

User Guide: Technology Integration Observation Instrument

Purpose and Use of the Instrument

The Technology Integration Observation Instrument was designed to assess the quality of technology integration in an observed lesson. The components of this instrument are grounded in different aspects of teachers' knowledge for technology integration, also known as "technological pedagogical content knowledge," or TPACK. Please note, however, that the instrument is *not designed to assess this knowledge directly*. It is designed to focus upon the *use* of technology integration knowledge in observable teaching.

No particular pedagogical philosophy or approach to teaching (e.g. problem-based learning; direct instruction; inquiry learning) is assumed or preferred in the design of this instrument. Rather, the rubric is designed to assess the quality of technology integration with any teaching approach that the observed instructor has chosen to use.

The instrument may be used by teachers, teacher educators, administrators and educational researchers as a way to assess how well technology use is integrated with the curricular focus and teaching strategies employed in the observed lesson. It can be used with both live and videorecorded instruction. It is not meant to provide a comprehensive assessment of teaching that is evident in a particular observational episode. Instead, we strongly suggest that it be used *in conjunction with* other observational measures of teaching effectiveness, since this instrument focuses solely on curriculum-based technology integration.

Definition of Technology Integration

Technology integration is defined in many ways. Many educational technology specialists advocate for student-centered, project-based and/or collaborative uses of educational technologies. This view of technology integration unnecessarily constricts the many possible ways that technology can support, enhance, and extend a wide variety of instructional approaches. This instrument is built upon a definition of technology integration as *the curriculum-based use of tools and resources to support learning and teaching*. We consider "technologies" to consist of both digital (e.g. computers, Web sites, digital cameras) as well as non-digital (e.g. whiteboards, Cuisenaire rods, paper maps) tools and resources. When using this rubric, we encourage scorers to consider the full range of digital and non-digital technologies in their assessments.

Scoring Guidelines:

- As you watch the lesson, be sure to take detailed notes on the curriculum topic(s) addressed, key instructional strategies and learning activities incorporated, and *all* of the digital and non-digital technologies used. These notes will help you to more easily score the lesson using the rubric after you have finished watching it.
- As you write your notes, be sure to record any contextual factors that you notice at play in the classroom (e.g., language differences, physical space constraints, presence

or absence of teachers' aides) that may inform how you assess the effectiveness of the technologies used in the lesson. For example, if you note limited student access to computers in the classroom, this may influence how you score the Technology Selections section of the rubric.

- Please be aware that you will probably have to infer some of the information that is requested on the first page of the instrument. For example, the teacher might not explicitly state the curricular objective(s) at the beginning of the lesson. As the lesson progresses, you may be better able to infer the teacher's goals or focus.
- Be careful not to allow your own teaching experience and pedagogical preferences (including preferred instructional strategies and/or technologies) influence how you score the lesson. Try to assess technology use *given* the content objective(s) and teaching approach employed, plus whatever contextual considerations of which you are aware (e.g., limited technology access).
- Be sure to consider all of the digital and nondigital technologies used, rather than focusing in on one technology that seems to have been used predominantly. Please focus upon the “fit” of the technologies with the curriculum objectives, types of learning activities used, and students' apparent learning styles and/or preferences.
- Please note that the second row of the instrument, which focuses upon “Instructional Strategies and Technologies,” is different from the fifth row of the instrument, “Instructional Use,” in that the second row assesses the inferred *plan* for instruction, while the fifth row assesses *how well the technological aspects of that plan were implemented* in the lesson itself.
- Similarly, please note that in general, the first four rows of the rubric address apparent *plans for* instruction, while the last two rows address the *implementation* of those plans.

Suggestions for Research/Assessment Teams:

To help to improve inter-rater agreement when multiple observers are using this assessment tool, a training/practice scoring session may be helpful. We suggest carefully reviewing the rubric's rows together, discussing the key terminology included in each dimension of the rubric. We also suggest discussing the Scoring Guidelines offered above.

We have found it to be particularly helpful to ask scorers to assess either a live or videotaped lesson independently during a practice session using the rubric, then compare and contrast how each scorer assessed the lesson in each dimension of the rubric. If needed, scorers can view two videotaped lessons, first scoring one collaboratively by consensus then another individually, discussing differences in scores assigned until a consensus is reached. Both of these participatory training techniques encourage more standardized use of the tool across assessors.

