed learning.	○	○	○	◉	○	○	◉
helps students transfer learning to novel situations.	○	○	○	◉	○	○	◉
builds time management skills.	○	○	○	○	◉	○	◉
requires time commitment.	○	○	○	◉	○	○	◉
engages student autonomy.	○	○	○	○	◉	○	◉

Q5.4. What comments do you have about this set of items?

Q6.1. What, if any, additional comments do you have about this survey of perceptions of online learning?

I think that it depends on the type of online learning offered and the knowledge and flexibility of the instructor about online learning.