

LoTi – Levels of Technology Implementation

The LoTi Framework is divided into six levels, and teachers are working diligently to provide lessons at the LoTi Level 3, integrating technology and weaving the higher level thinking questions into their units.

LoTi Level:	Explanation:
0 NonUse	<ul style="list-style-type: none"> <input type="checkbox"/> Use of technology is mainly text based (overheads etc..) <input type="checkbox"/> No visible evidence of computer access in the classroom <input type="checkbox"/> Computers sit idle during the day
1 Awareness	<ul style="list-style-type: none"> <input type="checkbox"/> Use of technology is one step removed from the teacher <input type="checkbox"/> Used for management <input type="checkbox"/> Enhance lessons <input type="checkbox"/> Classroom computers used for teacher productivity
2 Exploration	<ul style="list-style-type: none"> <input type="checkbox"/> Technology supplements <input type="checkbox"/> Focus on the computer and not the content <input type="checkbox"/> Will not raise test scores <input type="checkbox"/> PowerPoint <input type="checkbox"/> Focus on lower levels of cognitive skills <input type="checkbox"/> Computer is used as a reward
3 Infusion	<ul style="list-style-type: none"> <input type="checkbox"/> Technology based tools and internet use complement selected instructional events <input type="checkbox"/> Higher levels of cognitive thinking skills <input type="checkbox"/> Students use applications for analyzing data, making inferences
4a Integration (Mechanical)	<ul style="list-style-type: none"> <input type="checkbox"/> At this level teachers can design and implement units of instruction that lead to problem solving using available technology <input type="checkbox"/> Emphasis on student action and using higher levels of student cognitive processing
4b Integration (Routine)	<ul style="list-style-type: none"> <input type="checkbox"/> Technology based tools are integrated in a routine manner <input type="checkbox"/> Teachers readily design & implement units of instruction <input type="checkbox"/> Emphasis placed on higher levels of student cognitive processing
5 Expansion	<ul style="list-style-type: none"> <input type="checkbox"/> Technology access extends beyond the classroom <input type="checkbox"/> Teachers actively elicit technology applications and networking form other entities - schools, businesses - gov't agencies
6 Refinement	<ul style="list-style-type: none"> <input type="checkbox"/> At this level there is no longer a division between instruction & technology use <input type="checkbox"/> Technology offers a seamless vehicle for information queries, problem solving - product development

In 1994 Dr. Christopher Moersch developed the Levels of Technology Implementation (LoTi) Scale in an effort to accurately measure authentic classroom technology use. This scale is a result of five years of research & development. The Loti Survey is a 50 item questionnaire, designed to approximate an individual's current use of instructional computing, as well as give an accurate measure of a teacher's level of technology implementation in the classroom . The survey also addresses the participant's proficiency with their personal computer use.

All of the teachers in New Braunfels ISD, Waelder ISD, Nixon-Smilely CISD, Nancy Ney Charter School and the New Braunfels Christian Academy took the LoTi Survey in the fall of 2003. As a follow up all of the teachers will take the LoTi Survey again in the fall of 2005.

Below are some links to articles by Dr. Moersch:

1. This article explains the LoTi framework with a brief description of each level ([loti 2.pdf](#))
2. This article is an explanation of how school districts can use the LoTi information. ([asstechuse 2.pdf](#))
3. This article looks at some classrooms emphasizing the use of questioning and higher order thinking skills. ([mtis 2.pdf](#))
4. This is a research profile of the LoTi framework. ([NationalLoTi2002-03.pdf](#))