

# **SeeMeTeach**

**Teacher Observation Reimagined!**

## **User's and Training Manual**

**A Web-based Teacher & Classroom Observation App**

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# SeeMeTeach<sup>®</sup> Overview and Features

## 1. Welcome To SeeMeTeach - Teacher Observation Reimagined!

Welcome to SeeMeTeach<sup>®</sup> (hereafter referred to as SMT). SMT is a powerful teacher observation, feedback, and coaching tool that addresses and solves problems that limit the potential of teacher and classroom observations. SeeMeTeach is a powerful teacher observation and development tool that has both a qualitative mode for comments and feedback and a unique quantitative mode for robust data collection that stands by itself or linked to video or audio, with instant analysis for feedback and coaching. SMT is a tool used by educational professionals that fills the critical need for evidence-based observations when preparing teachers and improving or refining classroom instruction.

## 2. Terms of Service

Before proceeding and using SMT, you must read and agree to the complete **Terms of Service/Privacy Agreement**. The **TOS/PA** was provided during the registration process but is also located at the bottom of each page on the SMT website. Make note that the **TOS/PA** may be modified when necessary; modifications may occur after your initial reading during registration, so you are hereby advised to periodically read the TOS/PA for changes that may apply to you. The Terms of Service are in Appendix F.

## 3. Anytime, Anyhow, Anywhere!

SMT can be used live in the classroom, or when observing via an online video link, or directly from a pre-recorded video or audio of the teacher teaching. In a world where completing observations in a school is more difficult due to restricted visitations, SMT is even more of a ubiquitous and necessary tool for helping supervisors, future teachers, and teachers complete the required observations.

The team here at SMT extends a hearty welcome and congratulations to those who have decided to incorporate this powerful tool into the teacher and classroom observation process. The SMT team is looking forward to SMT being used for a variety of reasons and in many different settings. As such, we encourage users to provide any feedback or suggestions for making SMT an even more powerful tool.

## 4. Why Use SMT? Added Value, Synergy, and Power!

First, SMT addresses and solves many problems related to classroom observation. SMT allows for collecting and analyzing the important but often overlooked quantitative factors that are critical indicators of instruction. SMT also contains a qualitative mode that makes it a tool that provides instant feedback bolstered by both data and evidence when paired with the quantitative mode.

While either the qualitative comments tool or quantitative data-gathering tool can stand alone, there is additional synergistic power when using the data to add meaning and detail to the commentary aspect of the observation. The

data gathered complete a story about how teachers interact with their students, how students interact, and how students behave in the classroom. All these classroom dynamics are critical factors concerning the success of a lesson.

With the vibrant data collection, this tool helps reduce the subjectivity of classroom observations and adds significant value to teacher or classroom observations. Beginning or experienced teachers who desire to improve their craft and strive to be more effective in the classroom know the power of using data and analysis to refine and elevate their teaching to new levels. Administrators or teacher preparation personnel who want to use either or both qualitative and quantitative indicators will find SMT is a tool for powerful feedback, evaluation, and coaching. In short, any educator who studies teaching will stand to benefit from the use of SMT.

Second, SMT also addresses the problem of scant or minimal communication between members involved in the observation. SMT contains a unique observation, feedback, and collaboration platform, which helps facilitate and improve communication and the sharing of comments, data, and summative forms for up to four observation team members. This team might consist of the observing administrator, the teacher, and perhaps a peer mentor or second administrator in a school. In a teacher education program, the team might consist of the student-teacher, cooperating teacher, university supervisor, and maybe another member of the teacher preparation team or another student teacher who is team-teaching in that classroom.

Third, the education world has entered an era of increased measurement of school effectiveness and teacher preparation and teacher effectiveness. Schools, teachers, teacher preparation programs, and future teachers (edTPA) are now facing high stakes testing that has consequences. As such, using more data and evidence from those who prepare teachers or teachers who practice in the classroom will help buffer any frivolous suggestions, subjective conclusions, or outright assaults on their practice.

With this tool, the teacher and collaborating observer(s) can establish baseline data that aids in setting targets regarding general and specific teaching skills and use data to focus on the indicators for a learning environment in which:

- Teachers ask questions, respond, and use wait-time to foster student thinking and engagement in lessons.
- Students take risks, are willing to respond to questions, and are highly engaged in the lesson.
- Teachers know what their students are thinking, thereby knowing why they are successful or have difficulties.
- Teachers set up the classroom climate for fruitful discussions and foster student-to-student interactions.
- Teachers develop positive relationships with students and are successful in classroom management.
- Small groups are productive, and small group members are equitably contributing and engaged in learning.

In short, SMT helps to uncover and use data and evidence-based critical indicators of teaching effectiveness that can have a significant impact on teaching and learning in the classroom when modified. The data and comments collected are a potential source of rich and robust feedback for the person who is being observed.

#### 5. A Paradigm Shift - This tool provides:

- A complete profile of all teacher actions and teacher-student interactions in the lesson to show the predominance of behaviors and teacher tendencies, including:
  - The types of questions asked by the teacher and how many of each type.
  - The types of teacher responses following student actions and how many of each type.
  - Wait-time averages and specific wait-times are noted for the teacher and student actions.
- A complete profile of all student actions showing interactions with the teacher, with other students, and student misbehaviors such as:
  - A heat-map summarizing which students are interacting and the amount of interaction and engagement for each student.
  - A clear picture of which students are passive vs. actively engaged.
  - A timeline of student engagement during various lesson segments with links to video.
  - Indicators that show whether students with special needs, ELL, or minority students are engaged at an equitable level in the classroom (in progress).
- An analysis of the data uncovering critical patterns of teacher-student interactions providing answers to questions such as:
  - When teachers ask questions and students respond, is it a productive pattern or one contrary to the goals of the lesson?
  - If student engagement and thinking is the goal, are open-ended questions present or absent?
  - Were all follow-ups to student responses teacher-clarifying instead of asking the student to explain their answer further?
  - What were the average times for wait-time one and wait-time two?
- A complete profile of student misbehaviors and how the teacher dealt with such behaviors and answers to questions such as:
  - Who was exhibiting misbehaviors - a few students versus many?
  - What, where, and when regarding the teacher intervention?
  - When are more misbehaviors occurring – during x type of lesson, y type of lesson, transitions between lessons, or the beginning/end of class?
- A record of small group interaction and engagement provides answers to questions such as:
  - The who, when, and what type of interactions occur between small group members?
  - Are all small group members interacting and contributing on an equitable basis?
  - What is the nature of the interactions between the teacher and the small group?

## 6. The Target of the Observation

SMT is a tool for data collection during an observation of a whole class period and the entire class of students or used on subsets of the class, such as a fifteen-minute section of small group work or a 30-minute section of lab work. Furthermore, SMT can be used at any level of teaching from K-college (or beyond) as the common denominator is teacher and student actions that paint a vivid picture of instruction. While SMT's data collection can be rich and extensive, each observation's goal and purpose will differ and determine what specific data needs to be collected and whether the user uses all the codes or a sub-set of the codes. A user can be ready to collect data with as little as 15 minutes of beginning to use SMT.

**A Quick Tour and Highlights of the SMT Tool** - If the user wishes to quickly see the power and highlights of using SMT for observation, they should go to the SMT homepage and view the short video that provides an overview of both the qualitative and quantitative mode of SMT. This video is updated periodically to keep up with the additions and changes to SMT.

## 7. Who Uses SeeMeTeach®?

**A Single User or A Synergistic Team** - While this App is a tool that can be used by a single user who wants to study their teaching, it can also serve as the observation platform and feedback tool for a team of up to four people. The following represents those who find this a game-changing tool:

- **A Pre-service Teacher**
  - A pre-service teacher who wants to use the power of video and data to examine their teaching can use SMT to become more aware of specific things to improve on. SMT can be used to analyze a lesson, collect data and commentary, and develop self-analysis and reflection skills. In short, SMT is a vital asset to pre-service teachers as it helps them to prepare for writing and submitting the edTPA high stakes assessment.
- **A Teacher Preparation Team**
  - This team works together to complete observations and provide feedback to a pre-service teacher. They can use the team-based communication platform to share observation details, data, and feedback and facilitate discussion between team members.
  - A methods instructor who has students completing fieldwork-based assignments can ask students to bring back videos with analysis and reflections of their efforts using SMT to document the implementation of specific strategies and results.
- **Teacher Education Leadership**
  - Teacher education leadership can use SMT to collect evidence and demonstrate accountability. Program directors, department heads, or Deans can register their group of faculty and future teachers SMT and

use it as a tool for observations. Simultaneously, SMT is used to gather data and evidence to demonstrate the impact and effectiveness of their program on future teachers for internal reasons and to satisfy oversight entities who visit and scrutinize for evaluation purposes.

- **A Classroom Teacher**
  - Who wishes to view, analyze, and fine-tune their teaching.
  - Who is using video, collecting data, and using analysis, critical narratives, and reflections for bolstering their submission to the National Board of Certification of Teachers (NBCT)
  - Who wishes to use SMT data as evidence to help buffer the sometimes significant differences in teacher ratings from one administrator to another.
- **A Classroom Teacher and School Team**
  - A teacher and a colleague, peer-coach, or mentor can use SMT to collaborate and improve instruction, remediate, or fine-tune classroom management challenges.
  - A teacher and administrator can collaborate to complete the yearly classroom observation and feedback assessment process using data from SMT.
  - Teachers might wish to demonstrate and highlight pedagogical strengths by using SMT with a videotape of one or more of their lessons and present the data with analysis as part of their observation process.
- **Administrators**
  - A more evidence-based lens may help administrators justify recommendations regarding specific aspects of teaching when designing improvement plans.
- **Graduate Students**
  - A graduate student who is working on a Master's or Ph.D. Thesis, particularly those who are completing action-research and studying teacher actions and student engagement in the classroom.
- **A Research Team**
  - Tasked with examining the effects of professional development on teaching and classroom instruction.
  - Tasked with studying how curricular innovation impacts instruction, teachers, or students.
  - Tasked with examining the impact of state or federal funding on classroom instruction.



## 8. SMT Supporting Documents

**SMT Teacher Challenges** – A series of min-action research explorations into teaching. A teacher identifies an issue, collects baseline data, implements a potential solution, or shift to their teaching, and collects data to compare with the baseline data looking at critical indicators of change and effective instruction.

**SMT Professional Development Modules** – A series of modules focusing on specific strategies and pedagogy related to exemplary instruction for the discipline.

**SMT and edTPA for Rubrics 6-10** – Documents that provide guidance on how to vastly improve the use of data and critical indicators when planning for, teaching, analyzing, and reflecting on lessons when writing edTPA Rubrics 6-10.

**SMT and NBCT** – How to incorporate data as evidence and indicators of powerful instruction into the NBCT reflection submission.

**SMT Cooperating Teacher** – How a cooperating teacher can incorporate data as evidence and indicators of effective instruction when providing feedback and coaching to future teachers in a clinical setting.

**SMT and Teacher Education** – How methods instructors and fieldwork supervisors can use SMT to provide feedback and coaching using evidence-based indicators. How the data collected can become evidence for overall program effectiveness.

**SMT, Teachers, Administrators and Schools** – How using SMT, Teacher Challenges, and SMT Professional Development Modules can be used to replace or supplement teacher observation.

**Graduate Students and Other Researchers** – How SMT can provide a platform for pedagogical research and using data vs. impressions.

**Grant and Curriculum Impact Evaluators** – How SMT can be used to evaluate the impact of grant-supported professional development or curriculum development on teaching and instruction, bringing critical data and indicators into the process.

**What are Teacher Challenges?** *Teacher Challenges* are mini action-research investigations that focus on a strategy, a teaching model, or teacher-student interactions that are important to your teaching. *Teacher Challenges* are meant to be personal explorations of teaching that serve to gather and analyze data on some aspect of teaching that allows the teacher to determine ways to improve teaching and increase the positive effect on the learner. While there are many *Teacher Challenges*, there is no prescribed pathway to follow or any specific endpoint in mind. Growth, change, fine-tuning one's teaching for the sake of improving student engagement and learning is the target of *Teacher Challenges*. While it is a personal exploration, the explorer quickly engages in a study of educational research to increase awareness and understanding of the existing research and guiding conclusions and learn more about the various factors linked together that form the complex act of teaching. Improving teaching is a lifelong pursuit. Once teachers see the value in engaging in a study of their teaching, the typical teacher observation becomes even more obsolete.

### The Typical Flow of Activities

a. *The What and Why* - Describes a common teaching practice that might benefit from modifications and generates a strong case for why it is an issue. What aspect of teaching is being investigated? The teacher focuses on a strategy, a teaching model, or teacher-student interactions that are important to their teaching. The goal is to change instruction in a manner that might or will increase student engagement or positively affect student learning.

b. *The Challenge* - The general steps that the teacher follows involves teaching a lesson in the normal manner, gathering, and analyzing some data, then looking at key indicators to determine the impact on the learner concerning goals for the lesson. Then the teacher changes their teaching by using a different strategy or altering how they interact with students during the lesson. More data is gathered and analyzed, then compared to the original data set to determine if the changes in pedagogy had the desired effect on student engagement and, ultimately, learning. Keep in mind that "learning" is more complex to measure, but many data and studies link student engagement to learning. The primary indicator of the effect of implementing changes to teaching and from data analysis is student engagement which is easy to document using the SMT observation tool.

#### c. *The How*

##### Round One – Baseline Data and Indicators

1. Teach a lesson as usual and capture video.
2. Learn how to analyze the lesson and complete the SMT training needed to capture data.
3. Use SMT to capture and analyze data by linking the questions and corresponding data as best indicators.
4. Record data on the *Data Summary Chart* and identify what indicators to use and examine as change measures.
5. Use *SMT Modules* or online resources to mine for how to change instruction to better target and foster goals for instruction and have a more significant positive impact on student engagement and learning.

##### Round Two – Impact of Changes to Instruction

6. Modify instruction, teach, video the lesson, then again use SMT to collect data followed by comparing data that indicates change, growth, or impact when comparing the initial lesson to the second lesson.

## A Few Examples of Teacher Challenges

- ◆ Increasing Student Engagement
- ◆ Small Group Productivity and Equitable Contributions
- ◆ Increasing Wait-Time
- ◆ Using a New Teaching Strategy

### SMT Professional Development Modules

Teaching is a complex activity that involves a plethora of decisions, and therefore, there are many *SMT Professional Development Modules* to support this activity. What is the substance of some of the modules? Teachers make many decisions when planning lessons, but one of the key decisions is which strategy or teaching model to use to reap the best outcomes from a lesson. For example, when teaching science, some powerful strategies to choose from including *Dialogues*, *The Learning Cycle*, *The Five E's*, *Structured Controversy*, *Issues Analysis*, or *Problem Based Learning*. Modules for these strategies immerse the user in learning how to use them and then refining the use to obtain maximum benefit.

Another key module that all teachers would profit from is the *Teacher-Students Interactions* module, as it teaches one how to analyze questioning-responding behaviors to determine patterns and tendencies of how teachers interact with students. The observation and analysis skills learned through this module also help teachers determine whether their interactions with students is compatible with the strategy being used and if those interactions support the goals for the lesson or undermine their efforts. Companion guides *SeeMeTeach Overview and Features* and *SMT Teacher Challenges* places gathering and analyzing data as the foundation for using evidence as the central core of feedback and coaching for improving teaching.

The modules are designed for those working on a teaching certification or for a beginning or experienced teacher who analyzes and reflects on their teaching or works on professional development plans, a master's degree, or perhaps an advanced or national certification(s). The modules are designed to help teachers add more tools to their teaching toolbox or to fine-tune their teaching. The modules provide a gateway to an expansive set of tools and strategies for teaching and are an asset for a teacher who wishes to explore and diversify their teaching in a multitude of ways, as well as develop a more robust research-based rationale for the how and why of teaching. The modules are also a gateway to more in-depth study of that topic via a book that digs much deeper into the topic with an option of enrolling in a short course taught by the author of each special topics book.

Check out the SMT Professional Development Modules for delving into a topic that may add an important teaching tool to the teaching toolbox.

## 9. Registering to Use

To use SMT, the user must first register by going to [www.SeeMeTeach.com](http://www.SeeMeTeach.com) under *Plans and Prices*, then registering for a *Basic Plan – Single User*, or registering for as a *Group – School or Teacher Preparation Plan*. A single user can still collaborate with other SMT users but are not part of an official group. Once a single user or a group of users has completed the registration, they can collaborate on observations and proceed through the scaffolded training levels at a comfortable pace. A group of users might consist of administrators and teachers in a school, or instructors, students, and cooperating teachers in a university teacher education program.

### Registration For Basic Plan – Single User

A person can register as a single user and collaborate with other SMT registered single users. Once registered, the user can send invites to colleagues to register for SMT and collaborate on teaching observations. A single user cannot collaborate with group members as only designated members of the group can collaborate. However, a group member can still function outside of the group by also registering for SMT under a Basic Plan – Single User with an email that is different from the one used for the SMT group. A Single User can collaborate with as many other Single Users as they choose.

*\* Note that the FAQ's at [www.SeeMeTeach.com](http://www.SeeMeTeach.com) (Prices and Plans) or below in this document have FAQ's that are helpful when considering whether to register as a Single User or for a Group of Users*

### Registration For Groups Such as Schools or Teacher Education Programs

For an SMT group to form and function, the lead person registers and invites the individuals who will be part of the observation group.

#### Steps To Take To Register For and Add Users To a Group

1. Key information required for registering a group is the name and email of the key person and how many people are in the group. Note that the key person or group administrator is part of the group and can participate in observations, but their membership is free. Therefore, the person registering should factor that into the number of group members needed. Payment is either by credit card or by using a purchase order.

*\* If paying by credit card, begin at [www.seemeteach.com](http://www.seemeteach.com) under *Prices and Plans* and continue with the process of registering and paying.*

*\* If not paying by credit card, the person registering for the group should be prepared with a *Purchase Order Number*, and within *Prices and Plans*, there will be a link to a page of information to fill out and fax or email to SeeMeTeach. Upon receiving the group registration request, SeeMeTeach will confirm receiving the registration/PO and send a confirmation that their group can begin using SMT. Then SMT will email an invoice for payment. When the key person receives an invoice, they should process the payment in short order to continue using SMT. Note that the invoice will need to be paid within 30 days, or the account will be frozen until payment takes place.*

2. After establishing an account, the group administrator logs into SMT. Under their account name drop-down is a heading for *Contacts* - clicking *Add New User* allows them to add users to their group, up to the number per their registration. When they add a new user, SMT sends out an email invite, and the recipients of the invite need to open their email and accept the invite and add a bit of information like a password they will use when logging into SMT. Each user who has been invited will be listed in the *Observers List*, and either has a green dot (if they have accepted the invite) or a yellow dot (if they have not yet accepted) under the column *Status*.

3. Note that the number of individuals within a group can be increased during a payment period, and the organization will be billed accordingly. Still, the size of the group may not be decreased during a payment cycle. Once registration has been completed, there are no refunds if a member leaves the group. If a group member leaves the school or the program and is no longer part of the group, the administrator can *Remove* them. Removing a user should free up one of the paid group slots so that the administrator can *Add New User* to invite a new teacher or teacher education student to the group.

Once the user or group is registered and has access to SMT, they should train to learn some skills for using SMT. The training begins with creating a New Observation, followed by how to use the qualitative mode, and subsequently, a series of lessons on how to use the many features of the quantitative mode. Training support materials consist of video overviews, narratives describing what, how, and why of *SeeMeTeach*®, with practice sessions offered and structured to develop the user's skills.

## The Qualitative Mode

### 10. Qualitative Mode - Highlights and Important Features

- Observations can be completed live in the classroom or by using a pre-recorded video or audio.
- The user generates a time-stamped set of observation notes that can include comments and suggestions, color-coded to the specific team member that is making a comment, labeled, and organized by category.
- The user(s) can search and find comments by category.
- Comments are also noted via symbols on the timeline below the video so the user can see who left comments and how many comments are attached to the lesson, then click to read the comment and play the video segment.
- The user can create and tag comments to a student seating chart, thereby noting events and actions by individuals or groups of students.
- When using video, comments are linked to video segments, so the teacher or observer can provide feedback with video examples of the teacher or student actions.
- Summative commentary forms can be filled out, attached, and viewable by any team member. SMT provides some standard forms, or users can also upload and use their own personalized forms as well.
- Provides a platform for the observation team (of up to four people) to collaborate and communicate, and a team member can react to and respond to another team member's comments.

The screenshot displays the SeeMeTeach SMT Practice Video Swinging Spheres interface. The main video player shows a red screen with the text "SeeMeTeach SMT Practice Video Swinging Spheres". Below the video is a timeline with a play button and a grid of colored triangles (yellow, green, blue, orange) representing comments. To the right of the video is a list of categories: Goals/Plans, Instruct Strat, Quest/Respd, St Engagement, Flow - Pace, Equity/Sp Nds, Content, Lrng Environ, Other 1, Proc/Routine, Tch Decsn, Wait Time, St Thinking, Management, Assess Lrng, Nonverbls, Using Evidence, and Sum Cmnts. Below these categories are buttons for Find, Next, Prev, and Team Table. To the right of the categories is a list of comments with timestamps and category labels. The bottom section contains a Seating Chart Heat Map, Data Buttons (Lesson Demographics, Pre-Lesson Questions, Code Summary, Lesson Summary, Management Summary, Student Engagement, Teacher Actions, Interaction Patterns, Wait-Time Summary, Small Groups, Post Lesson Questions, Summative Comments), Course Name (Physical Science), Period, Block, or Time of Day (1), Lesson Topic (Swinging Spheres), Subject Taught (Science), and Grade Level.

**Qualitative Comment Button Choices** – There are many button sets to choose from when setting up a qualitative observation.

Start Qualitative Observation

Category

☐ Standard
 ☐ Dan Draft
 ☐ SPED 1
 ☐ SPED 2
 ☐ SPED 3
 ☐ Mar Draft
 ☐ HLP
 ☐ NBCT
 ☐ World Lang
 ☐ ESL Ed
 ☐ Performance English-ASL
 ☐ Performance ASL-English
 ☐ Transliteration Performance Rubric Signed English-English
 ☐ Transliteration Performance Rubric English-Signed English
 ☐ edTPA (coming soon)
 ☐ INTASC (coming soon)

Start

## Standard Set

Standard

Lesson Goals or Plans

Procedures or Routines

Instructional Strategy

Teacher Decisions

Questions-Response

Use of Wait Time

Student Engagement

Student Thinking

Lesson Flow or Pace

Behavior Management

Equity or Special Needs

Assess Student learning

Lesson Content

Teacher Nonverbals

Learning Environment

Using Student Evidence

Other 1

Summative Comments

## Special Education Set 1

SPED 1

High Student Behavior

Culture Of Respect

Teaches Social Skills

Max Acad Learn Time

Com Learning Expect

Self Monitor & Improve

Encourage Student Think Skills

Varies Instruction

Differentiate Instruction

Diagnostic Assessment

Formative Assessment

Summative Assessment

Assistive Technology

Co-Teaching

Classroom Management

Engagement / Mindset

Other

Summative Comments



## Special Education Set 2

SPED 2	
Teacher	Student
Proximity Control	Give Warning Response
Positive Reinforcement	Negative Reinforce
Positive Punishment	Negative Punishment
Redirect Student	Modeling
Gain Attention	Keep Attention
Prompting	Checking
Error Correction	Strategy Instruction
Scaffolding	UDL

SPED 2	
Teacher	Student
Self Injurious Behavior	--
Hurt Others	--
Imaginary Friends	--
Inappropriate Vocal	--
Left the Space	--
Off-Task Behavior	--
Transition	--
Other	Summative Cmnts

1	2	3	4	5
---	---	---	---	---

## Special Education Set 3

SPED 3	
Teacher	Student
Teaching whole	Gesture reprimand
Assist Individual	Verbal reprimand
Monitoring	Proximity control
Disengaged	Request
Asking questions	Calling out
Praise	Time out
Corrective feedback	Obj/direct/proced
Acknowledge	No response

SPED 3	
Teacher	Student
Talking	On task
Vocalizing	Collaborating
Traveling	Complies
Bother others	Ignores
Physical actions	Resists
Volunteering	Escalates
Called on	Other 1
Called out	Other 2

1	2	3	4	5
---	---	---	---	---



## World Languages Set

World Lang	
Main	Subset
Build Background	Interpretive mode
Comprehensive Input	Interpresonal mode
Strategies when teach	Presentational mode
Interaction w students	Practicing grammar
<b>Practice</b>	Support objectives
Lesson Delivery	Inclcd culture - practices
Assessment	Inclcd culture - products
Classroom Management	Inclcd culture - perspect

## English as Second Language (ESL) Set

ESL Ed	
Build Background	Speech - pace
<b>Comprehensive Input</b>	Speech - enunciation
Strategies	Speech - simple senten
Interaction	Suptl - using visuals
Practice	Suptl - using graphs
Lesson Delivery	Suptl - using realia
Assessment	Suptl - using videos
Classroom Management	Suptl - using manipulats
	Suptl - using books/wkbbk
	Suptl - using technology
	Suptl - online resources
	Suptl - other

## Signing ASL to English Set

Performance ASL-English	
Main	Subset
<b>Articulation</b>	Quality signing
Affect	Fingerspelling clear
Grammatical Structure	No extra signs/move
Language Match	Pace appropriate
Intent/Cultural Mediat	
Content	
Constr Action/Dialogue	
Use of Space	
Composure	
Appearance	
Overall Message Clarity	

1
2
3
4
5

## Transliteration Performance Signed English to English

Transliteration Performance Rubric Signed English-English	
Main	Subset
<b>Articulation</b>	Quality signing
Affect	Fingerspelling clear
Grammatical Structure	No extra signs/move
Language Match	Pace appropriate
Intent/Cultural Mediat	
Content	
Constr Action/Dialogue	
Use of Space	
Composure	
Appearance	
Overall Message Clarity	

## National Board Certification of Teachers Set

NBCT

Lesson design	T ask question
S initial knowledge	Wait-time 1 and 2
S new knowledge	S ask question
S process skills	S-S interactions
Extent of engagement	Opp S deep thinking
Impact of teaching	Opp S involvement
Equity of access	Opp T adjust lesson
Goals achieved	T encouraging risks
Other	S taking risks

**International Use** – Note that for international use the buttons can be customized with categories identified by the desired language.

**Lesson Plans** - Before, during, or after the observation, the observer can quickly access the teacher's Lesson Plans, either via the *Dashboard* or via the *Team Table*.

Observation Setup

Pre-Lesson Questions

Seating Chart

Student Demographics

Lesson Plan

Summative Forms

Post-Lesson Questions

Observation Details

Observation Type: video

Video Uri: <https://www.youtube.com/watch?v=npZn7-MFVh8&t=35s>

Teacher Being Observed: Seemeteachberg

Observers

Craig Berg07/01/20 05:07 pmSciencePhysical ScienceMomentumvideo

Observers

Name	Quantitative	Qualitative	Sum Form 1	Sum Form 2	Sum Form 3
Craig Berg	Start	✓			
Ben Herman	Pending	Pending			
Michael Clough	Pending	Pending			

Lesson Plan

**Pre-lesson Questions** - To provide the observer with some context and information about the upcoming observation, the teacher can respond to the *Pre-lesson Questions*, which the observer can see via the *Dashboard*, or via the observation pages.

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Pre Lesson Questions

What are the main learning goals/objectives for the lesson?

Describe the major activities or parts of the lesson to be observed.

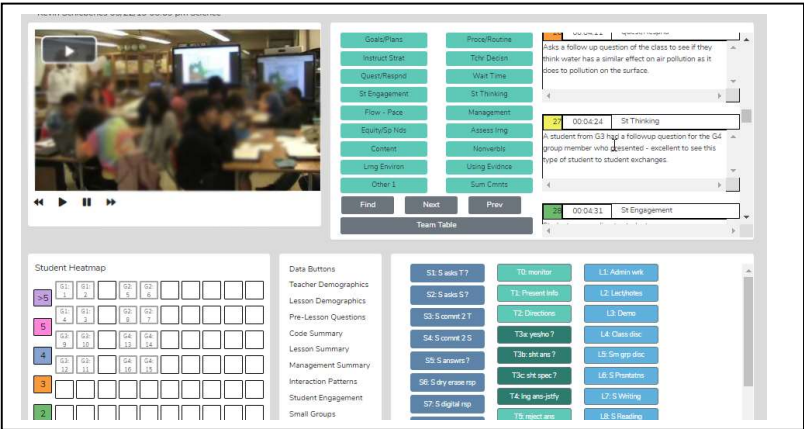
How will you know if the learning goals/objectives have been met (i.e., What evidence will you have?)?

Provide the context for the lesson. (i.e., How is this lesson connected to prior lessons? How is this lesson connected to subsequent lessons? Where is this lesson placed in the current instructional unit?)

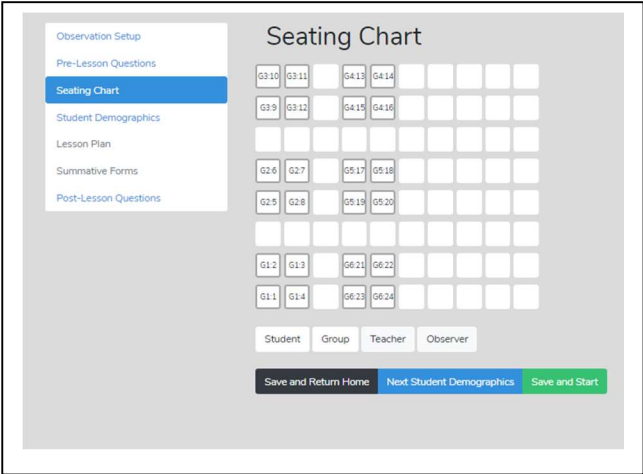
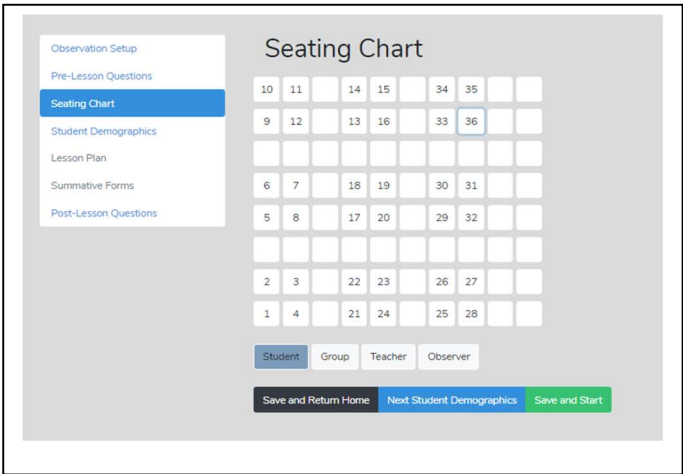
Describe the ability levels of the students in this class.

19


**Qualitative Observation Categories and Comments** - The observer, or multiple team members, provides comments, labeled by categories. There are many comment categories as choices.



**Seating Chart** - The teacher or observer can create a Seating Chart and refer to this when making comments - showing each student and showing small-group designations if desired.



**Post Lesson Questions** - To stimulate reflection, post-lesson questions can be filled out or accessed via the settings or via the observation/analysis page.



Instructional Plans	Probe/Rescue	Comments
Student Input	Tech Decider	00:00:35 Quest/Respond
Quest/Respond	Wait Time	<p>Starts out with asking who has seen the giraffe before, and if they have not to blurt out responses so it gives others a chance to think.</p>
St Engagement	St Thinking	
Flow + Pace	Management	00:01:34 Quest/Respond
Equity/Go Hots	Assess Impl	<p>Starts out with asking them to make a prediction based on what he is going to do with the steel spheres.</p>
Content	Numbers	
Stng Emotion	Using Evidence	
Other 1	Sum Concls	

Find
Next
Prev

Team Table

Student Heatmap

1	2	3		
4	5			
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Date Buttons

- Student Demographics
- Lesson Demographics
- Pre-Lesson Questions
- Code Summary
- Lesson Summary
- Management Summary
- Interaction Patterns
- Student Engagement
- Small Groups
- Wait-Time Summary
- Post-Lesson Questions
- Summative Comments

Tell me about today's lesson. Probe: What went well? Probe: What needed to be improved? Probe: If you taught this lesson over again, what would you change? Why?

Students seemed interested and gave their predictions. My questioning was mostly open-ended. I think I got all of them engaged to a high level. If I taught this lesson over I would use dry erase response boards so I could see all their answers.

What do you think students learned from today's lesson?

Even after the fourth trial, I don't think all of them were seeing a pattern yet. But I think something was taking shape in their heads. The next part of the lesson will tell me what they know or not.

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## Post Lesson Questions

Tell me about today's lesson. Probe: What went well? Probe: What needed to be improved? Probe: If you taught this lesson over again, what would you change? Why?

I think the activity went well. Students were actively working the whole time, and most finished their work. The chatting in small groups was focused on the work they were doing.

What do you think students learned from today's lesson?

They learned how to take data from a graph and use that to make predictions. They learned how to work better within a group and how their role and job was important to the rest of the members of the group.

What evidence do you have of this learning?

The assessment at the end of the activity showed that they could transfer what they should have learned in the activity, and use it in a new situation.

When the small groups processed their small group work they specifically mentioned some key aspects of how they can work better within the group.

What evidence did you observe that learners of all ability levels were engaged in this lesson?

Each person had an important role to play to make the group successful. And other members of the group were helpful and encouraging to members who might have had less ability to be successful.

Based on what happened in today's class, are you planning to make any changes to the next lesson? If so, what are these changes?

I think I will give the groups a bit more autonomy in figuring out how to best analyze the data, and how to present their findings.

What is the next step for this class in this unit?

Using the data and analysis on some real-life scenarios with genetics.

**Team Table** - Using this feature, a user can choose whose comments (or data/analysis) to view.

Craig Berg

06/25/20 02:06 pm

Science

Test of LP and Sjm

Test of LP

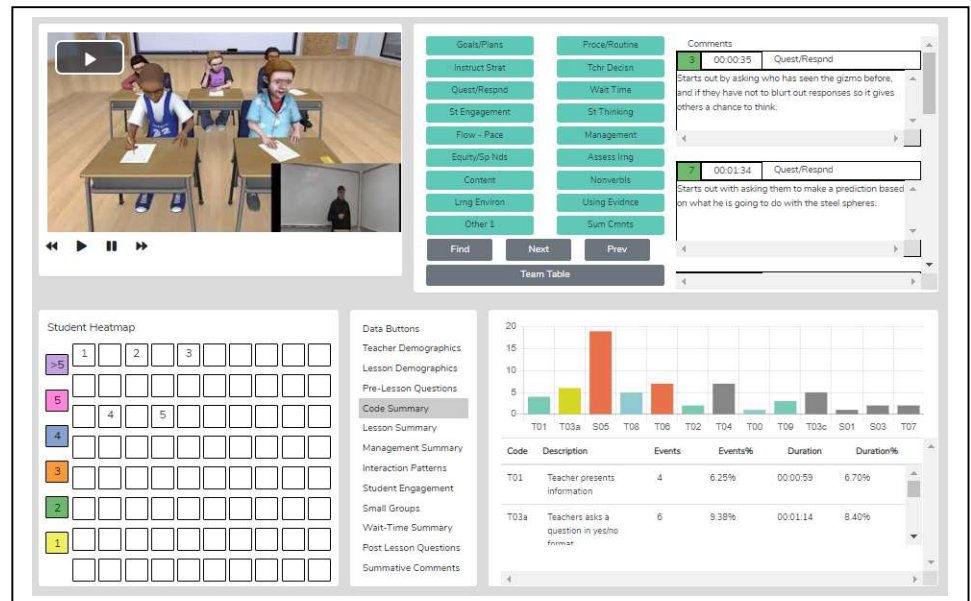
video

Observers

Name	Quantitative	Qualitative	Sum Form 1	Sum Form 2	Sum Form 3
Craig Berg	✓	✓			
Annie Levendusky	✓	✓			
Doug Bergy	✓	✓			
Ben Herman	Pending	Pending			

Lesson Plan

**Using Data and Evidence** - The observer can use data from the quantitative analysis to bolster comments made during the qualitative comments mode, thereby providing evidence-based feedback, recommendations, and coaching.



**Summative Comments and Summative Forms** - When the observation is over, the observer can add Summative Comments and/or fill in up to three Summative Forms to share with the observation team.

**Middle and Secondary Program Student Teaching Evaluation Checklist**

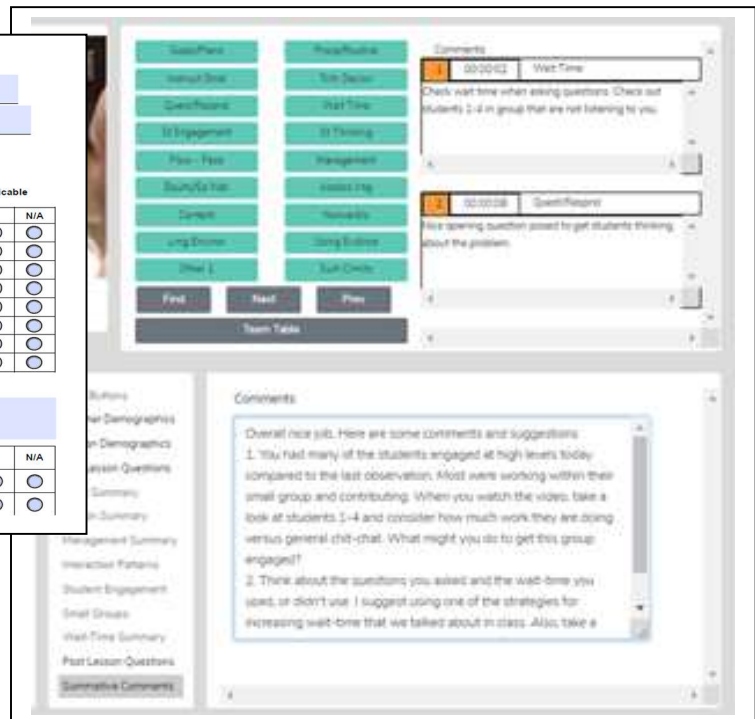
Student Teacher: \_\_\_\_\_ Date: \_\_\_\_\_  
 Cooperating Teacher: \_\_\_\_\_ School: \_\_\_\_\_ Grade: \_\_\_\_\_  
 Supervisor: \_\_\_\_\_ Completed by: \_\_\_\_\_ Date: \_\_\_\_\_

Key: 1 = Never 2 = Seldom 3 = Occasionally 4 = Frequently 5 = Consistently NA = not applicable

Preparation / Planning	1	2	3	4	5	N/A
The lesson plan:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has clear objectives and assessment strategies.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is properly sequenced.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is planned at an appropriate level.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Includes a variety of activities.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrates content from relevant disciplines.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plans for higher levels of thinking.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reflects long range planning activities.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments: \_\_\_\_\_

Classroom Management	1	2	3	4	5	N/A
Presents clear expectations for classroom behavior.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focuses student attention at the start of lesson.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



**Suggested Uses** - The team member's qualitative analysis might be useful regarding:

- The teaching observation of a fieldwork student or student-teacher by the teacher preparation program supervisor - After the observation, the qualitative analysis page is available to the student-teacher, who can view comments, respond to post-questions, post their reactions and commentary, and fill out the self-reflective *Summative Form(s)*.
- When using video for the observation, team interaction and communication can be enhanced as any team member can do a qualitative analysis of that lesson and view any other team member's running commentary and summative comments.
- When using video, all comments are linked to specific video segments so the viewer can see any particular action as it occurred in the classroom.
- Methods of teaching instructors can view the video of pre-service teachers implementing suggested strategies, view pre-service teachers' analyses and reflections, as well as add their own comments or suggestions.
- For a classroom teacher's yearly observation, a teacher can capture a video of their teaching and complete a self-analysis while an administrator completes their own, merging their commentary with that of the teacher. A conversation then follows this whole process. When using video, comments are linked to the video, making it easy to locate any part of the observation and showcase events being discussed, thereby enhancing feedback and coaching sessions.
- Research team members can share data and analysis screens by printing the data and analysis screens or by exporting the raw data to a .xls spreadsheet for more refined and custom analysis.



### 11. The Quantitative Mode – Highlights and Important Features

#### Quantitative Analysis and Feedback Options

The SMT quantitative model allows the user to collect and then analyze data related to teacher and student actions during a lesson. This data is coupled with the specific lesson type in play to show when and where student and teacher actions occur in lessons. The raw data is displayed, time-coded, and linked to the events as they took place in the video. The resulting raw data and analysis of data offer substantive insights into the activity and events of the lesson. The analysis and feedback options described below will highlight how beneficial it is to use quantitative data during the feedback and coaching process.

**Power of Video-linked Data** - When using video, the data collected is linked to the specific video segments that represent that data and the type of action or event by both teacher and students. When looking at the analysis screens, the observer, teacher, or team member can go directly to the video linked to specific data points and see examples in action.

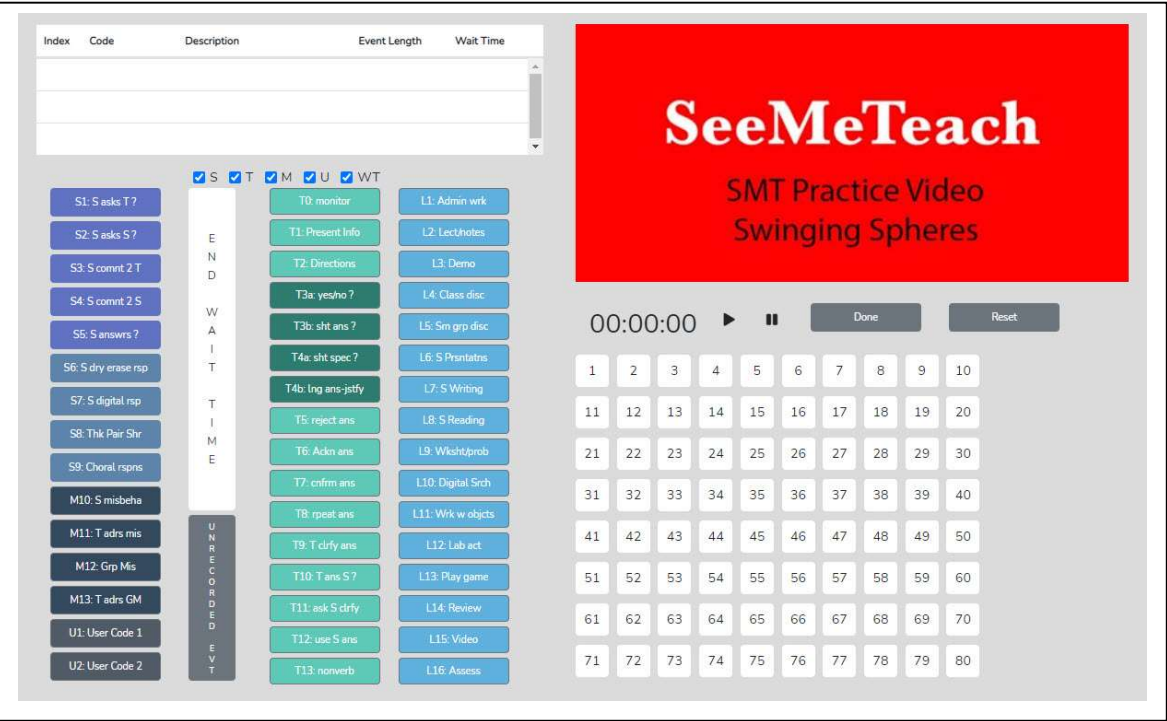
#### Highlights of the Qualitative Mode

- Observations can be completed live in the classroom or by using a pre-recorded video or audio file.
- SMT collects extensive data regarding teacher and student actions that is linked to events in the classroom.
- There is an immediate post-observation analysis of data with visual representations displayed in tables, graphs, and heat maps of seating charts.
- With a seating chart, the data are linked to specific students, small groups and analyzed by student demographics.
- Data are linked to video segments making it easy to locate specific examples of a teacher or student's actions.
- Small group actions can be noted for examining small group dynamics and engagement.
- The lesson plan is attached to the observation for ease of access for the observer or any team member.
- Summative forms tailored to local needs can be filled out, attached, and viewable by any team member. SMT provides some standard forms, or users can also upload and use their own personalized forms as well.
- SMT provides a platform for the observation team (of up to four people) to collaborate and communicate.

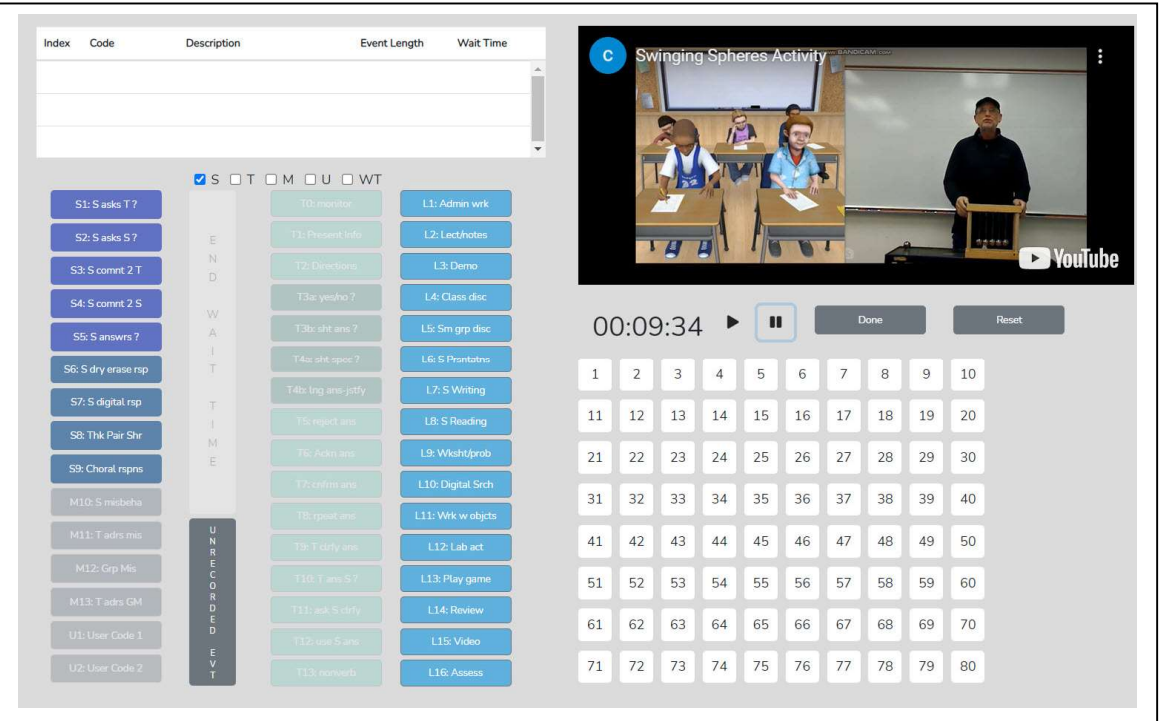


Data Collection Screen

The data collection screen contains a seating chart, the video window (live or audio has no video), and the data collection buttons that observers use to note teacher and student actions that result in rich and robust indicators and analyses. *Note that for international use the button sets can be customized by the user’s native language.*

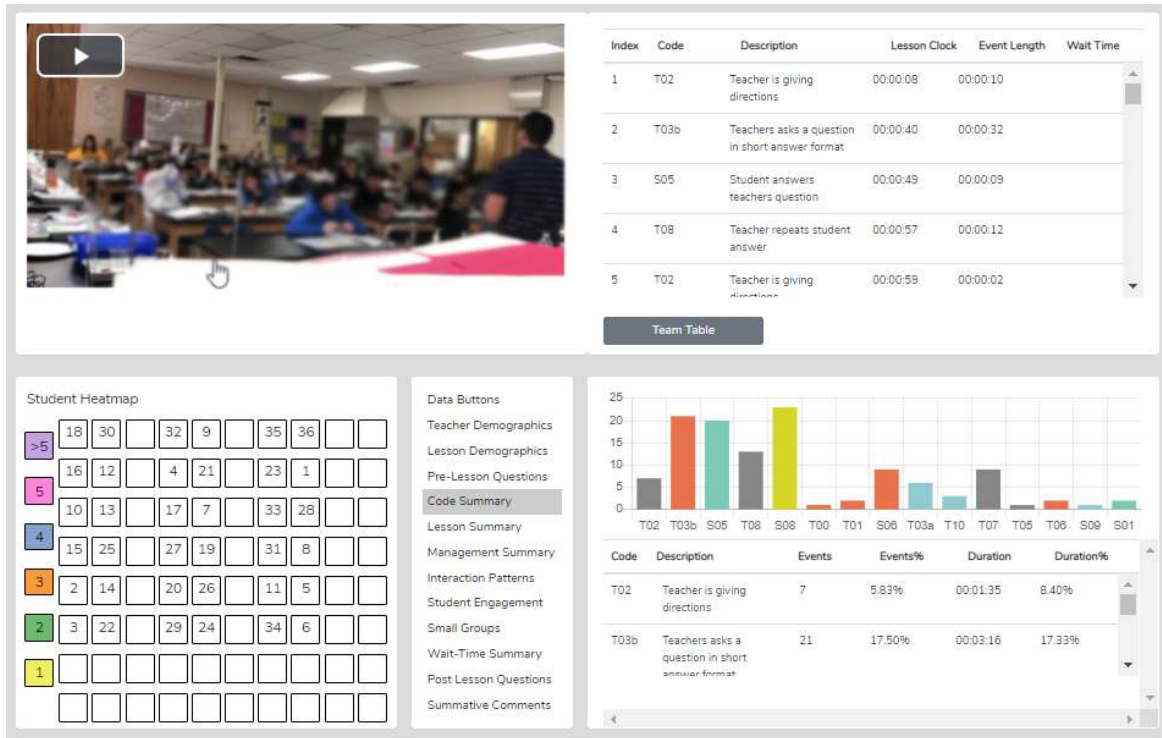


However, button sets can be toggled off for novices or for users who wish to only collect specific data, as seen below, making it quite easy to collect critical and important data such as student engagement—the training videos and manual scaffold the user from simple to complex data collection.



## Post-Observation Data Analysis Screens

**Code Summary** – This feature provides a graph of the number of events of each code used during data collection and shows the relative and specific use of T, S, M, and U codes. Underneath the graph is a data table that displays data for each of the specific codes by frequency of an event, frequency of an event compared to the total number of events, amount of time-coded by the specific event, and time accrued for that event compared to the total time of all the events. The T code data is tallied underneath this data table, as are the S code, M code, and U code data. This data is also recorded as a percentage of total events and percent of total time.



- Looking at *Code Summary*, the data table, and the graph:
  - What were the predominant T codes exhibited in this lesson?
  - When looking at the data for the four question types (T3a, T3b, T4a, and T4): what is the tendency of the teacher to ask open-ended questions requiring students to think more deeply, to speculate, and construct answers vs. asking questions that require a yes/no or short-answer memory type response?
  - If the goal was to dig into student thinking at a deep level, consider the type and number of questions asked (and your memory of the teacher asking questions in the video). What might you conclude?
- What does the teacher tend to do following a student response? Do they tend to judge responses, acknowledge, and then clarify for a student, or instead ask a student to explain?
- Considering the type and number of questions asked, what might you conclude if the goal was to dig into student thinking at a deep level? What changes would foster more of this?
- What is the total % of T codes vs. % of S codes? (This is an indicator of whether the teacher is doing most of the talking and events or if the talking is balanced between the teacher and students, and at what level the students are contributing to the teacher-student or student-student interactions in that lesson.)

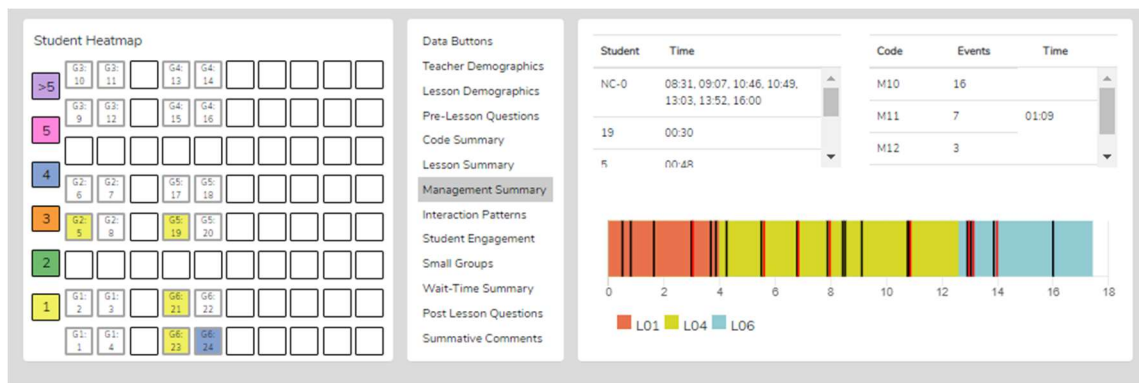
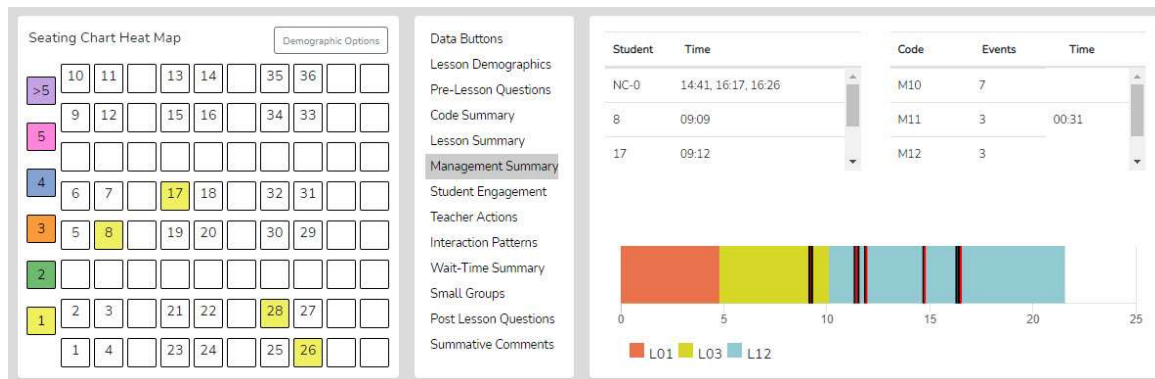
**Lesson Summary** – When coding a lesson, the observer notes the type of lesson in play by clicking an L button at the very start of the observation and a different L code each time the lesson type changes within the observation. As such, types of lesson segments are noted and displayed in the quantitative analysis mode in the *Lesson Summary* data window as a timeline showing the order and length of each segment of the lesson. This lesson segment display is used as a time-context reference when looking at other data such as *Student Engagement or Management Summary* to see where misbehaviors or students’ responses were present in the lesson.



With the **Lesson Summary** information, the user can consider the following:

- Teachers can view how much time was spent on each segment of the lesson and think about if more or less time was used on lesson segments than intended and how the use of time affected the outcomes of the lesson.
- After the bell rings and the class period begins, teachers can analyze how much time it took to start teaching and then decide what to do differently to begin teaching right at the start of the class period.
- Teachers can examine how much time was used for each lesson segment and the time needed for transitions between each part of the lesson, allowing the teacher to ponder what changes should be made to reduce the time needed for transitioning from one part of the lesson to another.
- If the lesson ended early, teachers could view much time at the end of the lesson, was not used for instruction, and think about some productive things to insert into the lesson to utilize the remaining class time.
- Teachers can consider the whole class period and what might have been done to use the time even a bit more productively.

**Management Summary** – Management Summary provides a seating chart, timeline, and individual student data for misbehaviors using black bars on the timeline that are also linked to the video and the teacher's response and intervention using red bars that are linked to the video. Also displayed is when and how long the teacher reacted to and addressed the misbehaviors. Clicking on a bar causes the video linked to that event to begin playing.



**Demographic Highlighting in the Seating Chart Heat Map** - In addition, if data is collected for specific students by using the student seat number before entering the M code, then the data can be displayed and toggled on or off by clicking on the Gender, ELL, SPED, or Minority buttons. If the observer should wonder how the students with special needs are disengaged during the lesson, toggle this information to find out. If the observer or teacher is concerned about equity of participation regarding gender, minority, ELL, or students with special needs, then this data is available.

### Things to Ponder - How Can SMT Users Utilize the Specific M Code – Student Misbehavior Data?

When Viewing the Code Summary:

- How many were classroom management events noted by the observer?
- How many of those classroom management events were not addressed by the teacher?
  - Note that when the number of M10 events is added to the number of M12 events, if that number is greater than the number of M11 and M13 events, the teacher is probably ignoring some of the student misbehaviors either intentionally or due to the frustration of not having an impact when they do intervene.
- How much time did the teacher use to intervene in management events? (M11 and M13)

When Viewing the Seating Chart Heat Map:

- Where in the classroom are the problems occurring?

- Is there a small group or table of students who are exhibiting most of the misbehaviors?
- Are behavioral issues proximal or distant to where the teacher is located?

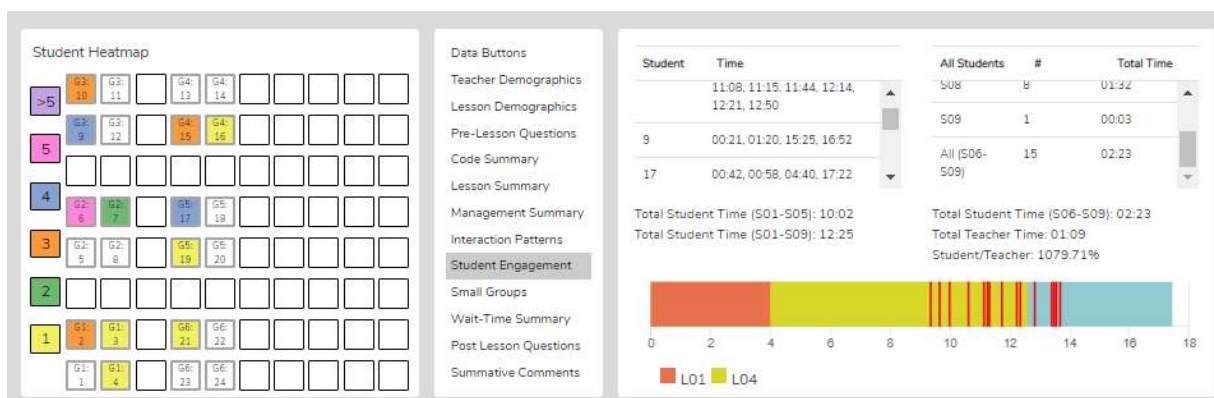
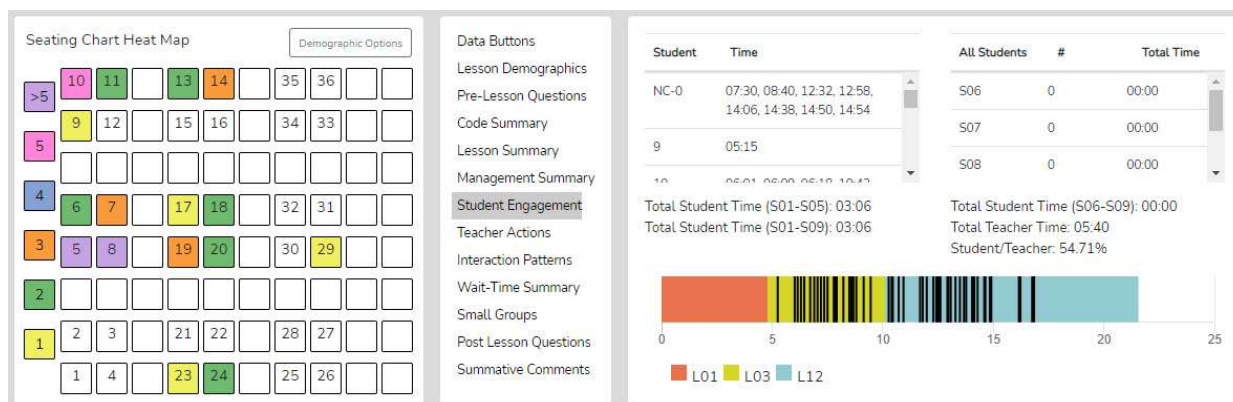
#### When Viewing the Management Summary:

- Where in the lesson, or during which lesson type, did the management issues occur? (Vertical bars on the lesson segment timeline)
- How many management issues occurred at the start of class, end of class, or during transitions from one lesson segment to another? (Vertical bars on the lesson segment timeline)

#### When Viewing the Video:

- How much time was needed to get all the students settled and begin the lesson when transitioning from one lesson segment to another?
- How was the teacher's movement around the classroom?
- How did the students behave or misbehave today as a whole, compared to other days in general?
- Regarding specific students who might tend to misbehave, how was their behavior today?
- Was there anything about this lesson that might have contributed to more or fewer management issues?

**Student Engagement Summary** – Displays the student engagement events (S codes), noted specifically by student seating number, or generically if seating chart numbers were not used, and when the events occurred. The specific time of occurrence of student and teacher data is displayed on the lesson-type timeline by black bars for student events and red bars for when the teacher engaged the whole class using Think-Pair-Share, digital devices, or other means. Clicking on a bar causes the video linked to that event to begin playing. In addition, the seating chart heat map shows by color code how many events are linked to specific students.



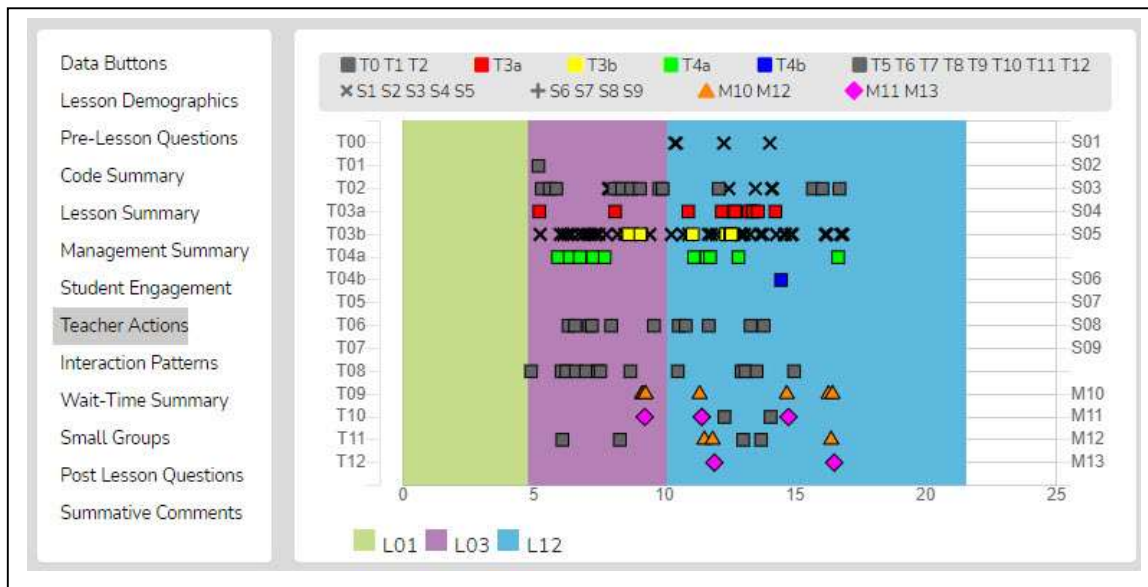
**Demographic Highlighting in the Seating Chart Heat Map** - In addition, if data is collected for specific students by using the student seat number before entering the S code, then the data can be displayed and toggled on or off by clicking on the Gender, ELL, SPED, or Minority buttons. If the observer should wonder how the students with special needs are engaged during the lesson, toggle this information to find out. If the observer or teacher is concerned about equity of participation regarding gender, minority, ELL, or students with special needs, then this data is available.

**Things to Ponder Using S Codes – Student Engagement Data?**

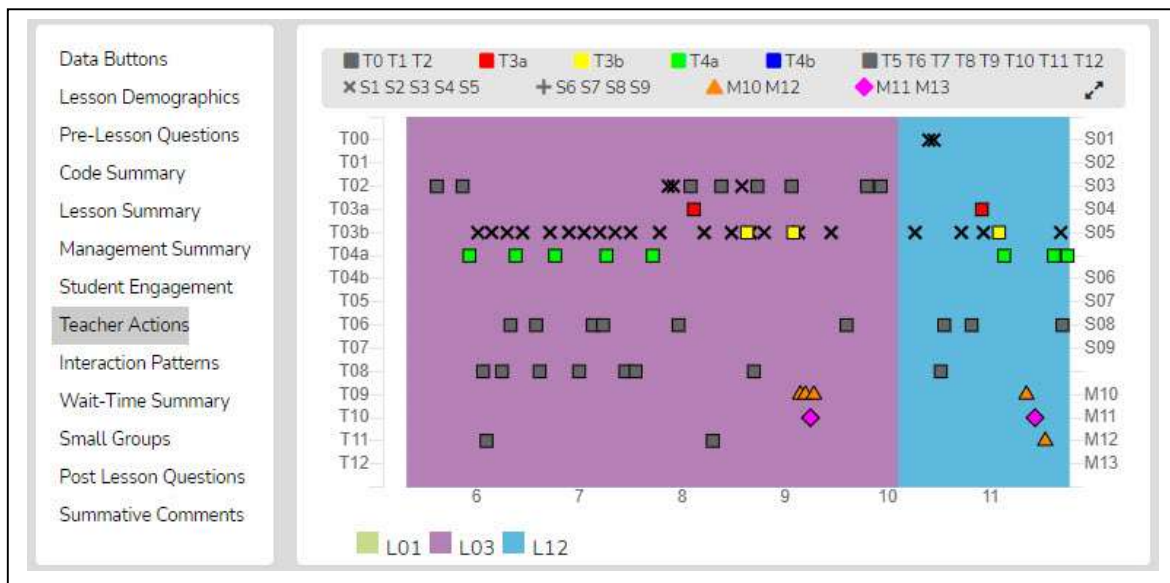
- Consider how many of the students responded to at least one question and how many students were not part of the conversation. (Heat Map)
- Think about your teaching, and how many of the students responded to each other at least once, and what you might change to produce more student-to-student interactions. (*Interaction Patterns S-S #*)
- Think about the average number of responses per student, how that fits your student engagement goals, and how that number might be increased. [Total of S1-S5 plus (the total of S6-S9 x the number of students in the class) / number of students in class]
- Look at the various part of the class or type of lesson segment and determine if or how students were engaged as evidenced by vertical bars. Think about parts of the lesson that were absent of student contributions and engagement and how your lesson might be altered to produce more student engagement.
- Using the demographic toggles on the Seating Chart Heat Map, examine student engagement by demographics such as gender, minority, ELL, and Special Education – think about what the data suggests in terms of equity regarding student engagement.



**Teacher Actions Summary** – *Teacher Actions Summary* is a timeline from beginning to end of the lesson that displays a backdrop of the lesson type (colors) in play and shows symbols for when the teacher exhibited various T codes actions, so the user can follow the sequence of teacher actions throughout the lesson. Also displayed on this timeline are M and S code data; in truth, almost all data collected are represented on the timeline, which is a robust set of data representing teacher and student actions. The user can easily see when any management issues occurred in the context of the rest of the teacher and student actions in the lesson. Since this is a visual display of teacher actions, student actions, and misbehaviors, as well as the teacher’s reaction to misbehaviors, it provides the user with a visual of the flow of action from beginning to end of the lesson and visually brings forth sequences, predominate or absence of a teacher or student actions. For example, if the teacher is curious about their use of questioning, it is easy to view when any of the four questioning codes were used and what codes occurred prior to or after. The user may find a complete absence of higher-level questions. The user may readily see what they tend to do following a student response. The user can target viewing of any codes by toggling on or off the display of any of the T, S, or M codes. Aside from wait-time data, all the data is represented on this summary screen, which is often a large chunk of data and may clutter the screen.



As shown below, the viewer can zoom in or out to enable data points to separate from each other.

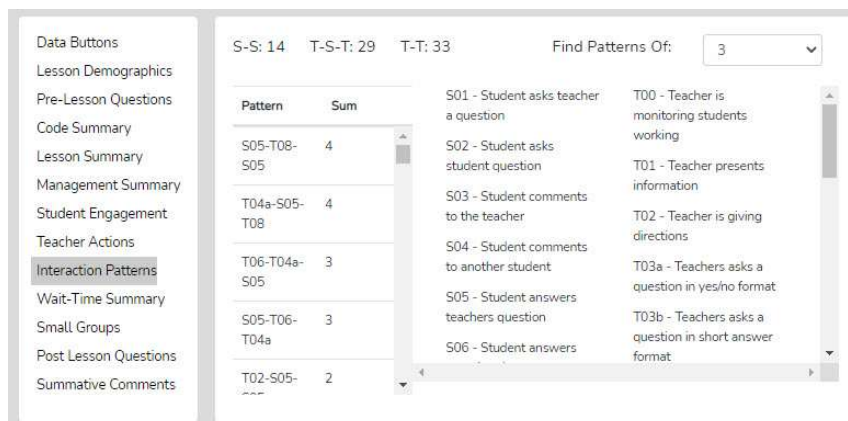


Finally, as with other data points in SMT, the user can click on any data point (symbol), and the linked video will play.

### Things to Ponder About Teacher Actions Plus Data

- Looking at the *Teacher Actions Plus* screen:
  - What question types were used in the lesson? What followed questions in terms of S codes – one student response, or was it more than one student response? After the student(s) responded, what did the teacher tend to do next?
  - How did the teacher use the whole group response engagement S codes (S6-S9) to generate answers and provide maximum feedback to the teacher? If S6-S9 were not used, what evidence is there that the teacher attempted to increase students' oral contributions to the lesson?
  - Knowing that T codes (teacher responses) T6, T11, T12, and sometimes T8 help get and keep students thinking more so than T5, T7, T9, and T10, what does the visual tell you about the teachers use of the various student response codes?
  - What stands out about the student misbehavior actions M10 and M12, and then how would you characterize the teacher's reaction to student misbehaviors M11 and M13?
  - How was the distribution of S codes and student contributions to the lesson?
  - What was the mix of S codes? How many S1-S4 codes were present during the observation?

**Interaction Patterns** – Using all the teacher actions (T codes) and student engagement actions (S codes), the user can view the predominant patterns of interaction between the teacher and students. In addition, numbers are provided that show how often students interact with each other (S-S) versus how often the traditional teacher-student-teacher pattern (T-S-T) is used or how often another teacher action follows a teacher action (T-T).



### Things to Ponder About Interaction Patterns – Teacher to Student Interactions Data

- Looking at *Interaction Patterns*, examine the 3-code pattern tendency, then the 4-code pattern tendency. How are the most common patterns consistent with the goals for the lesson? What are some changes to how the teacher interacts with students that would be more consistent with the intentions for the lesson?
  - How did the teacher initiate questions and then respond to student thinking? How did the teacher's tendencies encourage or discourage student responses and engagement?
  - When students respond – what does the teacher tend to do? Do they tend to judge responses, acknowledge, and then clarify for the student, or instead, ask the student to clarify? Different tendencies are more effective depending on the goals of instruction and level of thinking or engagement from students desired by the teacher.



**Small-Group Summary** – When completing a quantitative observation and student engagement or misbehavior data is collected and tagged by an individual or group number, the observer can then use the *Student Engagement*, *Management Summary*, *Seating Chart Heat Map*, and *Small Group* analysis displays to examine the results and determine various things about how the lesson impacted small groups.

The screenshot shows the observation software interface. On the left, there is a list of events with columns for Index, Code, Description, Event Length, and Wait Time. Below this is a grid of buttons for tracking student engagement, with columns for S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19, S20, S21, S22, S23, S24, S25, S26, S27, S28, S29, S30, S31, S32, S33, S34, S35, S36, S37, S38, S39, S40, S41, S42, S43, S44, S45, S46, S47, S48, S49, S50, S51, S52, S53, S54, S55, S56, S57, S58, S59, S60, S61, S62, S63, S64, S65, S66, S67, S68, S69, S70, S71, S72, S73, S74, S75, S76, S77, S78, S79, S80, S81, S82, S83, S84, S85, S86, S87, S88, S89, S90, S91, S92, S93, S94, S95, S96, S97, S98, S99, S100. In the center, there is a video feed showing a classroom scene. Below the video feed is a grid for tracking student engagement, with columns for G1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, G18, G19, G20, G21, G22, G23, G24, G25, G26, G27, G28, G29, G30, G31, G32, G33, G34, G35, G36, G37, G38, G39, G40, G41, G42, G43, G44, G45, G46, G47, G48, G49, G50, G51, G52, G53, G54, G55, G56, G57, G58, G59, G60, G61, G62, G63, G64, G65, G66, G67, G68, G69, G70, G71, G72, G73, G74, G75, G76, G77, G78, G79, G80, G81, G82, G83, G84, G85, G86, G87, G88, G89, G90, G91, G92, G93, G94, G95, G96, G97, G98, G99, G100. On the right, there is a grid for tracking student engagement, with columns for G1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, G18, G19, G20, G21, G22, G23, G24, G25, G26, G27, G28, G29, G30, G31, G32, G33, G34, G35, G36, G37, G38, G39, G40, G41, G42, G43, G44, G45, G46, G47, G48, G49, G50, G51, G52, G53, G54, G55, G56, G57, G58, G59, G60, G61, G62, G63, G64, G65, G66, G67, G68, G69, G70, G71, G72, G73, G74, G75, G76, G77, G78, G79, G80, G81, G82, G83, G84, G85, G86, G87, G88, G89, G90, G91, G92, G93, G94, G95, G96, G97, G98, G99, G100.

The screenshot shows the Student Heatmap and Data Buttons interface. On the left, there is a heatmap showing student engagement levels for groups G1 through G10. The heatmap is color-coded from 1 (yellow) to 5 (purple). On the right, there is a table of Data Buttons. The table has columns for Misbehavior and Engagement. The rows show data for groups G1 through G6, and a Total row. The data is as follows:

	Misbehavior	Engagement						
	M10	S1	S2	S3	S4	S5	Total	
G1	1	0	0	1	0	2	4	
G2	0	1	1	0	1	9	12	
G3	0	2	0	0	1	4	7	
G4	0	1	0	1	0	5	7	
G5	0	1	1	1	0	6	9	
G6	1	0	0	1	0	2	4	
Total	2	5	2	4	2	28	43	

The *Group Summary* data collected in conjunction with the student seating number allows for examining group dynamics and amount and levels of S code type of interactions that reveal the impact of a lesson on student-to-student interactions. The table shows S codes and M10 event responses coming from specific groups. If the teacher and observer wondered how the lesson stimulated student actions (S codes) within the small group, this data would indicate thereof. The *Seating Chart Heat Map* would show how much interaction occurred within that group and color-coding to show the number of contributions each member made.

### Questions to Ponder Regarding Group Engagement and Equity Among Group Members Data

- When the teacher approached the small groups and interacted with them, what was their intention? What did they want to accomplish by doing so versus observing the groups in action?
- What was noticed about the teacher's interactions with the small groups?
- How did the teacher's interactions foster the goals for the small group and the lesson? In what ways, if any, did the teacher's interactions lessen the intention of the lesson or weaken the intended purpose of having students work in small groups?

- Small groups are a great place to ask good questions and to foster student-to-student interactions – what did the observer notice regarding such? How might the teacher improve?
- How was the teacher’s ability to pace themselves and get around to all small groups without taking too much time with one small group?
- We know the power of using cooperative learning strategies with small group structures (versus simply students in a group expected to work together). What might the teacher have done differently regarding small group strategies, and what impact do might it have on student engagement, thinking, and learning?

**Wait-Time Summary** – The wait-time data is only located within the *Wait-Time Summary*. Within the *Wait-time Summary* are general summaries of wait-time by wait-time type, by events, by total time, and averages for each wait-time. In addition, the lower half of the summary provides wait-time averages according to a specific teacher or student's actions. For example, the user can determine if more wait time is allowed with higher-level questions that require deeper thinking than lower-level questions.

Data Buttons				
Lesson Demographics				
Pre-Lesson Questions				
Code Summary				
Lesson Summary				
Management Summary				
Student Engagement				
Teacher Actions				
Interaction Patterns				
Wait-Time Summary				
Small Groups				
Post Lesson Questions				
Summative Comments				

Wait-Time Type	Total Events	Total Time	Average
Wait Time 1 (T-T)	5	00:17	00:03
Wait Time 2 (S-T)	11	00:18	00:01
Wait Time 3 (T-S)	7	00:16	00:02

Code	Wait-Time 1	Wait-Time 2	Wait-Time 3	Wait-Time 4
T01				
T02	6.50		1.00	
T03a	1.00			

### Questions to Ponder and How SMT Users Can Utilize the Wait-Time Data

- How does the WT1 average correspond to the teacher’s intention for using wait-time to give students ample opportunity to think about the teacher’s question?
- How does the WT2 average correspond to the teacher’s intention to use wait time to give students ample time to think about a student's response and respond to that student? (Look at the relationship between WT2 average and the S-S count in *Interaction Patterns*.)
- How does the average WT for question types differ regarding higher-level questions and students needing more think-time to generate an answer?
- If the WT average is lower than expected or desired, what is the teacher’s concrete plan for increasing their WT?

**Running Record** - The *Running Record* lists all the events in sequence from the lesson start to finish. The user can scroll through the events and can click on any event to see the related video. While *SeeMeTeach*® has significant data analysis built-in for instant viewing, also note that the data can be exported to a .csv file to be used with powerful statistical packages.

Index	Code	Description	Lesson Clock	Event Length	Wait Time
1	L01	Administrative	00:01:59	00:00:08	
2	L03	Demonstration	00:02:12	00:00:14	
3	T04a	Teachers asks question requiring speculation	00:02:15	00:00:02	00:00:06
4	T02	Teacher is giving directions	00:02:26	00:00:04	
5	T02	Teacher is giving directions	00:02:30	00:00:03	

Team Table Download Data

Data Buttons

- Lesson Demographics
- Pre-Lesson Questions
- Code Summary
- Lesson Summary
- Management Summary
- Student Engagement
- Teacher Actions
- Interaction Patterns
- Wait-Time Summary
- Small Groups
- Post Lesson Questions
- Summative Comments

S1: S asks T? T0: monitor L1: Admin wrk  
 S2: S asks S? T1: Present info L2: Lect.notes  
 S3: S comnt 2 T T2: Directions L3: Demo  
 S4: S comnt 2 S T3a: yes/no ? L4: Class disc  
 S5: S answns ? T3b: sht ans ? L5: Sm grp disc  
 S6: S dry erase rsp T4a: sht spec ? L6: S Prsntatns  
 S7: S digital rsp T4b: lng ans-justfy L7: S Writing  
 S8: Thk Pair Shr T5: reject ans L8: S Reading  
 S9: Choral rspns T6: Ackn ans L9: Wksh/prob  
 M10: S misbeha T7: crfrms ans L10: Digital Srch

**Data Buttons** - The *Data Buttons* feature serves as a *Search and Find* function and allows the user to quickly locate linked video examples of specific T, S, M, or U events. Clicking on a button finds the first of that specific code/event in the *Running Record* window, and the linked video begins to play. And, at the bottom of the *Running Record* window, there is a note indicating how many events of that type were located. This feature is particularly helpful for identifying the habits and tendencies of the teacher. For example, perhaps the observer noticed the teacher has a habit of asking yes/no questions, followed by clarifying the answer for the student. In this case, we know that having the teacher change how they interact and react would be beneficial for finding out more about the student's thinking. For example, the teacher could have asked the student to clarify their answer. As such, the observer might choose to use that data or video, all or some, to make a point of how a teacher's choice affects student engagement and their ability to uncover student thinking.

**Lesson Demographics** – This contains information about the lesson that was entered during *New Observation* lesson setup or can be edited (course name, period, lesson topic, subject, and grade level).

**Pre-Lesson Questions** – Questions posed to the teacher that will provide context to and intent of the lesson. *Pre-Lesson Questions* can be accessed from both the *Settings* screen and from the *Analysis* screen.

- What are the main learning goals/objectives for the lesson?
- Describe the major activities or parts of the lesson to be observed.
- How will you know if the learning goals/objectives have been met? For example, what evidence will you have?
- Provide the context for the lesson. How is this lesson connected to the prior lesson? How is this lesson connected to the subsequent lessons? Where is this lesson placed in the current instructional unit?
- Describe the ability levels of the students in this class.
- What are you going to do to maximize the engagement of all ability levels of students?
- How will you differentiate the lesson for all types of learners?

Observation Setup
Pre-Lesson Questions
Seating Chart
Student Demographics
Lesson Plan
Summative Forms
Post-Lesson Questions

## Pre Lesson Questions

What are the main learning goals/objectives for the lesson?

The main goal of this lesson is to get students working in small groups, using a cooperative learning format, so that students are working together, with each student communicating their ideas, plans, observations and conclusions in a balanced manner. They will be collecting and analyzing data, and working as a group to present that information to the rest of the class.

Describe the major activities or parts of the lesson to be observed.

1. Instructions on how to proceed.
2. Small group planning
3. Data collection and analysis
4. Presentation to the whole class

How will you know if the learning goals/objectives have been met (i.e., What evidence will you have?)?

I am looking for significant student engagement from all students in all small groups. Engagement is defined as students participating and communicating with each other, and working together to achieve the end product of a concise but robust presentations.

Provide the context for the lesson. (i.e., How is this lesson connected to prior lessons? How is this lesson connected to subsequent lessons? Where is this lesson placed in the current instructional unit?)

### Post Lesson Questions – Questions for the teacher to respond to following the lesson and observation.

*Post-Lesson Questions* can be accessed from both the Settings screen and from the *Analysis* screen.

- Tell me about today's lesson. Probe: What went well? What needed to be improved? If you taught this lesson over again, what would you change? Why?
- What do you think students learned from today's lesson?
- What evidence do you have of this learning?
- What evidence did you observe that learners of all ability levels were engaged in this lesson?
- Based on what happened in today's class, are you planning on making any changes to the next lesson? If so, what are those changes?
- What is the next step for this class in this unit?

Observation Setup
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## Post Lesson Questions

Tell me about today's lesson. Probe: What went well? Probe: What needed to be improved? Probe: If you taught this lesson over again, what would you change? Why?

I think the activity went well. Students were actively working the whole time, and most finished their work. The chatting in small groups was focused on the work they were doing.

What do you think students learned from today's lesson?

They learned how to take data from a graph and use that to make predictions. They learned how to work better within a group and how their role and job was important to the rest of the members of the group.

What evidence do you have of this learning?

The assessment at the end of the activity showed that they could transfer what they should have learned in the activity, and use it in a new situation.

When the small groups processed their small group work they specifically mentioned some key aspects of how they can work better within the group.

What evidence did you observe that learners of all ability levels were engaged in this lesson?

Each person had an important role to play to make the group successful. And other members of the group were helpful and encouraging to members who might have had less ability to be successful.

Based on what happened in today's class, are you planning to make any changes to the next lesson? If so, what are these changes?

I think I will give the groups a bit more autonomy in figuring out how to best analyze the data, and how to present their findings.

What is the next step for this class in this unit?

Using the data and analysis on some real-life scenarios with genetics.

Save and Return Home
Save and Start

**Team Unification and Synergy Using Data and Feedback** – If another member of the team has completed the quantitative coding of the video, before leaving the data analysis screen (or from the *Dashboard*), the user can open the *Team Table* click, toggle on, and view the data gathered and the analysis by that team member. Or the user can jump to any team member’s completed quantitative or qualitative observation by clicking on the green checkmark in the expanded *Dashboard*.

The screenshot displays a software interface with a 'Team Table' modal window. The modal has a 'Lesson Plan' tab and a 'Team Table' tab. The 'Team Table' tab is active, showing a table with columns for team members (Craig Berg, Ben Herman, Michael Clough) and their quantitative/qualitative coding status. Below the table are sections for 'Sum Form 1', 'Sum Form 2', and 'Sum Form 3', each with a 'Fillable Form' button and an 'Upload' button. The background shows a video player and a 'Student Heatmap'.

	Quantitative	Qualitative	Sum Form 1	Sum Form 2	Sum Form 3
Craig Berg	On				
Ben Herman					
Michael Clough					

Sum Form 1

Fillable Form Select Completed Form Browse Upload

Sum Form 2

Fillable Form Select Completed Form Browse Upload

Sum Form 3

Fillable Form Select Completed Form Browse Upload



**Summative Comments and Summative Forms** - When the observation is over, the observer can add *Summative Comments* and/or fill in *Summative Forms*.

ECU Observation and Dispositions Form				
To be used during 1 <sup>st</sup> and 3 <sup>rd</sup> Observations				
<b>Step 1:</b>				
A. Planning for Instruction and Assessment		Meets or Exceeds	Emerging	Not Met
Focus for Learning: Standards and Objectives/Targets	1. Lessons aligned to state standards. 2. Learning goals are measurable and appropriate for learners.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Materials and Resources	3. Materials and resources are aligned to lesson objectives and are relevant to learning tasks and learners. 4. Materials are easily accessible and organized for instruction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assessment of P-12 Learning	5. Assessments aligned with state standards and learning goals. 6. A variety of assessments are planned to allow learners to demonstrate understanding.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Differentiated Methods	7. Uses knowledge of students to develop instructional supports/activities to meet individual learner needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What feedback for planning do you have for the candidate?				
B. Instructional Delivery		Meets or Exceeds	Emerging	Not Met
Learning Target and Directions	1. Provides learners with accurate learning goals, directions, and sequences learning experiences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Item	Exceeds Expectations (3 points)	Meets Expectations (2 points)	Emerging (1 point)
<b>Planning for Instruction and Assessment</b>			
A. Focus for Learning: Standards and Objectives/Targets InTASC 7a	<input type="checkbox"/> Plans align to appropriate P-12 state learning standards AND <input type="checkbox"/> Goals are measurable AND <input type="checkbox"/> Standards, objectives/targets, and learning tasks are consistently aligned with each other AND <input type="checkbox"/> Articulates objectives/targets that are appropriate for learners and attend to appropriate developmental progressions relative to age and content-area	<input type="checkbox"/> Plans align to appropriate P-12 state learning standards AND <input type="checkbox"/> Goals are measurable AND <input type="checkbox"/> Standards, objectives/targets, and learning tasks are consistently aligned with each other AND <input type="checkbox"/> Articulates objectives/targets that are appropriate for learners	<input type="checkbox"/> Plans align to appropriate P-12 state learning standards AND/OR <input type="checkbox"/> Some goals are measurable AND/OR <input type="checkbox"/> Standards, objectives/targets, and learning tasks are not consistently aligned with each other AND/OR <input type="checkbox"/> Articulates some objectives/targets appropriate for learners
Sources of Evidence:	<input type="checkbox"/> Pre/post observation conferences <input type="checkbox"/> Conversations with and/or documentation from the mentor teacher <input type="checkbox"/> Cumulative lesson plans <input type="checkbox"/> Student learning objectives <input type="checkbox"/> Evidence of differentiation <input type="checkbox"/> Use of appropriate P-12 State Learning Standards <input type="checkbox"/> Posted learning objectives/targets		
Possible Evidence:	<b>Exceeds/Meets Expectations</b> <input type="checkbox"/> Student teachers' plans: appropriately "connect content to standard" (Marzano, p. 27). <input type="checkbox"/> "Goals are: specific, measurable and timebound; based on multiple sources of available data that reveal prior student learning; aligned to content standards; appropriate for the context, instructional interval and content standard(s); demonstrating a significant impact on student learning of content (transferable skills)" (Marzano, p. 36).		
Remote Instruction Evidences:	<input type="checkbox"/> Virtual or remote learning plans are aligned to P-12 standards <input type="checkbox"/> Goals/Objectives are appropriate for remote learning and are identified in virtual/take-home materials <input type="checkbox"/> Post standards/goals/objectives within announcements on an LMS		
	<b>Emerging</b> <input type="checkbox"/> "Goals may... <input type="checkbox"/> Goals are... <input type="checkbox"/> Standards... <input type="checkbox"/> the following instruction... <input type="checkbox"/> is not connected to a significant impact on student learning of content" (Marzano, p. 36).		

CPAST Form—Consensus Sheet

Student teacher: \_\_\_\_\_

Mentor teacher: \_\_\_\_\_

University supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

Pedagogy				
Domain	Candidate Score	Mentor Score	Supervisor Score	Consensus Score
<b>Planning for Instruction and Assessment</b>				
A. Focus for Learning: Standards and Objectives/Targets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Materials and Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Assessment of P-12 learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Differentiated Methods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Instructional Delivery</b>				
E. Learning Target and Directions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Critical Thinking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Checking for Understanding and Adjusting Instruction through Formative Assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Digital Tools and Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Safe and Respectful Learning Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Assessment</b>				
J. Data-Guided Instruction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K. Feedback to Learners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L. Assessment Techniques	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Analysis of Teaching</b>				
M. Connections to Research and Theory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Professional Dispositions Form</b>				

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### More Information

To learn more about SeeMeTeach, go to [www.seemeteach.com](http://www.seemeteach.com) and view the short promo video. Then perhaps look through the *User's and Training Manual* to see more details about the many strengths of using SMT for teacher observations vs. another observation platform.

## 12. Getting Started Using

### Registering to Use SMT

Users must register to use SMT, either as a single user who also may have colleagues as team members or a user who is part of teacher education, school, or research group. The appendices have more information on the registration procedure.

### Setting Up and Completing a Lesson Observation

Setting up a lesson observation is common to both a qualitative observation and a quantitative observation. For a quick look at how-to, see the following videos. For a “quick start,” view the videos with a bullet point.

- SMT Training Level 1 Video Overview and Setting Up a New Observation <https://youtu.be/MwuAilguHUw>  
SMT Training - How To Add a Lesson Plan <https://youtu.be/IPKZZgcyk44>  
SMT Training – How To Use Summative Forms <https://youtu.be/FtG7p1AZf3w>

### Qualitative Comments Mode

Learning to use the Qualitative Comments mode is quite fast, and the following video provides an overview.

- SMT Training Level 2 Qualitative Comments Mode [https://youtu.be/tprgqtfa\\_RA](https://youtu.be/tprgqtfa_RA)

### Quantitative Data Collection Mode

Learning to use the Quantitative Data Collection mode takes a bit of training. But the following video provides essential information and provides an overview of the powerful features of this mode.

- SMT Training Level 3 Quantitative Mode Basic Info <https://youtu.be/r1MMczuREfs>

### Training Levels 4 - 10

Users can pick and choose the type of data they wish to collect. After learning how to set up a new observation, and after completing Training Level 3, a user could choose student engagement data to collect, go directly to the training level 5, read about how to collect that data, and be collecting data in a matter of minutes. The same is true with student misbehavior data – Training Level 4. Note that the *SMT Users and Training Manual* (found on the SMT website) has more levels of training for the quantitative mode that will help the user develop data collection and analysis skills regarding teacher actions, tendencies, and interaction patterns; student engagement; student misbehaviors, and teacher reactions; and small group analysis, that they can use for feedback, reflection, and coaching. The *User's and Training Manual* has extensive documentation and associated videos for progressing through the levels of training.

**\*\* Note that this manual and the training or videos may be updated and incorporate guidance on using new aspects or modifications to SMT. As such, the latest version of this Users and Training Manual will always be located at SeeMeTeach.com.**



## Training Manual Table of Contents:

SMT Training from Novice to Expert User

Black = Narrative Overview and Instructions

Blue = Video Overview

Green = Practice Using SeeMeTeach ®

### **Level 1 - Acclimating to SMT – A General Overview**

[Lesson 1.0: Video Overview - Acclimating to SMT](#)

Lesson 1.1: Learning About New Observation Settings

[Lesson 1.2: Practice - Setting Up a New Observation](#)

### **Level 2 - The Qualitative Comments Mode**

[Lesson 2.0: Video Overview - Using the Qualitative Mode](#)

Lesson 2.1: A Quick Look at Specific Features of the Qualitative Comments Mode

[Lesson 2.2: Practice - Completing a Qualitative Comments Observation](#)

Lesson 2.3: A Quick Look at Specific Features of the Qualitative Analysis and Feedback Mode

Lesson 2.4: Completing a Qualitative Analysis

### **Level 3 - Basic Information for Using the Quantitative Mode**

[Lesson 3.0: Video Overview - Quantitative Data Collection Screen](#)

Lesson 3.1: The Quantitative Data Collection Screen

Lesson 3.2: Two Types of Codes for Collecting Data

Lesson 3.3: Basic Rules and Options

Lesson 3.4: L Codes – Type of Lesson in Play

### **Level 4 - Learn About M Codes: Student Misbehaviors and Teacher Reactions**

[Lesson 4.0: Video Overview - M Codes](#)

Lesson 4.1: M Codes Defined

Lesson 4.2: Setting Up a New Observation

[Lesson 4.3: Practice - Data Capture Using M Codes](#)

Lesson 4.4: M Code - Student Misbehavior and Teacher Reaction Data Analysis

### **Level 5 – Learn About S Codes: Student Actions, Engagement and Using the Seating Chart**

[Lesson 5.0: Video Overview - Using M and S Codes, Seating Chart and Data Analysis](#)

Lesson 5.1: S Codes Defined

Lesson 5.2: New Observation Setup and Seating Chart

[Lesson 5.3: Practice - Data Capture Using S Codes with a Seating Chart](#)

Lesson 5.4: S Code – Student Engagement Data Analysis

[Lesson 5.5: Practice - Data Capture Using M and S Codes with a Seating Chart](#)

### **Level 6 – Learn About T Codes: Teacher Actions and Behavior**

[Lesson 6.0: Video Overview - Using and Remembering T Codes](#)

Lesson 6.1: T Codes Defined/Examples

Lesson 6.2: Learning and Practicing Identifying T Codes on Paper

[Lesson 6.3: Practice - Data Capture Using T Codes with Video](#)

[Lesson 6.4: Video Overview - T Code Data Analysis](#)

Lesson 6.5: T Code - Teacher Actions Data Analysis

## **Level 7 - SMT Black Belt: Developing More Speed, Accuracy, Sophisticated Data Analysis, and U Codes**

[Lesson 7.0: Video Overview - Data Collection and Data Analysis Using T, M, and S Codes](#)

[Lesson 7.1: Practice - Data Capture Using T, M, and S Codes at Slower Speed](#)

Lesson 7.2 Data Analysis Using For T, M, and S Codes

Lesson 7.3 Collecting Data Using U Codes - User Identified Labels

Lesson 7.4: U Code - Data Analysis

## **Level 8 – Learn About G Codes: Small Group Interactions**

[Lesson 8.0: Video Overview - Data Collection and Analysis Using G Codes](#)

Lesson 8.1: Introduction to Group Setup

Lesson 8.2: Setup for Groups in the Seating Chart

Lesson 8.3: Collecting Group-related Data

Lesson 8.4: G Codes - Group Actions Data Analysis

## **Level 9 - Incorporating T, M, and S Codes, Using a Seating Chart, and Wait-Time**

[Lesson 9.0: Video Overview - Using T, M, and S Codes, Seating Chart and Wait-Time](#)

Lesson 9.1: About Collecting Wait-Time

[Lesson 9.2: Practice - Data Capture of T, M, and S Codes, Seating Chart and Wait-Time](#)

Lesson 9.3: T, M, and S Data Analysis Using Seating Chart and Wait-Time

## **Level 10 – Trainer = Black Belt Plus More Speed: T, S, M, and U Codes Seating Chart, Wait-time with Increased Speed and Accuracy**

### 13. SMT Training from Novice to Expert User

**Introduction** - This *User's/Training Manual* will first teach the user how to set up a new observation, which is followed by how to use the qualitative mode. Most of the rest of the manual is devoted to learning the features and functions of using the quantitative mode of data collection and analysis. While the quantitative mode training takes more time, it is well worth it when considering the plethora of data and evidence obtained and the analyses produced, which can be used for feedback and coaching purposes or program evaluation.

#### **Master List of Training Video Overviews and Video URL's Used for Practice**

Note that there are overview videos for each level of training that provide a first look at specific features or functions. A series of lessons are designed to scaffold the user's expertise from complete beginner to "Black Belt" user status. As the user progresses through training, they will typically first be asked to view the overview video for that section, then read a section in the manual that reiterates and expands on the topic, followed by practicing (in SMT or on paper) what they learned from the video and reading.

The following list contains links to the overview videos and the practice video URLs, which can be copied and pasted into the video URL window when setting up a New Observation to practice using SMT at the various training levels. These URLs and links to the video overviews are embedded in each training section.

#### **Master List for SeeMeTeach® Training - Practice Videos and YouTube Links**

SMT Web Page Promo	<a href="https://youtu.be/EhDYTVW5AGY">https://youtu.be/EhDYTVW5AGY</a>
SMT Training Level 1 Video Overview	<a href="https://youtu.be/MwuAilguHUw">https://youtu.be/MwuAilguHUw</a>
SMT Training - How To Add a Lesson Plan	<a href="https://youtu.be/IPKZZgcyk44">https://youtu.be/IPKZZgcyk44</a>
SMT Training – How To Use Summative Forms	<a href="https://youtu.be/FtG7p1AZf3w">https://youtu.be/FtG7p1AZf3w</a>
SMT Training Level 2 Qualitative Comments Mode	<a href="https://youtu.be/tprgqtfg_RA">https://youtu.be/tprgqtfg_RA</a>
SMT Training Level 3 Quantitative Mode Basic Info	<a href="https://youtu.be/r1MMczuREfs">https://youtu.be/r1MMczuREfs</a>
SMT Training Level 4 M Codes	<a href="https://youtu.be/JR5nZ61kAgw">https://youtu.be/JR5nZ61kAgw</a>
SMT Training Level 5 Using M, S Codes with the Seating Chart	<a href="https://youtu.be/FOAuOEPytRo">https://youtu.be/FOAuOEPytRo</a>
SMT Training Level 6 T Codes Pt A	<a href="https://youtu.be/1Evn9j8e_DQ">https://youtu.be/1Evn9j8e_DQ</a>
SMT Training Level 6 T Codes Pt B	<a href="https://youtu.be/fcHEvdz0X-Q">https://youtu.be/fcHEvdz0X-Q</a>
SMT Training Level 7 T M and S Codes	<a href="https://youtu.be/bjXvB5RrvOc">https://youtu.be/bjXvB5RrvOc</a>
SMT Training Level 8 Small Groups	<a href="https://youtu.be/8l_RtkGnTy8">https://youtu.be/8l_RtkGnTy8</a>
SMT Training Level 9 All Codes, Seating Chart and WT	<a href="https://youtu.be/_lxHQ1HMoW0">https://youtu.be/_lxHQ1HMoW0</a>
SMT Practice Video Float Sink A	<a href="https://youtu.be/oxxazkrBChg">https://youtu.be/oxxazkrBChg</a>
SMT Practice Video Float Sink B	<a href="https://youtu.be/k38GViRMJIM">https://youtu.be/k38GViRMJIM</a>

SMT Practice Video Float Sink M

<https://youtu.be/uLJ3Jvn0jHw>

SMT Practice Video Swinging Spheres

<https://youtu.be/XIPKXIkeHMA>

SMT Practice Video Truck Hill L

<https://youtu.be/pjv0FSyR5sw>

SMT Practice Video Truck Hill M

<https://youtu.be/YSD7mNBbZ1Q>

## Level 1 - Setting Up a New Observation

In this lesson, the user will learn:

- How to create a new observation
- The “settings” required before the observation begins
- Factors to consider in terms of which member of the team should set up an observation
- When it is best to set up the observation
- How the quantity of time available before the lesson affects who sets up the observation
- Whether it is necessary to input all the information for a regular start or just the minimal information needed to get started quickly

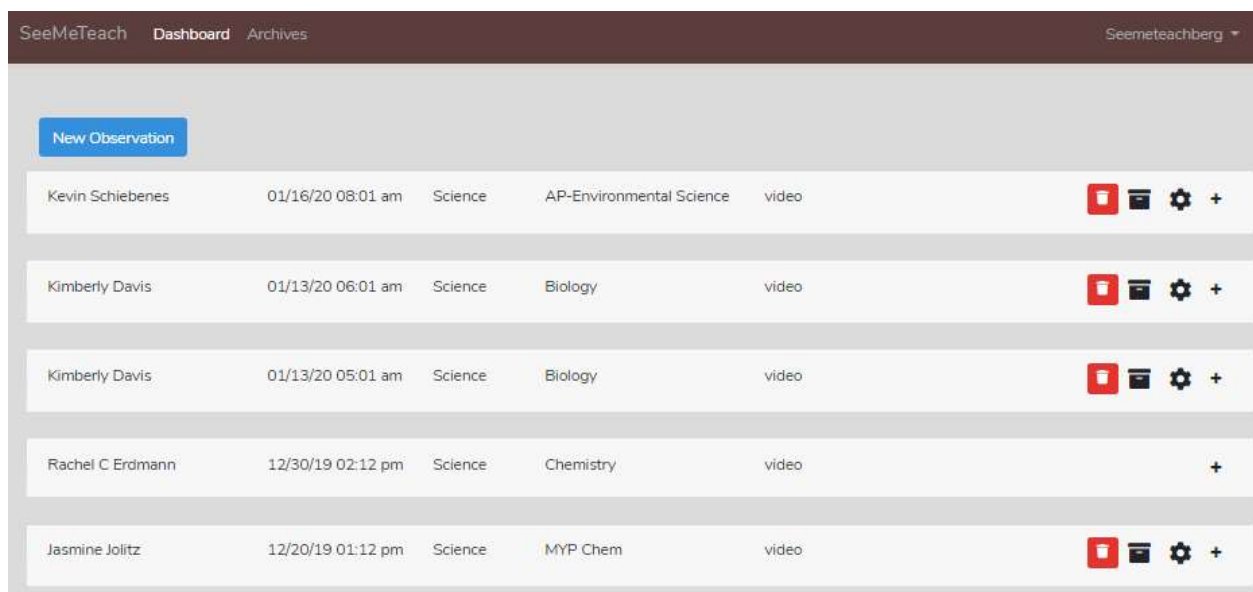
**Steps to Take** – First, watch the video overview. Note that the video points out the key areas of the screen and describes features and functions. After watching the video, read through the sections below for a thorough overview of SMT functions.

**Lesson 1.0: Video Overview - Setting Up a New Observation** <https://youtu.be/MwuAilguHUw>

### Lesson 1.1: Learning About New Observation Settings

#### Initial Login

After logging in, the main operational page, called the *Dashboard*, contains a listing of observations that have been set up and perhaps completed and the option to create a new observation using the **New Observation** button. If the user is a first-time user, there will not be any observations listed.



The screenshot shows the SeeMeTeach Dashboard. At the top, there is a navigation bar with 'SeeMeTeach', 'Dashboard', and 'Archives' on the left, and 'Seemeteachberg' with a dropdown arrow on the right. Below the navigation bar, there is a blue button labeled 'New Observation'. The main content area displays a table of observations. Each row contains the following information: Name, Date and Time, Subject, Course, and Media Type. To the right of each row are four icons: a red trash can, a blue folder, a gear, and a plus sign.

Name	Date and Time	Subject	Course	Media Type	Actions
Kevin Schiebenes	01/16/20 08:01 am	Science	AP-Environmental Science	video	[Trash] [Folder] [Gear] [Plus]
Kimberly Davis	01/13/20 06:01 am	Science	Biology	video	[Trash] [Folder] [Gear] [Plus]
Kimberly Davis	01/13/20 05:01 am	Science	Biology	video	[Trash] [Folder] [Gear] [Plus]
Rachel C Erdmann	12/30/19 02:12 pm	Science	Chemistry	video	[Plus]
Jasmine Jolitz	12/20/19 01:12 pm	Science	MYP Chem	video	[Trash] [Folder] [Gear] [Plus]

**New Observation: Screens, Choices, and Minimal Information** - When clicking on the *New Observation* button from the Dashboard, the first screen presented is labeled *Create a New Observation*. See the figure below and **note that this screen includes the minimal information necessary before the setup can be saved or before the user can start an observation. This primary information will be displayed on the dashboard or before the user can start an observation.**

- Video Type: At the top of the *New Observation* screen, the user is prompted to choose whether the observation is video-based or a real-time classroom observation.
  - If the observation is video-based, the URL of the video is entered.
    - Video-based means the user has a video stored in a location like YouTube and can copy and paste that URL into SMT
    - Audio-based means the user captured audio (without video), and this is also stored on YouTube. The analysis is completed while listening to the teacher and student interactions. For the user's purposes, it will be loaded to SMT, like the video.
      - Note that there is a section at the end of this manual on how or where to store the video or audio, so it has a URL address that the user and/or team member(s) can access.
  - Real-time means either the observer is in the classroom using SMT or watching the classroom virtually using an online platform in one window and SMT in another window. No video is captured or saved, and the comments or data are not linked to video segments like they would be when using a video.
- Team member names: To save a *New Observation*, the user, at minimum, must enter the name of the *Teacher Being Observed* and the name for *Observer 1*. Note that the user who is logged into SMT and doing the initial setup will, by default, be listed as *Observer 1*. The person teaching the lesson should be chosen as the *Teacher Being Observed*. At this point, the user could start a lesson observation, having put in these two pieces of information.

Suppose there is a second, third or fourth observer. In that case, the user can enter other team member's names or choose names from the dropdown menu if that person was part of the user's team in an earlier observation, accepted your invitation to join SMT so they could be a collaborating colleague with you, or if their name was included as part of your teacher preparation or school group team.

Note: The person teaching should always be listed as *Observer 1* or *Observer 2* because only observers 1 and 2 have set-up rights and can enter or change the setup information or delete an observation from

The screenshot shows the 'Create a New Observation' form in the SeeMeTeach application. The form is titled 'Create a New Observation' and has a navigation bar at the top with 'SeeMeTeach', 'Dashboard', and 'Archives'. The form includes the following fields and options:

- Video Type:** Radio buttons for 'Classroom observation from video' (selected) and 'Live classroom observation - no video'.
- Video URL:** A text input field containing 'https://youtu.be/qH5w25ixxx'.
- Teacher Being Observed:** A dropdown menu with 'doc1 Berg' selected.
- Observer 1:** A dropdown menu with 'Seemeteachberg' selected.
- Observer 2:** A dropdown menu with 'Rachel C Erdmann' selected.
- Observer 3:** A dropdown menu with 'John Kish' selected.
- Observer 4:** A dropdown menu with 'Kevin Schiebene' selected.
- Course Name:** A text input field with 'Biology'.
- Period, Block, or Time of Day:** A text input field with '4th'.
- Lesson Topic:** A text input field with 'Cells and Membranes'.
- Subject Taught:** A dropdown menu with 'Science' selected.
- Grade Level:** A dropdown menu with 'Ninth' selected.

At the bottom of the form are three buttons: 'Save and Start Later' (dark grey), 'Save and Continue' (blue), and 'Save and Start' (green).

the *Dashboard*. If the user is the only person viewing and completing the lesson observation, their name would be listed as the teacher and as observer 1.

Note: At any time, even after an observation has been completed, the user can add more team members to the observation (up to four total team members).

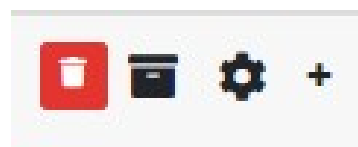
Following input of this minimal information needed to begin an observation, the user can:

- *Save and Continue* (goes to the next screen of settings which contains a list of additional considerations like pre-lesson questions, seating chart, etc.)
- *Save* (saves information that was selected or typed)
- *Save and Start* (the user is asked to choose a qualitative or quantitative mode and then be taken to the screen of the mode they chose, then start the observation).
- *Save and Return to Dashboard* (returns the user to the Dashboard)

### Starting and Continuing Setup of a New Observation from the Dashboard

If the teacher (or observer) sets up the lesson observation ahead of time, then clicks *Save and Return to the Dashboard*, the lesson will be listed on their *Dashboard* and on the *Dashboard* of the other members of the observation team who were identified when setting up the lesson (or other members could be added later). At this point, the user could either:

- a) Depart from and log back into SMT when ready for the observation.
- b) Click on the gear symbol to go directly back into settings to add more information, such as a seating chart. (Shown below)
- c) Click on the plus symbol (+) to see the expanded dashboard for that observation and view the basic information regarding the teacher's name, time/date of the lesson, observer names, and the state of completion of observation(s) for the various observers. (Shown below)



Tom Wozniak	01/16/20 11:01 am	Technology	Intro to Programming	video				
Kevin Schiebeneis	01/16/20 08:01 am	Science	AP-Environmental Science	video				
Kimberly Davis	01/13/20 06:01 am	Science	Biology	video				
Observers								
Name	Quantitative	Qualitative	Lesson Plan	Sum Form 1	Sum Form 2	Sum Form 3		
Kimberly Davis	✓	Pending						
Seemeteachberg	Start	Start						
Joseph Sardina	Pending	Pending						
Anja Blecking	Pending	Pending						
Kimberly Davis	01/13/20 05:01 am	Science	Biology	video				
Rachel C Erdmann	12/30/19 02:12 pm	Science	Chemistry	video				

When viewing the expanded dashboard, they can click on the Start button if the user wants to start an observation. Or, if they want to view another team member's results, they can click on the green checkmark. Note the graphic above and three various stages of observation shown under the quantitative and qualitative columns.

1. Start – The user can click this button and start the observation. **Don't start the observation unless you have time to finish it.** You can briefly pause while in the observation, but if you leave the observation and return to the dashboard, you cannot get back into the observation and do more.
2. Green Checkmark – This mark means the observation has been completed. Clicking on the green checkmark will open the data analysis of that observation.
3. Pending – This means the other team member (or team members) still needs to log in to their account and begin the observation.

### Adding Additional Information to a New Observation

If, after filling out the minimal information on the *Create a New Observation* screen, the user wishes to add more information to the setup, they should click *Save and Continue*. The next screen presents various options (listed in the upper left-hand corner of the screen) to include *Pre-Lesson Questions*, *Seating Chart*, *Student Demographics*, *Lesson Plan*, *Summative Forms*, *Teacher Demographics*, and *Post-Lesson Questions* (shown below).

The screenshot shows a web interface for 'Pre Lesson Questions'. On the left is a vertical sidebar with a menu containing: 'Observation Setup', 'Pre-Lesson Questions' (highlighted in blue), 'Seating Chart', 'Student Demographics', 'Summative Forms', 'Post-Lesson Questions', 'Teacher Demographics', and 'Lesson Plan'. The main content area is titled 'Pre Lesson Questions' and contains five text input fields with the following prompts: 'What are the main learning goals/objectives for the lesson?', 'Describe the major activities or parts of the lesson to be observed.', 'How will you know if the learning goals/objectives have been met (i.e., What evidence will you have?)?', 'Provide the context for the lesson. (i.e., How is this lesson connected to prior lessons? How is this lesson connected to subsequent lessons? Where is this lesson placed in the current instructional unit?)', and 'Describe the ability levels of the students in this class.'

The person teaching the lesson can fill this out or click on any one of the other choices in the box at the top left of the setup screen and proceed in or out of order as needed.

- Pre-Lesson Questions – These questions are posed to the teacher being observed before the lesson, including:
  - What are the main goals and objectives of the lesson?



- Describe the significant activities or parts of the lesson to be observed.
  - How will you know if the learning objectives have been met? What evidence will you have?
  - Probe the content of the lesson.
    - How does this lesson connect to prior learning, and how does it connect to subsequent learning?
    - Where is this lesson placed in the current instructional unit?
    - Describe the ability levels of the students in the class.
  - What are you going to do to maximize the engagement of all ability levels of students?
  - How will you differentiate the lesson for all types of learners?
- Seating Chart – For each observation, the user can set up a specific seating chart to be displayed and used during the qualitative or quantitative collection modes. If a specific seating chart is not created, a generic seating chart is displayed with an 8x10 grid.

10	11		13	14					
9	12		15	16					
6	7		17	18					
5	8		19	20					
2	3		21	22					
1	4		23	24					

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80

**Seating Chart with Student Numbers**

**Generic Seating Chart**

### Individual Student Data

- Individual student data can be captured using the seating chart and the S code (student response) and M code (behavior management) buttons in a situation in which the goal is to better understand how individual students respond or behave in class. This allows the user to capture data on how these students are:
  - Engaged (or not engaged) in answering questions.
  - Interacting with the teacher and/or other students.
  - Behaving (or misbehaving).

### Setting up a Seating Chart for Individual Students

- First, to identify where students are seated, click on the STUDENT icon so it turns blue. Then click on a square to identify where the first student is seated. Then click on the next square for the second student and repeat until all student seats have been identified. Finally, click on the STUDENT icon again to deselect it.
  - **Note: Click carefully as currently there is no way to undo a mistake.**

- To place an indicator for where the observer is sitting in the classroom, click on the TEACHER or OBSERVER icon to turn blue. Then click on a square to identify where the teacher's desk is located or where the observer is seated. Placing these on the seating chart can help both the observer and the teacher with the orientation of the seating chart.
  - Note that once an observation has started, the seating chart cannot be added or changed.

## Group Summary

A common pedagogical strategy used in classrooms is to group students for labs, discussions, cooperative learning, working problem sets, or for many other reasons. All educators hope that rich and equitable interactions occur and that all small group members are involved in the work and conversation. But small groups are often notorious for having a subset of the group doing most of the work, resulting in the other group members playing a very passive role or conversation and instead diverting their focus to non-lesson related topics. The goal of instruction is to get ALL students involved equitably and productively related to the goals and objectives for that lesson. SMT can help collect data on whether this goal is achieved, and at what level, by collecting data linked to groups identified in the seating chart using *Group Setup*.

**Group Setup** – When setting up a new observation, the user can designate small groups of students by group number, along with an individual student number, so student behavior and management code data can be prefaced by a group number the student number within that group. After designating student and group numbers, student number 2 in group 1 would have a square that reads G1:2 (Group 1, student number 2, or a student number 15 in group 3 would have a designation of G3:15 (Group 3, student number 15) as shown below.

Also, note that when small groups are represented by Gs in the seating chart, student engagement or misbehaviors can be coded to a specific group (if the question or comment was targeted to the group) or coded to a specific student within that group. What can be learned when collecting individual student interactions within a group? We know that in some small groups, one or two students often dominate the conversation. We also know that a lesson can be structured using roles so that most of the group members will be equally engaged and contribute to the lesson. Using the S codes with a specific G number allows for an examination of such and a look at the specific within-group communication dynamics and engagement.

### Setting up a Seating Chart for Groups

- To identify where students are seated in groups first set up your seating chart with individual students using the directions listed above for **Setting up a Seating Chart for Individual Students**.
- When you have finished setting up your seating chart, select a specific number or grouping of individual students in the same group, and then click on the *Group* icon again.
- Then select all of the students in the next group and click on the *Group* icon to denote the second group. Repeat this process until groups are identified.

The screenshot shows a web interface for setting up a seating chart. On the left is a sidebar with a menu: Observation Setup, Pre-Lesson Questions, Seating Chart (highlighted in blue), Student Demographics, Lesson Plan, Summative Forms, and Post-Lesson Questions. The main area is titled 'Seating Chart' and contains a grid of 100 seats arranged in 10 rows and 10 columns. Some seats are pre-filled with group codes: Row 1 (G3:10, G3:11, G4:13, G4:14), Row 2 (G3:9, G3:12, G4:15, G4:16), Row 4 (G2:6, G2:7, G5:17, G5:18), Row 5 (G2:5, G2:8, G5:19, G5:20), Row 7 (G1:2, G1:3, G6:21, G6:22), and Row 8 (G1:1, G1:4, G6:23, G6:24). Below the grid are four buttons: Student, Group, Teacher, and Observer. At the bottom are three action buttons: Save and Return Home, Next Student Demographics, and Save and Start.

- **Student Demographics** – This feature is for noting gender, minority, special education needs, or ESL/ELL status for each student. It is embedded into the seating chart heat map feature and used to help determine the equity of student engagement or isolate the origins of classroom management issues.

- Lesson Plan** – The teacher’s lesson plan is added during the initial lesson setup or added later by going back into settings using the gear symbol and then clicking on *Lesson Plan*. Using *Browse*, the user locates the pdf file of the lesson plan on their computer, then *Uploads* the **lesson plan, which needs to be in a pdf format**. The lesson plan can then be viewed before an observation via the *Expanded Dashboard* or viewed post-observation within the *Team Table*.

**Lesson Plan How-To Video** – <https://youtu.be/IPKZZgcyk44>

- **Teacher Demographics** – This is optional and not used in data analysis but contains some background information about the school and the teacher’s educational background.
- **Post Lesson Questions** – The teacher can fill out these questions after the lesson has been taught and the observation has been completed. This set of questions can be answered from within *Settings* or from the *Qualitative/Quantitative Analysis* screen. The Post-Lesson questions include:
  - Tell me about today’s lesson.  
Probe: What went well?  
Probe: What needed to be improved?  
Probe: If you taught this lesson over again, what would you change? Why?
  - What do you think students learned from today’s lesson?
  - What evidence do you have of this learning?
  - What evidence do you have that learners of all ability levels were engaged in this lesson?
  - Based on what happened in today’s class, are you planning to make any changes to the next lesson? If so, what are these changes?
  - What is the next step for this class in this unit?
- **Summative Forms** – The summative forms function is designed to allow the observer and team members to provide summative remarks, provide feedback, or complete scoring using standard forms designed by SMT, or user-designed, fillable pdf forms. Up to three different forms could be used and included for each observation. Once filled out and uploaded to SMT, any observation team member can fill them out or view them via the *Expanded Dashboard* or the *Team Table*.

Summative Forms: Single User vs. Groups - With a single user plan, each individual user decides which *Summative Form(s)* they wish to use for a lesson observation they establish. The group administrator determines which forms the group has access to and uses for observations with a group plan.

There are three quick steps the user takes to incorporate the use of summative forms into an observation.

- Step 1 - Loading Summative Forms Into Your SMT Account
- Step 2 - Choosing Which Forms to Use for a Specific Observation
- Step 3 - Using the Summative Forms Post-Observation

The how-to video and directions below explain this process.

**Summative Forms How-To Video** - <https://youtu.be/FtG7p1AZf3w>

## Step 1 - Loading Summative Forms Into Your SMT Account

**1.1 Forms Must Be Fillable pdf:** A form must be in the format of a fillable pdf document. The user may choose to use some of the standard forms that have been embedded in SMT or create their own form(s). School districts or teacher preparation programs may use a unique set of forms for observations, which the user would need to modify into fillable pdf forms before uploading them to their SMT account, as described below. Note that more detailed instructions for creating fillable pdf forms are located at the end of this section.

**1.2 Upload Forms to SMT Account:** The fillable pdf forms are uploaded to the user's SMT account. When the user (single or group administrator) wants to upload the forms to their account for themselves and/or their team of observers, they:

- \* Log into SMT
- \* Click on the login name drop-down in the top-right corner, and
- \* Click on *Custom Summative Forms*.

A *Summative Forms* page is displayed. Note that first-time users will see the following screenshot showing no forms listed.

The screenshot shows the 'Settings' page with a sidebar on the left containing links for 'Account Details', 'Invitations', 'Observers', 'Custom Summative Forms', and 'Billing'. The main content area is titled 'Summative Forms' and contains a form with fields for 'Form Name', a dropdown for 'Sum Form 1', and a 'PDF File' field with 'Browse' and 'Submit' buttons. Below the form is a table with columns 'Name', 'Type', and 'Actions'. The footer of the page reads '© 2020 SeeMeTeach ® All Rights Reserved. - Terms of Service'.

1. The user should identify whether the form will be used for Sum Form 1, Sum Form 2, or Sum Form 3. Note: If the user always wants their observation rubric as the primary form, they should choose Sum Form 1 and type a name for the form into the box labeled *Form Name* - perhaps a short name such as *Obs Rubric*.
2. Use *Browse* to locate the fillable pdf file on the user's computer and click on submit. Note: It is helpful if the file name of the form stored on the computer is close to or matches what the user labels it for use in SMT.
3. Clicking *Submit* adds the form to the column by name and by type of form (1, 2, or 3), as seen below.

### 1.3 Changing or

*Deleting* - If the user wishes to change the *Form Name* or change the category from *Sum Form 1* to *Sum Form 2*, they click on *Edit Form*. If they do not want that form to be listed as one of the choices presented when setting up a lesson, they can choose or click *Delete*.

**1.4 Different Forms Used at Different Times** - Note that some teacher preparation programs might use an observation rubric form and have a mid-term or final summative form used only once during field placement. SMT is designed so the user may load more than one form for each of forms 1, 2, or 3 as they may need different forms at different times. For example, perhaps in a teacher observation program, the observer used a rubric for Form 1, then a Likert scale with comments boxes document for Form 2, and a mid-term OR a final form for Form 3. If both the mid-term and final forms are loaded under Form 3, when the user sets up the new observation, they can switch from the mid-term to the final form when needed. In short, the user can choose whatever forms they wish to use for a specific observation (next section below) if they have loaded the desired forms into their account.

## Step 2 - Choosing Which Forms to Use for a Specific Observation

2.1 When setting up a *New Observation*, after completing the initial and basic lesson information entry, the user can click on *Summative Forms*, and there will be dropdown choices listed for *Summative Forms 1, 2, and 3*.

Note that the forms found in the dropdown are dependent on what the user loaded into their SMT account. If there are no forms shown for the drop-down choices, the user must complete Step 1 above.

2.2 If summative form choices are present in the dropdowns (shown below), the user can choose which form(s) to use for the observation. For each specific observation, the user may only choose one form for each of Sum Form 1, Sum Form 2, and Sum Form 3.

Observation Setup

Pre-Lesson Questions

Seating Chart

Student Demographics

**Summative Forms**

Post-Lesson Questions

Teacher Demographics

Lesson Plan

## Summary Forms

Sum Form 1 Pick a Form...

Sum Form 2 NBCT Form

Sum Form 3 NBCT Form

Save and Return to Dashboard Save Save and Start

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### Step 3 - Using the Summative Forms Post-Observation

Following the observation, the observer's goal is usually to provide feedback on strengths and weaknesses and to offer suggestions for improvement. Well-planned forms help the observer to accomplish this goal. In this last step, the user will learn to fill in the blank fillable pdf form with final comments, summative remarks, or rubric scores, then connect it to the SMT observation so it is available to any team member by clicking on the icon in the *Team Table* or within the *Expanded Dashboard*.

3.1 To fill in a summative form after the observation phase is completed and when the user has either the quantitative analysis or qualitative analysis screen open, click on the *Team Table*, and the user should see the figure below.



Team Table [Lesson Plan](#)

Quantitative Qualitative Sum Form 1 Sum Form 2 Sum Form 3

Craig Berg [On](#)

Sum Form 1

[Fillable Form](#)  [Browse](#) [Upload](#)

Sum Form 2

[Fillable Form](#)  [Browse](#) [Upload](#)

Sum Form 3

[Fillable Form](#)  [Browse](#) [Upload](#)

**Note that if the user** who set up the lesson when completing a *New Observation* **did not choose which summative forms to use** for the lesson observation (as described above in Step 2 - *Choosing Which Forms to Use for a Specific Observation*), then when any member of the observation team gets to the *Team Table*, they would see the following screen showing *No Forms Selected*. In this case, the user who set up the lesson would need to complete Step 2.

Team Table

Quantitative Qualitative Sum Form 1 Sum Form 2 Sum Form 3

Craig Berg [On](#)

Sum Form 1

No Form Selected for Summative Form One

Sum Form 2

No Form Selected for Summative Form Two

Sum Form 3

No Form Selected for Summative Form Three

3.2 Note: The next and last step requires the user to have the form on their computer to fill in the pdf, save, and upload into SMT. They may or may not already have this form.

**User does not have the form** - If the form is not yet on the user's computer, they should first click on the grey box labeled *Fillable Form* (see below). It will open as an extra window in the browser, but this is NOT where users fill in their scores or comments. **Note – it must be first be downloaded to the**

**user's computer to fill it in – filling it in within this open window will not save the text or numbers the user adds.** The user should download the form to their computer by right-clicking on the form in the window that just opened and *Select*, then *Save As*, the file on the computer. (On a MAC, go to *File* and *Save Page As*.) Then, locate the file where it was downloaded on the computer, open the fillable pdf file, enter comments, numbers, or click on checkboxes. Then save it to the computer with a name that represents the teacher and observation.

Back in the *Team Table*, the user can use the *Browse* button (see below) to locate the file name on their computer, click *Upload*, and after the current quirk of bumping out of the *Team Table*, they can re-enter into the *Team Table* to view the icon in the appropriate form column. Now when the user or any team member clicks on the *Sum Form Icon* the pdf will display the form's contents.

The screenshot shows a web application window titled "Team Table". At the top, there is a "Lesson Plan" button. Below this is a table with columns: "Quantitative", "Qualitative", "Sum Form 1", "Sum Form 2", and "Sum Form 3". The "Quantitative" column has a value "On" for the row "Craig Berg". Below the table, there are three sections for "Sum Form 1", "Sum Form 2", and "Sum Form 3". Each section contains a "Fillable Form" button, a text input field with the placeholder "Select Completed Form", a "Browse" button, and an "Upload" button.

**User has the form** - If the user already has the blank fillable pdf form on their computer (because they created it or because an institution distributed the required forms), they simply fill it in and save it with a name representing the observation. Then the user can then *Browse* to locate the file and then *Upload* it. Once uploaded in the *Team Table*, an icon will now reside under the column for that summative form (see the figure below). This process can be repeated for each of the three forms, if necessary. Note as seen below that the file name for each summative form used has been added to *Team Table* for help identifying which form has been uploaded. For example, *C. Berg Science Midterm.pdf*.

Team Table Lesson Plan

	Quantitative	Qualitative	Sum Form 1	Sum Form 2	Sum Form 3
Craig Berg	On	On			

Sum Form 1  
 Fillable Form Select Completed Form Browse Upload  
 C Berg Science Obs Sheet .pdf

Sum Form 2  
 Fillable Form Select Completed Form Browse Upload  
 C Berg Science Rubric.pdf

Sum Form 3  
 Fillable Form Select Completed Form Browse Upload  
 C Berg Science Midterm.pdf

Once finished, the icons for

the summative forms will also now appear in the *Expanded Dashboard* for that lesson, as shown in the figure below. Clicking on an icon opens the summative form for viewing only.

New Observation

Craig Berg 07/18/20 09:07 am live

Observers

Name	Quantitative	Qualitative	Sum Form 1	Sum Form 2	Sum Form 3
Craig Berg	✓	✓			

Lesson Plan

### Standard Forms for School Districts or Teacher Preparation Programs

A school district or a teacher education program probably uses standard forms for observations. SMT is designed so that the group administrator (leader of the group) for the school or institution can create and add forms to the group account or choose which forms the group members can use for observations. The group administrator is responsible for creating and uploading the fillable pdf forms using the process described in **Step 1 - Loading Summative Forms Into Your Account**. Only the group administrator can add forms for the group. The other members of the group cannot add new forms for the group. Therefore, group members are limited to what the administrator has chosen for the *Summative Form* options. To identify which forms will be used for a specific observation, the user who sets up the observation will choose the *Summative Forms* during the process of setting up a *New Observation*. Then all observation team members (post-observation via the *Team Table*) can fill in the

form and upload it. These forms are then viewable by members of the observation team from the *Team Table* or the *Expanded Dashboard*.

### **Creating digital Fillable pdf Forms**

Most people have heard of a pdf format for a document. A fillable pdf is just like it sounds. The document has boxes for typing text or checkboxes for making checkmarks or boxes for making an X. To create a fillable pdf form, the user must first create a document (probably in Word), then turn it into a fillable pdf document using software such as Adobe Acrobat DC, MAC pdf Element, Microsoft Print to PDF, or Foxit Phantom pdf. Adobe Acrobat Dc is a subscription-based app for creating and managing PDF files, offering Standard and Pro plans. There is also a free trial subscription. As you might expect, many resources show how to create a fillable pdf, including Wiki and YouTube videos.

**Who Can Create a New Lesson (Setup) Observation and When** - Setting up a new observation can be completed ahead of time or just before starting the observation? Factors to consider are:

- 1) How much time the observer has available before the start of the lesson
- 2) How much the observer knows about where students will be seated in the classroom and knowledge of students' demographics
- 3) Whether a specific seating chart with student demographics is important for the observation or if a generic seating chart without student demographics will suffice.

The answers to questions 1-3 will determine whether the teacher or the primary observer is better positioned to set up the lesson. But realize that while the teacher who is being observed might do the initial setup of the lesson observation, if desired, the primary observer can complete any remaining parts of the setup before the observation, or vice versa.

There are some advantages to having the teacher set up the new observation. For example, the teacher knows the students' classroom seating chart and demographics, whereas the observer probably does not know this ahead of time. Once within the classroom, the observer can see where students are seated and perhaps note some of the demographics, but if special education or ELL is an important factor, and that factor is present for analysis, then the teacher, not the observer, is most likely the person who should enter the complete demographic information. Only when a specific seating chart has been created can student demographic information be entered (before or after the observation), and then, in the future, student demographic information will be used for analysis in association with the heat map of the seating chart. The heat map is simply a colored coded student seating chart showing levels of student engagement or misbehaviors from zero to > 5. Note: The generic seating chart does not allow for student demographic-specific analyses.

### **Time Available Before the Start of the Observation**

Suppose the user needs to start a lesson observation in a short amount of time. In that case, they can do a “quick-start” by entering only the minimal information on the first screen of New Observation and quickly starting the observation. If more time is available, the user can do a regular start and enter as much information as desired.

**Quick-Start for a Live Observation** – This feature is designed for the observer who is planning on doing a live observation and has very little time before the start of class. The time needed to complete this setup is about one minute and designed to get the user into the live classroom observation quickly, bypassing some of the teacher demographic information, which can be typed in after completing the observation.

A quick start can be used:

- Suppose the teacher completes the minimal setup required to establish an observation on the Dashboard ahead of time. In that case, another team member can log in to their *Dashboard* and start the observation immediately.
- When a generic seating chart without student demographics is suitable for the observation, the observer arrives at the classroom 1 - 2 minutes before the start of the class and wants to input minimal information to set up a new observation in time for when the bell rings.

### Steps to Begin a Quick-Start Observation

1. Click on New Observation
2. Enter the minimal information needed to begin an observation:
  - Choosing whether the observation is video-based or a real-time classroom observation.
    - If video-based or audio-based, enter the URL of the video or audio
  - Team member names: Minimally, the user must enter the name of the teacher and primary observer (or choosing from dropdowns).
  - Adding in the course name, period, lesson topic, subject topic, and grade level.
3. Then click *Save and Start* if the user wishes to begin the observation. Or, if time allows *Save and Continue* to continue with lesson set up. Or, if starting the observation later, click *Save and Return to Dashboard*.
  - If *Save and Start* is chosen, the user is then prompted to choose **Quantitative** or **Qualitative** mode. Once a mode is chosen, the observation and data collection screen opens, and the user begins.

**Regular-Start** – This should be used when the observer has roughly 5-10 minutes preceding the observation. The teacher who is being observed or the observer can type in most of the *Settings* information before the observation.

### Post-Observation

Note that once the observation is complete and the user clicks *Done*, various steps can be taken, such as data analysis for the quantitative and/or qualitative data can be viewed.

- If there was a specific seating chart created before the observation, but student demographics were not added at that time, student demographics information could be added at any time post-observation.
- Additional team members' names could be added post-observation, allowing them to complete a quantitative observation and/or a qualitative observation if the lesson was set up to be a video-based observation.
  - To add either student demographics or additional team member names, the user can go back to *Settings* on the *Dashboard*, click on the *Settings* icon (gear symbol) and add the information. Note that post-lesson questions are also found in *Settings* or can be accessed from the *Post Lesson Questions* button on the analysis page.
- Note: If the user completed a live observation, additional team members could view the data analysis and feedback from that observation, but without video, no video would be linked to the data. The additional team members could also view pre-lesson and post-lesson question responses and can fill out summative forms. For example, suppose the university supervisor was doing a live observation. In that case, the student-teacher (who taught the lesson) and their cooperating or mentor teacher (who watched the lesson) might fill out their reactions and comments using the summative form(s).

**Using Video or Audio Recording Presents More Options - Observers can choose to use either the qualitative or the quantitative modes for a live observation.** For an observation that uses video or an audio recording, however, an observer can do qualitative, quantitative, or both as once the lesson is set up, the observer can complete one mode then the other. This also means that when using video or an audio recording, it is possible to have all team members complete a qualitative and/or a quantitative observation making for very rich data, analysis, and feedback.

**Dashboard – Archiving Observations** – the file folder symbol is used to archive a lesson observation when the observer wants to retain it but decrease the clutter and reduce the number of observations on their Dashboard. Only observer one and observer two can delete or archive a lesson. Note that at this time, once archived, the lesson cannot be brought back into the main screen Dashboard. So, think twice before archiving any lesson.

**Lesson 1.2: Create a New Observation** – Before the user creates their first new observation, they should have read the preceding pages and watched the video overview - <https://youtu.be/MwuAilguHUw> .

After reading this section, they should use SMT to set up a practice observation, which will be a qualitative observation completed in Level 2 Training.

- Click on *New Observation* to bring up a new screen titled “Create a New Observation.” Choose video-based observation, then copy and paste this URL <https://youtu.be/pjv0FSyR5sw> for *SMT Practice Video Truck Hill L*.
- Since the person teaching the lesson is not a member of your observation team, and you won't find their name in your dropdown list of team members, simply click on yourself as both the teacher and primary observer for this practice observation.
- In the box for *Lesson Topic*, type *Lesson 2.2 Practice*.
- With this information entered on the main settings screen, click on *Save and Return to Dashboard*.

This is the end of Training Level 1. Congratulations, you just set up your first observation!

**Looking Ahead to the Next Lesson**

The completed lesson setup will be used in Lesson 2.2, where the user will be asked to start and complete a qualitative observation.



## Level 2 – The Qualitative Comments Mode

**Introduction** – The qualitative comments mode allows the user to observe and make comments. With SMT, the comments are:

- time-stamped and labeled/organized by comment categories
- color-coded to the specific team member that is making the comment
- linked to the video segment related to the comment (if using a pre-recorded lesson)
- locatable using a search and find function to help locate comments of a specific type
- also noted via symbols on the timeline below the video so immediately the user can see who and how many comments are attached to the lesson, then click to read the comment and play the video segment

In addition, there is a team member feature that allows any team member to view any other observer's comments.

**Suggested Uses** - The team member's qualitative analysis might be useful regarding:

- The teaching observation of a fieldwork student or student-teacher by the teacher preparation program supervisor - After the observation, the qualitative analysis page is available to the student-teacher, who can view comments, respond to post-questions, post their reactions and commentary, and fill out the self-reflective *Summative Form(s)*.
- When using video for the observation, team interaction and communication can be enhanced as any team member can do a qualitative analysis of that lesson and view any other team member's running commentary and summative comments.
- When using video, all comments are linked to specific video segments so the viewer can see any particular action as it occurred in the classroom.
- Methods of teaching instructors can view the video of pre-service teachers implementing suggested strategies, view pre-service teachers' analyses and reflections, as well as add their own comments or suggestions.
- For a classroom teacher's yearly observation, a teacher can capture a video of their teaching and complete a self-analysis while an administrator completes their own, merging their commentary with that of the teacher. A conversation then follows this whole process. When using video, comments are linked to the video, making it easy to locate any part of the observation and showcase events being discussed.
- Research team members can share data and analysis screens by printing the data and analysis screens or by exporting the raw data to a .xls spreadsheet for more refined and custom analysis (coming soon).

**In this lesson, the user will learn:**

- Which of the many qualitative comments schemes to use for your intent of the observation.
- How to complete a qualitative observation by adding qualitative comments that are timestamped and linked to the video segments.
- Post-observation, how to view the comments and watch the video segments linked to the data.
- How to search and find comments headed by comment labels and categories.
- How to toggle on or off other user's comments.
- How to react to other user's comments.

- How to enhance qualitative comments by incorporating data gathered from the quantitative mode.

To complete Level 2 training, first, watch the Video *Overview of Qualitative Mode*, read the specific features section below, and then follow the training lessons to complete a short qualitative observation and learn the mechanics of using the qualitative mode of SMT.

## [Lesson 2.0 - Video Overview of Qualitative Mode](#) [https://youtu.be/tprgqtfq\\_RA](https://youtu.be/tprgqtfq_RA)

### Lesson 2.1: A Quick Look at Specific Features of the Qualitative Comments Mode

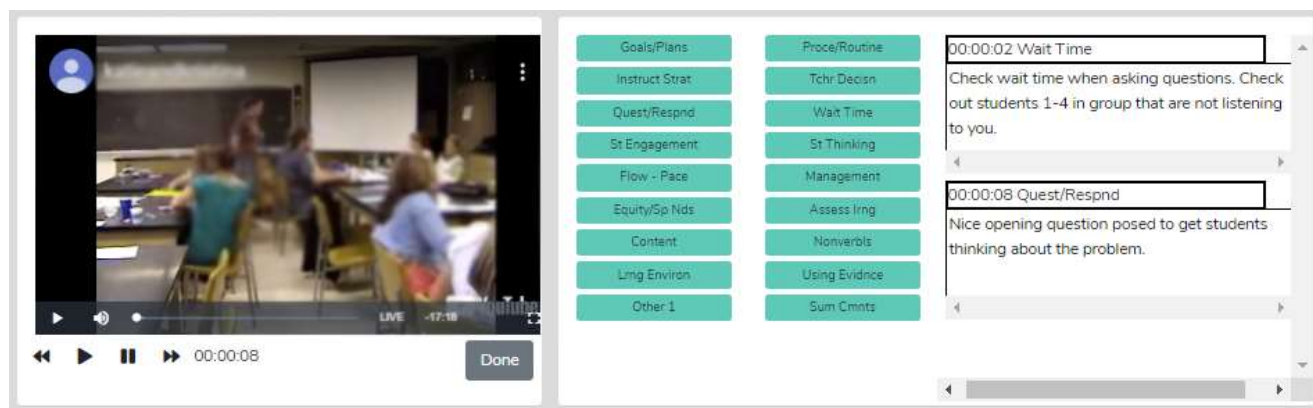
Note the following main quadrants of the screen that show a completed observation.

If the observation was video based versus a live observation, the top left window contains the play and pause buttons and a lesson clock synced to the video. Note again, when using video, any team member can observe, enter the qualitative analysis mode, and individually view, comment, and provide feedback.

### Steps to Collecting Data in the Qualitative Comments Mode

The top, far-right window contains the running commentary boxes. Each comment entered is time-stamped and has a category label connected to that comment. For example, when viewing the video, if the observer notices something about the lesson, teacher, or students and wants to enter a comment pertaining to “questioning,” they first click on the quest/respond button. When this occurs, the timing clock and the video

pauses, the time is noted, and the sequence number of the comment is added along with the comment category heading, and the user can type the feedback into the comment window, as shown below. Note that the user can use the back or forward arrow to rewind or jump ahead 10 seconds when doing the observation or while in the qualitative analysis mode.



When finished typing the comment, the user clicks play and resumes the observation. If the user needs to go back to the starting point of a comment-worthy event, they can rewind using the 10 second back button (once or more) or jump forward in 10-second increments using the double-arrow forward video control. If the observer is doing a live observation, they obviously cannot press pause, so they would continually click on categories and enter comments on the fly.

When the observation has ended (but before the user clicks DONE), the user can enter some final thoughts using the summative comments category button (Sum Cmnts).

**Suggestions for First-Time Users** - When first using the *Qualitative Mode*, the novice user is unfamiliar with the various comment buttons. When users want to comment, they can click on the pause button to stop the video, allowing themselves time to determine which comment button pertains to their comment. The alternative is letting the video play until determining which comment button to click – in the meantime, teaching continues. So, for the novice who is only getting familiar with the comment buttons, using the pause feature is probably necessary until qualitative mode skills are developed.

Note: The software is set up so that each comment is linked to the video but is programmed to start the video 30 seconds ahead of when the comment was entered so when viewing playback of the video, the event noted is more likely to be seen, without having the use the rewind button.

**Comment Buttons Defined or Explained** – Generally, the buttons are defined as follows, and what is typed into the comment box is an observation, comment, or recommendation regarding such.

### 1. Standard Set – Labels for Comment Buttons

**Lesson Goals or Plans – Goals or Plans:** These comments pertain to the goals of the lesson, objectives, learning targets, or plans for the class. For example, the observer may make a comment about how the actions, events, or activities of the class relate to the goals of the class or standards of instruction.

**Instructional Strategy - Instructional Strategy:** These comments relate to an instructional strategy chosen by the teacher to use in class. For example, the 5 E model in science or modeling in math. These comments could also pertain to how much the teacher is lecturing vs. using small groups or cooperative learning.

**Questions-Response – Questioning and Responding:** Comments in this category highlight how a teacher asks questions, how they respond to student answers, patterns of interaction, or something pertaining to teacher-student interaction. Classroom management interactions, however, would fall under the *Management* category button.

**Student Engagement – Student Engagement:** Comments in this category highlight how much or how little student engagement is present, methods of increasing student engagement, whether student engagement is concentrated among a few students, or if most students are engaged and in what manner.

**Lesson Flow or Pace – Flow or Pace of the Lesson:** Comments in this category highlight how the lesson is flowing and at what pace - too fast, too slow, just right, and indicators of such.

**Equity or Special Needs – Equity or Special Needs:** Comments in this category highlights students with special needs and their level of engagement, adaptations for the lesson, or suggested modifications. These comments can also be used to track the inclusion of all students and highlight equity regarding gender, race, etc.

**Lesson Content – The Content and Subject Matter:** Comments in this category highlight certain aspects of the content or subject matter of the lesson.

**Learning Environment – The Learning Environment:** Comments in this category highlight aspect of the learning environment – is it conducive to learning? Do students feel safe to contribute and interact with each other and to take risks and leave their comfort zone? Has the teacher developed good relationships with students?

**Other 1 –** Comments in this category pertain to miscellaneous comments that don't necessarily fall under any other categories.

**Procedure or Routines – Procedure or Routines:** Comments in this category highlight how the teacher uses procedures or has developed routines that help the class function better.

**Teacher Decisions – Teacher Decisions:** Comments in this category highlight specific teacher decisions witnessed in the observation. Perhaps a child was misbehaving, and the teacher chose not to address the misbehavior. The comment made by the observer would pertain to ignoring the misbehavior.

**Use of Wait Time – Using Wait-time:** Comments in this category highlight the teacher's use of wait-time 1 or wait-time 2 as it relates to teacher-student interactions, questioning, and responding.

**Student Thinking – Student Thinking:** Comments in this category highlight student thinking, ideas that are uncovered, misconceptions identified, or teacher actions or strategies that help to uncover student thinking.

**Behavior Management – Classroom Management:** Comments in this category highlight student misbehaviors and if/how the teacher reacts or is proactive as related to such.

**Assess Student Learning – Assess Learning:** Comments in this category highlight assessing student learning.

**Teacher Nonverbls – Teacher Non-verbals:** Comments in this category highlight the non-verbal behavior of the teacher that affects the classroom learning environment, student engagement, or ability to be more effective. Examples might include the teacher might be jiggling coins in his pocket, stroking a beard, taking glasses off and putting the stem in their mouth, positioning themselves in a stand-offish manner with arms folded and across their chest in a non-inviting manner, scrunching their eyes when listening to a student response and consequently students and the observer interpret that look as negative feedback to the student.

**Using St Evidence – Using Student Evidence:** An essential component of the EdTPA assessment requires the applicant to describe how they are teaching using evidence. More so, evidence from students shows they have met the objective of the lesson in the form of a student-generated artifact.

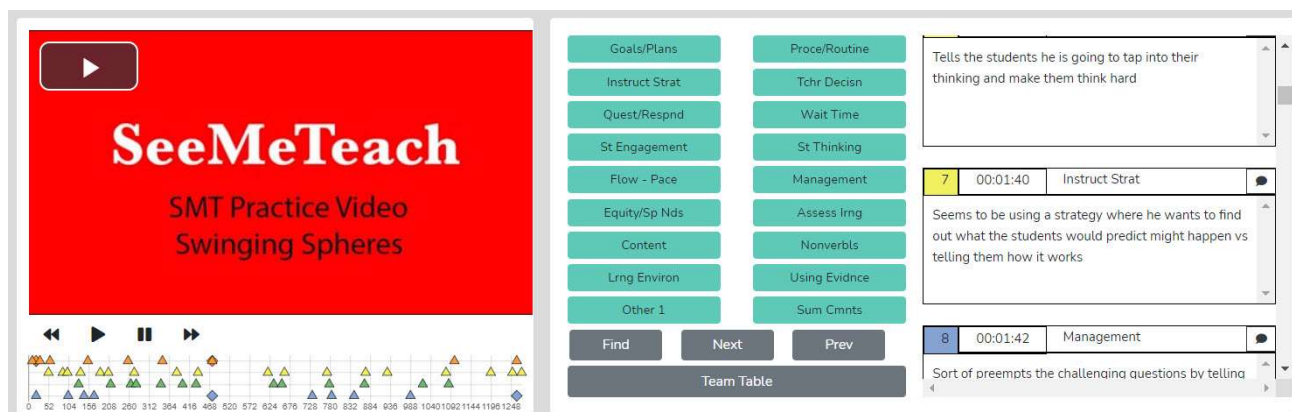
**Summative Cmnts – Summative Comments:** When the observation reaches the endpoint, and when all things are considered, the user can add some significant concluding and summative comments about the lesson.

### Other Sets of Comments Buttons

When choosing “qualitative” as the type of observation, there are many choices for types of buttons that include a Standard set as well as sets for *Danielson*, *Marzano*, *Special Education*, *High Leverage Practices*, *edTPA*, *NBCT*, *Signing and Interpreting*, *World Languages and ESL/Bilingual*. However, more sets of comment buttons are being developed to accommodate the needs of observers who use specific schema when observing or who wish to utilize another mainstream set of observational categories when making and linking comments. For example, another set of buttons is being created for those who are focusing on teachers of students with special needs.

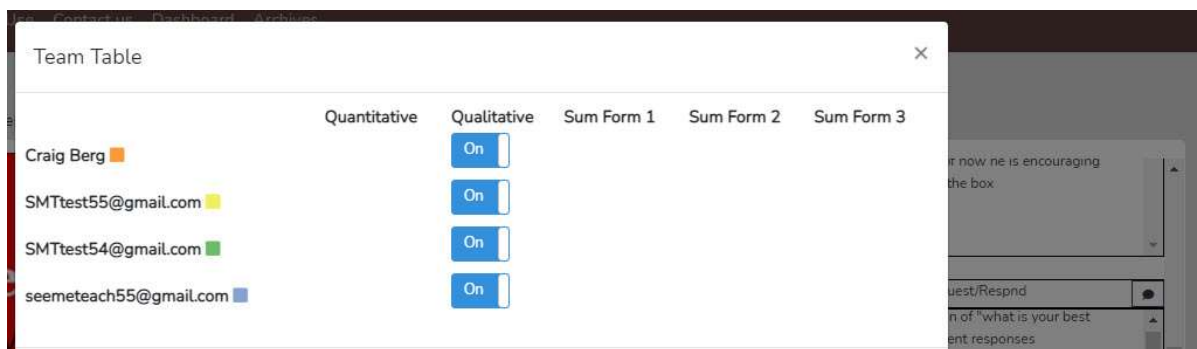
## Lesson 2.2 - Quick Look at Specific Features of the Qualitative Analysis and Feedback Mode

Once the user finishes adding their qualitative commentary and clicks DONE, the screen changes slightly. The following features are added to the screen, turning the qualitative data collection mode into qualitative analysis mode.

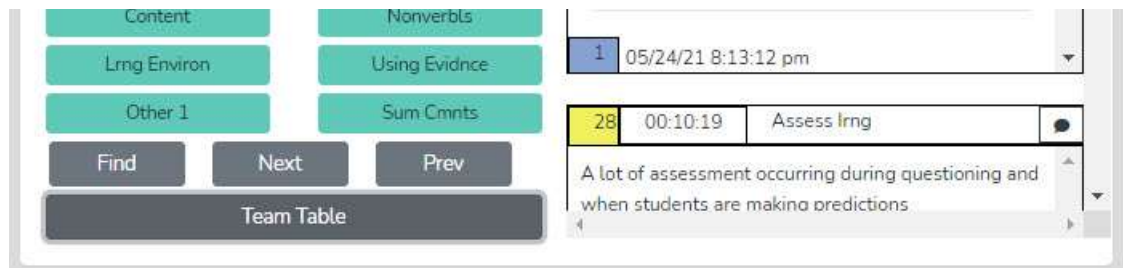


## Things The User Can Do

1. **View and Scroll Through the Observer's Comments** – Any comments made during the observation by any of the four possible observers are displayed in the comments window, color-coded by the observer, time-stamped, and with the comment category heading shown.
2. **Identify Who Made the Comments - Team Table - Unification and Synergy Using Data and Feedback** – The *Team Table* contains links for team member's observation results. Suppose multiple team members have completed the observation using a video of the lesson. In that case, the user can bring up the *Team Table*, identify the observer's comments by color, and toggle any of the other team members' color-coded comments on or off in the comments window by clicking the qualitative data button on or off. The figure below shows the qualitative comments option for all four observers toggled to the on position. Therefore, all user's comments would be displayed.



3. **Search and Find** - The user can search and find comments headed by a specific comment category by first clicking on the FIND button, then clicking on a specific comment button. The first comment with that heading and the section of the linked video that correlates with that specific comment will begin playing. Clicking NEXT will locate the next comment on that category type. Clicking PREVIOUS will locate a prior comment, and the video segment linked with that specific comment again will play.

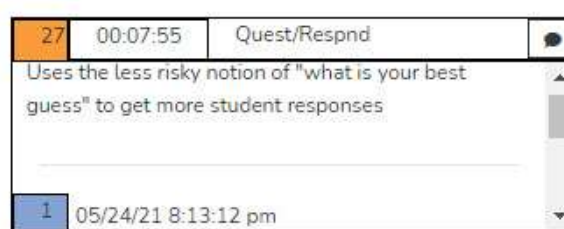


4. **View the Timeline and Which Observer Made Comments, When and Where** – The timeline below the video window shows the lesson from beginning to end with comments noted by a color-coded triangle. With the mouse wheel, the user can zoom in or out when the symbols become crowded or reset the zoom to normal by clicking the Reset button. Clicking on the triangle or diamond shape in the timeline underneath the video window highlights that comment in the comments window.

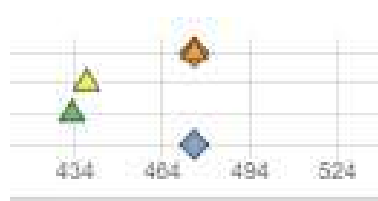


5. **Links to the Video** – All comments are time-stamped and linked to the video. Besides using the *Find* function, the user can also watch the linked segment of the video by clicking on the time box in the specific comment window.
6. **Team Members Can React to Comments** – Note that each comment has a thought bubble symbol on the right side of the header of the comment box.

Any member of the team can click on this bubble symbol and type something regarding that comment, and a team member could continue or add to the comment by clicking on the symbol and typing to ask for clarification, ask a question, answer a question, respond to the person who left the original comment. In other words, this



feature allows for a mini exchange between members of the observation team. Any reaction is color-coded, so users know which team members are leaving comments or reactions to comments. The blue user left a comment to the orange user above. Note that the original comment is noted on the timeline by a triangle. If a user reacts to a comment, the symbol changes to a diamond shape. A quick scan of the timeline alerts any user as to reactions existing in the set of comments and who left the reaction.



**Exit to the Dashboard** – After analyzing the qualitative data collected during the observation, the user can exit back to the *Dashboard* by clicking on the *Dashboard* heading at the top of the page.



### Lesson 2.3 - Completing a Qualitative Comments Observation and Analysis

– In this lesson, the user will become familiar with using the features of the qualitative comments data

collection and analysis mode they read about in Lesson 2.2. There is very little training required to use the SMT qualitative comments mode. However, before observation, the user might want to review the comment category buttons and refresh their memory of what button they would click per type of action they wish to comment.

#### Steps to Complete a Qualitative Comments Observation and Viewing the Data Analysis Page

1. If continuing directly from Level 1 training, the SeeMeTeach® web page should be open to the screen where the user can choose qualitative or quantitative. Choose *Qualitative*, then select *Standard*, and proceed to practice the qualitative comments collection mode. When the qualitative commentary of the short video is completed, click *DONE*, and the screen will change to the qualitative analysis mode.
2. In Training Level 1, if you chose *Save and Return to Dashboard*, go to your *Dashboard*, identify the lesson you set up, labeled *Lesson 2.2 Practice*, enter the *Expanded Dashboard* by clicking on the plus symbol, click on the *Start* icon under the qualitative column, choose *Standard*, then begin the qualitative observation. The screen should show the video window at the top left with the qualitative buttons and the comments window at the top right. Press play and begin the observation and addition of comments.
3. If you need to set up a completely new observation, click on *New Observation*, and on the screen with a heading that says “Create a New Observation,” choose video-based observation, then copy and paste this URL <https://youtu.be/pjv0FSyR5sw> for SMT Practice Video Truck Hill L.
4. When you have finished adding comments to the observation in Lesson 2.2 and click *DONE*, the screen will change slightly to the qualitative analysis mode, and you will notice some extra buttons added to the screen. If you took a break following completion of the qualitative observation in Lesson 2.2, then go to the Dashboard, locate Lesson 2.2, click on the plus symbol, click on the green checkmark to put the qualitative analysis mode on the screen, and proceed.
5. Now that the qualitative analysis mode is on the screen **USE** the features described in Lesson 2.3 to familiarize yourself with their functions.

#### Need More Practice?

If the user desires more practice, set up a *New Observation*, and copy and paste any URL from the master list of Practice Videos located at the beginning of the training section into the video window in New Observation.

It is recommended to use the Swinging Spheres Video. <https://youtu.be/XIPKXikeHMA>

#### Enhancing Observations Using Quantitative Comments

Qualitative comments and recommendations are valuable to the teacher, and they often stem from observers who may have years of experience observing classrooms and providing feedback. Yet, when able,

professionals should give feedback, make decisions, and draw conclusions based on evidence and data. As such, the quantitative mode of SMT (next in the training) provides a plethora of data that can support or refute observations or fine-tune comments and recommendations.

When the team user and/or member completes the quantitative mode first, the data can bolster the qualitative commentary. For example, wait-time data from the quantitative mode can support the more general and subjective comments made while in the qualitative comment phase. For example, instead of just typing “Consider increasing your wait-time,” the observer could refer to the quantitative wait-time data and supplement the comment with “Your wait-time one average is 1.6 seconds, and your wait-time two average is .89 seconds. Try to increase your wait time to an average of more than 3.5 seconds. Let’s think of something you can do when interacting with students that will help you remember to use more wait time. Perhaps put your hand behind your back and count to five on your fingers.” This is only one example of many where quantitative data can bolster qualitative commentary.

### **Next in the Training Sequence**

The training levels will prepare the user to collect rich and robust quantitative data that are indicators of effective instruction and serve as mile markers for growth and improvement of teaching.

## **Introduction to the Quantitative Data Collection Mode Levels 3 – 10**

SMT collects and then analyzes quantitative data related to teacher and student actions during a lesson. This data is coupled with the specific lesson type in play to show when and where student and teacher actions occur in the lesson. The raw data is time-coded and linked to the events as they take place in the video. Note that data collection can also occur live in the classroom without video. Data collection can be limited and focused on a single factor or be more complex and encompass many elements. The goal of the data collection determines which options the observer will choose to use and, therefore, what data to collect to fulfill the intent of the observation. The user can also choose to observe and code a specific desired length of time. As with the qualitative mode, the amount of class time-coded varies depending on the length of the targeted lesson segment, such as small group work versus a lab activity versus a whole class discussion.

### **The Richness of the Observation and Quantitative Data Collection**

There are a surprising amount of teacher and student actions within an entire or just a section of a lesson. An observer collecting data on both the teacher and students might easily enter 200 plus data points in 20 minutes of observation. Why is that? When a teacher is cognitively immersed in the flow state of teaching, they think, weigh options and choices, make decisions, and take action based on many factors. They need to consider and attend to many variables such as student mood, students' actions, and behaviors or misbehaviors, interactions with students, time constraints, and the next steps of the lesson. Given everything happening in this chaotic environment, it is remarkable that teachers control this constant state of flux. The teacher is absorbing all this information, recalibrating and adjusting the lesson, or altering their interactions with students based on what they see and hear. In short, there is a plethora of teacher decisions, and some or many turn into discernable and distinct teacher actions. These teacher actions are designed to and do affect student action. This combination of teacher and student action data tells the tale of the lesson and helps the observer and teacher come to conclusions about the teacher's teaching skills. The teacher's actions and student actions are indicators of pedagogical effectiveness and offer clues as to what to change or improve to have even more positive impact on the learner.

When using SeeMeTeach<sup>®</sup>, a quantitative observation consists of clicking buttons that correspond to teacher and student actions in the classroom. While no system is perfect for all, most of the discrete and observable teacher and student actions can be linked to one of the buttons. Therefore, collecting this data provides a footprint and a fingerprint of the story that unfolded during the lesson observation. The story is clarified further when the data analysis uncovers trends, patterns, tendencies of teacher action and showcases student involvement and engagement in the lesson. The data collected are limited to visible, discernible, discrete, and recognizable teacher and student actions - what the observer can view and note in their comments. A pre-lesson discussion with the teacher or a look at a well-crafted lesson plan will help clarify both intents of delivery and expected outcomes. Yet, the observer doesn't know the teacher's reasoning behind the actions until the post-lesson discussion when the observer and teacher can debrief and put context to the decision-making during the lesson.

Using SMT, observations can be simple and focus on only one factor, or they can be complex and collect data on many factors. The fun begins when the observation is completed, and the instant analysis is viewable for cogitation. This is the moment when some aspects of teacher actions and student actions become more apparent, displayed in seating chart heat maps, graphs, tables, and charts with counts and patterns. This

extensive analysis helps the teacher and observer reach data and evidence-based conclusions about the teaching being observed and the extent of student engagement during the lesson. It is difficult to discount the data and even more difficult to ignore the video segments linked to the data that turn an opinion into a concrete example of a teaching strength versus an aspect of teaching in need of improvement.

Now let's look at the quantitative data collection screen below and read about the various chunks of data collection buttons and their functions.

**Read This First** – The power of the quantitative mode is immense, something you will realize as you progress in skill development and begin to collect data beyond the first few levels of training. As you view the graphic below of the quantitative data collection screen, remember, it is your first look - very little will make sense and it might seem visually overwhelming. That will quickly change.

Here is what should be remembered about training. All of these codes and features are options that you will learn in chunks, beginning with rudimentary and easier levels of use. However, after seeing the tremendous power of SMT and the benefits of the data and analysis, you will be inspired to work towards using more of the options. This inspiration will be your fuel to continue to quickly move through the levels of training and learn the “buttons” and “controls” ultimately acquiring the skills of a “black belt SMT user” regarding data collection and analysis.

**Remember – you are going to learn SMT in chunks – you can do this!**

## Training for the Quantitative Data Collection Mode

**Introduction to Training for the Quantitative Data Collection Mode** - While preparing for and using the qualitative mode of SeeMeTeach<sup>®</sup> (SMT) takes little start-up time, the quantitative mode takes a bit more time to become proficient, but completely worth the training time when considering the valuable data and information one can glean from such an observation. Training helps the user to progress through various levels, beginning at a simple level followed by progressing to capturing more of the teacher and student actions resulting in more extensive data and analysis, thereby providing rich opportunities for feedback and reflection.

**Progression of Training for the Quantitative Data Collection** – Training for the quantitative mode is set up to develop skills at various progressive levels. The user will rapidly progress through levels 3 – 5, which is basic information, types of codes, rules for operation, L codes (lesson type), M codes (misbehaviors), and S codes (student action). Then the training moves into recognizing and coding T codes (teacher actions) in level 6. Level 7 focuses on developing more speed and accuracy and data analysis when using T, S, and M codes and using U codes (optional user-defined codes). Completing Level 7 allows the user to claim SMT Black Belt status. In Level 8 – Black Belt 8, the user learns how to observe and code G Codes, small group interactions. Level 9 – Black Belt 9, training focuses on capturing data using T, S, and M codes with seating chart numbers while also capturing wait-time during an observation. Wait-time data is good to have on hand when analyzing ways to improve teacher-student interactions and student engagement. Level 9 is a level that every teacher can reach with a bit of effort. Using these features will maximize the full capabilities of SMT and produce a

vibrant and robust amount of data, therefore allowing for optimal and extensive data analysis and feedback to the teacher being observed. Level 10 proficiency is demonstrated by using all the data collection features with increased speed of coding that matches even the fastest-paced classroom. Level 10 - SMT Trainer is a level only reached via a practical exam given by SMT. Upon passing, the user is officially endorsed as SMT's certified stamp of approval for collecting data that has the high validity and reliability necessary for consulting or program evaluation or training others to use SMT.

## Level 3 – Overview and Important Features of the Quantitative Data Collection Mode

### In this lesson, the user will learn:

- The layout of the data collection screen and specific data collection buttons
- That all the data is linked to video segments
- The general operation of data collection and two rules for data collection
- What raw and analyzed data are available post-observation
- The features and examples of the quantitative analysis options
- Questions about teaching that the data help to answer

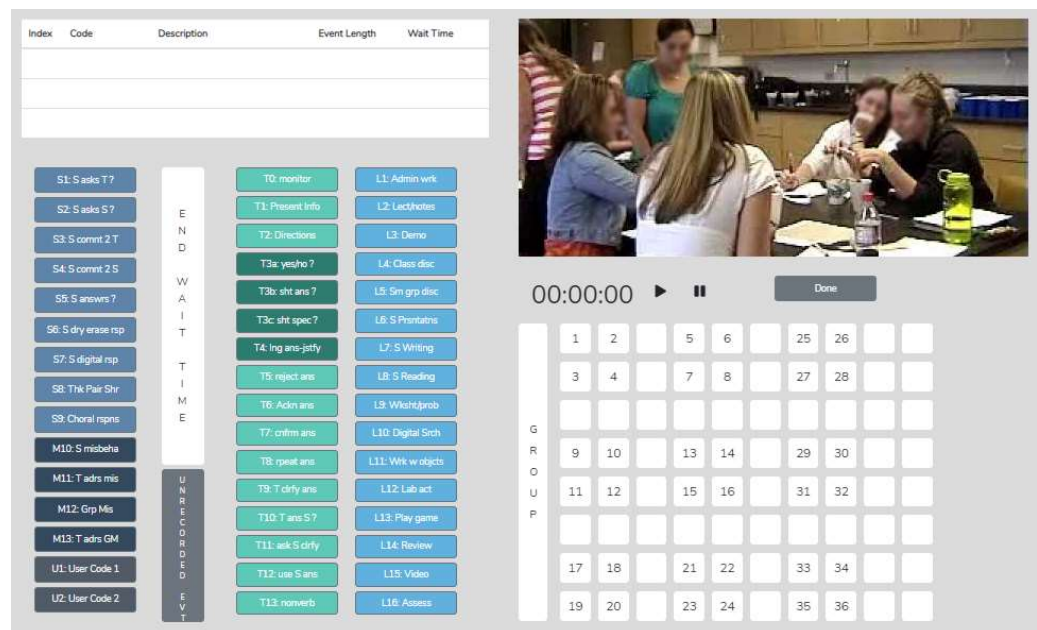
**Steps to Take** – First, watch the video overview. Note that the video points out the key areas of the screen and describes features and functions. After watching the video, read through the sections below for a thorough overview of SMT functions.

### Lesson 3.0 Video Overview of Quantitative Data Collection Screen

<https://youtu.be/r1MMczuREfs>

### Lesson 3.1: Quantitative Data Collection Screen Features

The graphic to the right shows where the quantitative codes reside on the data-collection screen.



While observations might use only one type of data button, the specific data collected can include the following:

**L Codes** – There are 16 choices for *Lesson Type*, which describe what is generally occurring during a lesson, such as lecturing, lab activity, small group discussion, etc. The lesson type changes typically only a few times during the lesson. Still, this feature is essential as it places other data collected, such as student engagement and misbehaviors, in the context of the lesson-type activity.

**T Codes** – These 14 codes represent teacher actions while instructing. They help paint a vivid picture of how the teacher interacts with their students and help uncover tendencies and patterns that make a difference in student engagement, learning, or behavior. Before attempting to code using T codes, we highly recommend completing the *Training – Level 6 Learn About T Codes*. This will help the user develop skills to sharpen their ability to recognize noteworthy teacher actions, therefore increasing their ability to collect more accurate data during the observation.

**S Codes** – These nine codes represent student actions when students interact with other students or with the teacher. The S codes paint a vivid picture of class dynamics, interactions, and aid in examining student engagement in the classroom. S1-S5 are for individual student responses, while S6-S9 is used when the whole group responds (dry erase, digitally, think-pair-share, or choral responses).

**M Codes** – These four codes collect data pertaining to student misbehavior and subsequent teacher reactions.

**U Codes** – These two codes are optional and user-labeled for collecting data concerning actions or events not covered by the existing T, S, and M codes.

**Wait-time Bar** – This button is used to determine average wait times, the range of wait times, and the specific type of wait-time(s) for T or S codes. This is a significant feature as wait-time is a factor known to impact student learning and engagement significantly.

**Toggle On/Of To Simplify Data Collection** – Located above the data collection buttons are small boxes serving as clickable toggles that the SMT user can use to show or hide any of the S, T, U, M, and Wait-Time buttons. A novice or experienced user, if only collecting a subset of possible data, may want to shade out and disable buttons they won't need for that teacher observation as doing so reduces what the user is viewing.

#### **Other Features of the Coding Window Include:**

**Emergency**– Note that this shows up **only when doing a live observation** and is used when an activity occurs that the user does not want to code and needs to pause coding. For example, maybe there is a fire drill, and the user can use this button to pause coding without leaving the data collection screen.

**Unrecorded Event** – Note that this shows up **only when using video**. If a section of the video does not want to code, they can click *Unrecorded Event*, and the video will keep playing, but the coding clock will pause until the user clicks an L key to restart the coding clock. The video will remain synced with the data, but the paused coding time will not skew the data.

*Note: the previous two features are the same, but the labels change depending on whether the user is doing a live observation vs. using a recorded video.*

**Lesson Clock** – Begins at zero at the start of the lesson and counts in minutes and seconds.

**Timing of Events** - All events coded are linked to the lesson clock, noting when in the lesson they occur and (for most) the duration of the event.

**Video Window** – If using a video instead of a live observation, the video is displayed here.

**Scrolling Running Record Window** – The window at the top is the running record of data being collected. It displays the events as coded in the window. Each time the user clicks a code, it is recorded and noted in the running record window. This window mainly functions as a feedback window letting the user know the code was indeed entered.

**Student Seating Chart** – If set up, this shows where the students are seated in the classroom, represented by a clickable number, and can be tagged to specific S codes or M codes. Also, small groups can be identified and noted on the seating chart. If not set up, the seating chart shows an 8 x 10 grid with numbers but without specific students' seats designated. The user can still use this generic chart and click on a seat number prior to clicking on an S code to generally show where the action is occurring. Keep in mind that no student demographics are tagged to that seat number since it is a generic seating chart. Note that all student action data can be linked to video segments and the *Seating Chart Heat Map* for post-observation data analysis – as such, there is a big payoff when using the specific seating chart numbers with the data.

**Group Data Collection** – The *Group* button is to the left of the seating chart. If the user clicks this button before clicking on any seat containing that specific group number, the running record will record the data prefaced by that group number. For example, clicking on G2 prior to clicking on S1 records the event as G2:S1.

**Student Demographics** - Also present but not visible on this data-collection screen are the underlying demographics regarding gender, minority, ELL, or special education status that can be displayed and examined during the post-data collection analysis phase (coming soon).

**Like its namesake, the DONE Button** is clicked when the user wants to end or be done with the observation. A second chance warning pops up in case the user wants to continue. It is placed off to the far right so that the user won't accidentally click it - it should remain untouched until the user has completed collecting data. Upon clicking *DONE*, the screen changes to the quantitative data analysis screen.

Remember - All these codes and features are options, that the user will learn in chunks, one step at a time. The user only needs to learn a few things to begin data collection. Note that the user can toggle on or off any set of T, S, M or U codes as well as the wait-time bar to reduce the complexity of the data collection screen.

### **Lesson 3.2: Quantitative Analysis and Feedback Options**

SMT helps the user collect and then analyze data related to teacher and student actions during a lesson, and this data is coupled with the specific lesson type in play to show when and where student and teacher actions occur in lessons. Collecting and analyzing data provides a record of teacher and student actions during the



lesson. The raw data is displayed and time-coded, and linked to the events as they took place in the video. The resulting raw data and analysis of data offer substantive insights into the activity and events of the lesson. The analysis and feedback options described below will highlight how beneficial it is to use quantitative data during the feedback process.

**Power of Video-linked Data** - When using video, much of the data collected is linked to the specific video segments that represent that data and the type of action or event by both teacher and students. When looking at the analysis screens, the observer, teacher, or team member can go directly to the video linked to specific data points and see examples in action.

**Running Record** - The *Running Record* lists all the events in sequence from the lesson start to finish. The user can scroll through the events and can click on any event to see the related video. While *SeeMeTeach*® has significant data analysis built-in for instant viewing, also note that the data can be exported to a .csv file to be used with powerful statistical packages.

Index	Code	Description	Lesson Clock	Event Length	Wait Time
1	L01	Administrative	00:01:59	00:00:08	
2	L03	Demonstration	00:02:12	00:00:14	
3	T04a	Teachers asks question requiring speculation	00:02:15	00:00:02	00:00:06
4	T02	Teacher is giving directions	00:02:26	00:00:04	
5	T02	Teacher is giving directions	00:02:30	00:00:03	

Team Table Download Data

**Data Buttons**

- Lesson Demographics
- Pre-Lesson Questions
- Code Summary
- Lesson Summary
- Management Summary
- Student Engagement
- Teacher Actions
- Interaction Patterns
- Wait-Time Summary
- Small Groups
- Post Lesson Questions
- Summative Comments

S1: S asks T? T0: monitor L1: Admin wrk  
 S2: S asks S? T1: Present info L2: Lectnotes  
 S3: S comnt 2 T T2: Directions L3: Demo  
 S4: S comnt 2 S T3a: yes/no? L4: Class disc  
 S5: S answe? T3b: sht ans? L5: Sm grp disc  
 S6: S dry erase rsp T4a: sht spec? L6: S Prntains  
 S7: S digital rsp T4b: lng ans-jstfy L7: S Writing  
 S8: Thk Pair Shr T5: reject ans L8: S Reading  
 S9: Choral rspns T6: Ackn ans L9: Wksht/prob  
 M10: S misbeha T7: cnfrm ans L10: Digital Srch  
 T8: sht ans T9: sht ans L11: Wksht/prob

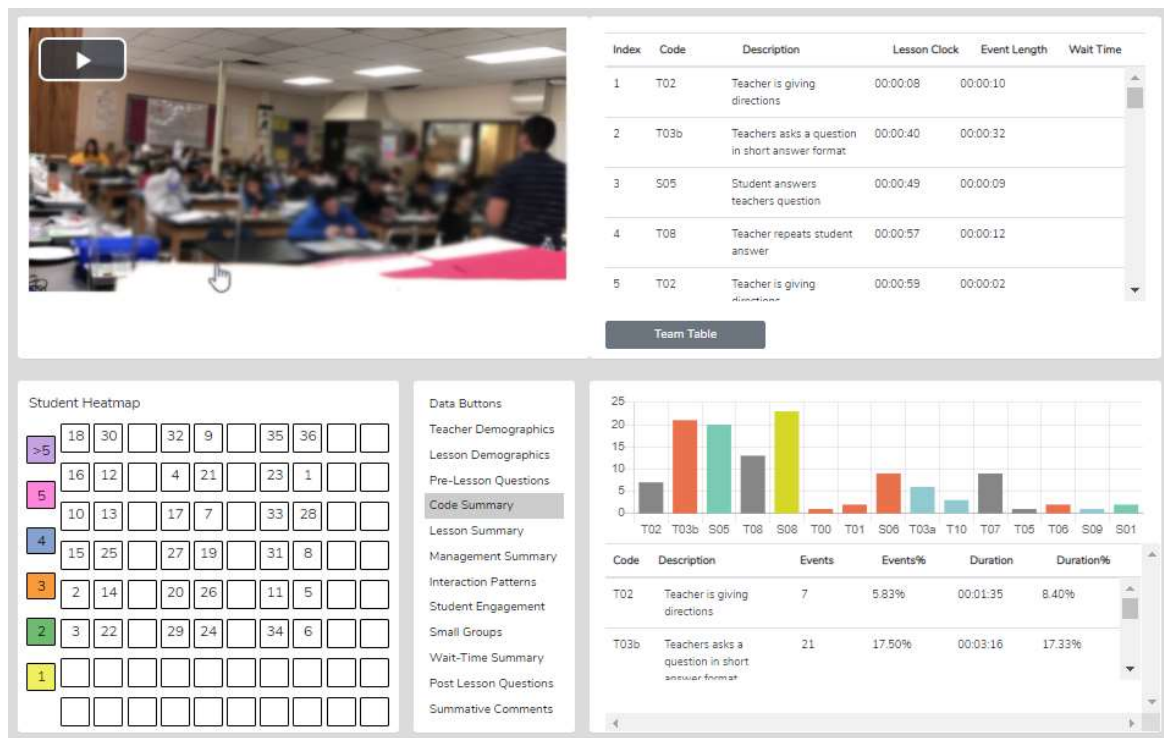
a note indicating how many events of that type were located. This feature is particularly helpful for identifying the habits and tendencies of the teacher. For example, perhaps the observer noticed the teacher has a habit of asking yes/no questions, followed by clarifying the answer for the student. In this case, we know that having the teacher change how they interact and react would be beneficial for finding out more about the student's thinking. For example, the teacher could have asked the student to clarify their answer. As such, the observer might choose to use that data or video, all or some, to make a point of how a teacher's choice affects student engagement and their ability to uncover student thinking.

**Lesson Demographics** – This contains information about the lesson that was entered during *New Observation* lesson setup or can be edited (course name, period, lesson topic, subject, and grade level).

**Pre-Lesson Questions** – Questions posed to the teacher that will provide context to and intent of the lesson.

- What are the main learning goals/objectives for the lesson?
- Describe the major activities or parts of the lesson to be observed.
- How will you know if the learning goals/objectives have been met? For example, what evidence will you have?
- Provide the context for the lesson. How is this lesson connected to the prior lesson? How is this lesson connected to the subsequent lessons? Where is this lesson placed in the current instructional unit?
- Describe the ability levels of the students in this class.
- What are you going to do to maximize the engagement of all ability levels of students?
- How will you differentiate the lesson for all types of learners?

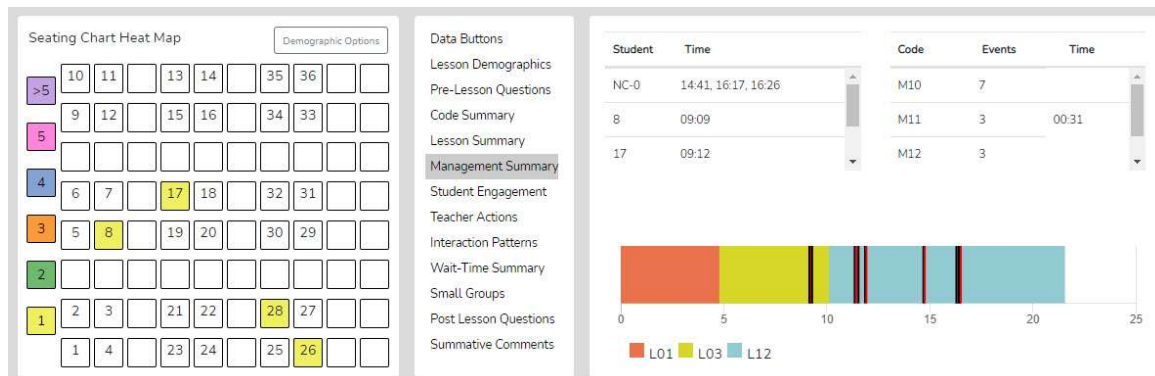
**Code Summary** – This feature provides a graph of the number of events of each code used during data collection and shows the relative and specific use of T, S, M, and U codes. Underneath the graph is a data table that displays data for each of the specific codes by frequency of an event, frequency of an event compared to the total number of events, amount of time coded by the specific event, and time accrued for that event compared to the total time of all the events. The T code data is tallied underneath this data table, as are the S code, M code, and U code data. This data is also recorded as a percentage of total events and percent of total time.



**Lesson Summary** – When coding a lesson, the observer notes the type of lesson in play by clicking an L button at the very start of the observation and a different L code each time the lesson type changes within the observation. As such, types of lesson segments are noted and displayed in the quantitative analysis mode in the *Lesson Summary* data window as a timeline showing the order and length of each segment of the lesson. This lesson segment display is used as a time-context reference when looking at other data such as *Student Engagement* or *Management Summary* so the user can see where misbehaviors or students’ responses were present in the lesson.

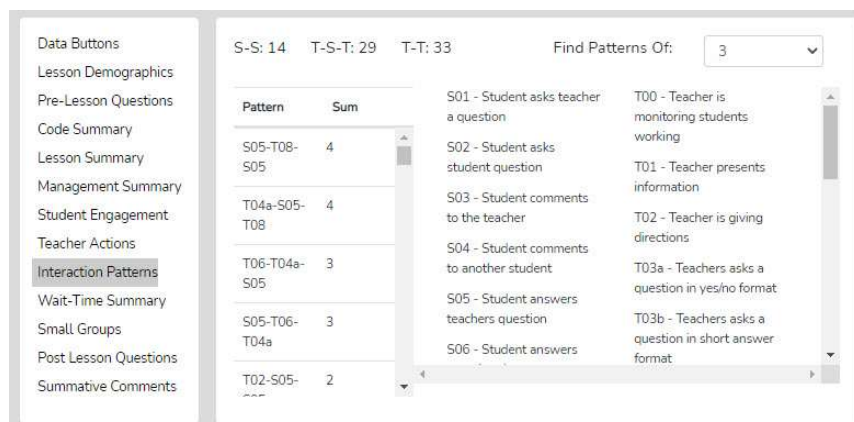


**Management Summary** – Displays the misbehavior events (M codes), noted specifically by student seating number, or generically if seating chart numbers were not used, and when the events occurred. Also displayed is when and how long the teacher reacted to and addressed the misbehaviors. The specific time of occurrence of student and teacher data is displayed on the lesson-type timeline by black bars for student events and red bars for teacher reactions. Clicking on a bar causes the video linked to that event to begin playing. In addition, the seating chart heat map shows by color code how many events are linked to specific students.

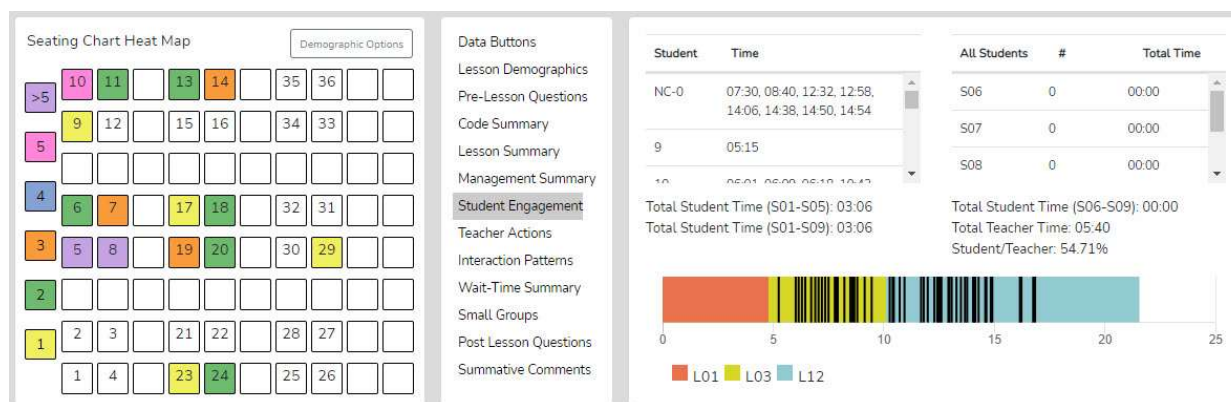


**Demographic Highlighting in the Seating Chart Heat Map** - In addition, if data is collected for specific students by using the student seat number before entering the M code, then the data can be displayed and toggled on or off by clicking on the Gender, ELL, SPED, or Minority buttons. If the observer should wonder how the students with special needs are disengaged during the lesson, toggle this information to find out. If the observer or teacher is concerned about equity of participation regarding gender, minority, ELL, or students with special needs, then this data is available.

**Interaction Patterns** – Using all the teacher actions (T codes) and student engagement actions (S codes), the user can view the predominant patterns of interaction between the teacher and students. In addition, numbers are provided that show how often students interact with each other (S-S) versus how often the traditional teacher-student-teacher pattern (T-S-T) is used or how often another teacher action follows a teacher action (T-T).

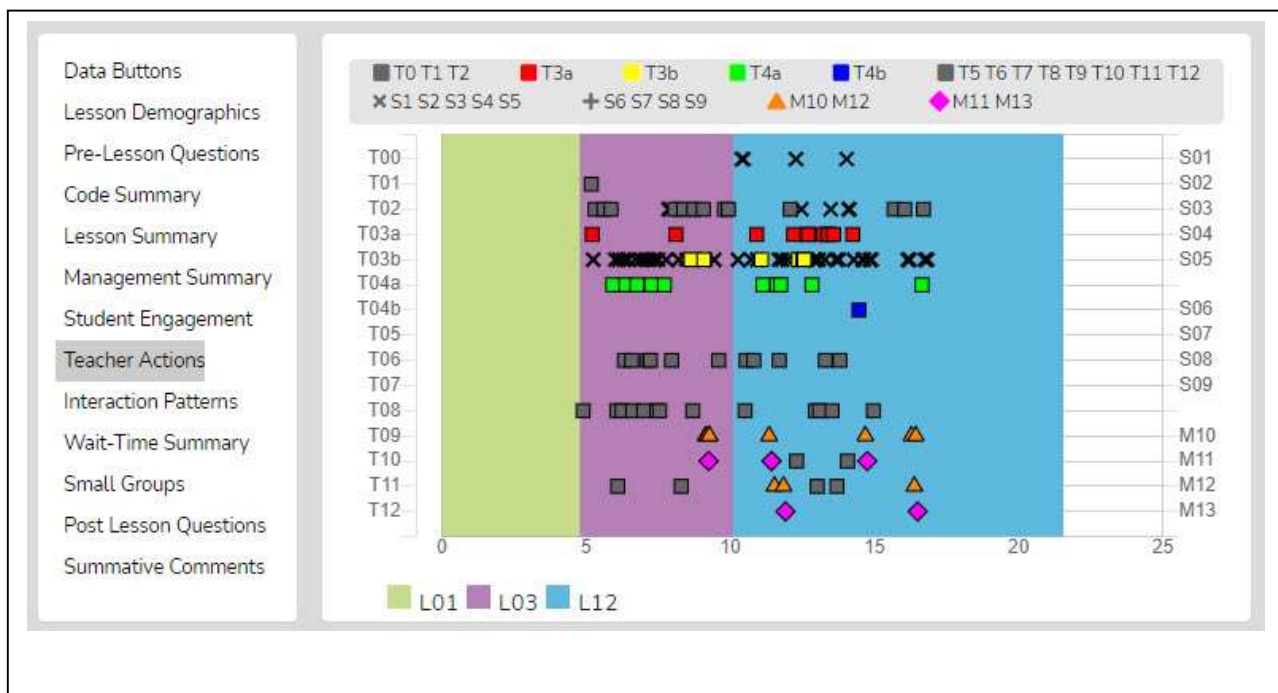


**Student Engagement** – Displays the student engagement events (S codes), noted specifically by student seating number, or generically if seating chart numbers were not used, and when the events occurred. Also displayed is when and how long the teacher reacted to and addressed the misbehaviors. The specific time of occurrence of student and teacher data is displayed on the lesson-type timeline by black bars for student events and red bars for teacher reactions. Clicking on a bar causes the video linked to that event to begin playing. In addition, the seating chart heat map shows by color code how many events are linked to specific students.



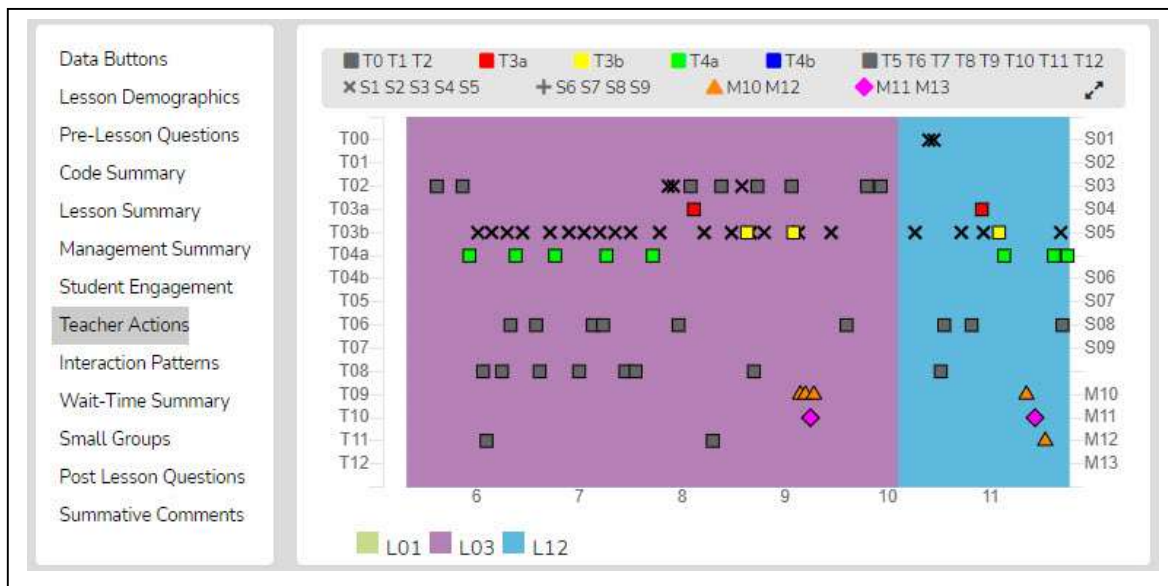
**Demographic Highlighting in the Seating Chart Heat Map** - In addition, if data is collected for specific students by using the student seat number before entering the S code, then the data can be displayed and toggled on or off by clicking on the Gender, ELL, SPED, or Minority buttons. If the observer should wonder how the students with special needs are engaged during the lesson, toggle this information to find out. If the observer or teacher is concerned about equity of participation regarding gender, minority, ELL, or students with special needs, then this data is available.

**Teacher Actions Summary** – *Teacher Actions Summary* is a timeline from beginning to end of the lesson that displays on a backdrop of the lesson type (colors) in play and shows symbols for when the teacher exhibited various T codes actions, so the user can follow the sequence of teacher actions throughout the lesson. Also displayed on this timeline are M and S code data; in truth, almost all data collected are represented on the timeline, which is a robust set of data representing teacher and student actions. The user can easily see when any management issues occurred in the context of the rest of the teacher and student actions in the lesson. Since this is a visual display of teacher actions, student actions, and misbehaviors, as well as the teacher’s reaction to misbehaviors, it provides the user with a visual of the flow of action from beginning to end of the lesson and visually brings forth sequences, predominate or absence of a teacher or student actions. For example, if the teacher is curious about their use of questioning, it is easy to view when any of the four questioning codes were used and what codes occurred prior to or after. The user may find a complete absence of higher-level questions. The user may readily see what they tend to do following a student response. The user can target viewing of any codes by toggling on or off the display of any of the T, S or M codes. Aside from wait-time data, all the data is represented on this summary screen, which is often a large chunk of data and may clutter the screen.





As shown below the viewer can zoom in or out to enable data points to separate from each other.



Finally, as with other data points in SMT, the user can click on any data point (symbol) and the linked video will play.

**Small Groups** – When completing a quantitative observation and student engagement or misbehavior data is collected and tagged by an individual or group number, the observer can then use the *Student Engagement*, *Management Summary*, *Seating Chart Heat Map*, and *Small Group* analysis displays to examine the results and determine various things about how the lesson impacted small groups.

Data Buttons

Teacher Demographics

Lesson Demographics

Pre-Lesson Questions

Code Summary

Lesson Summary

Management Summary

Interaction Patterns

Student Engagement

Small Groups

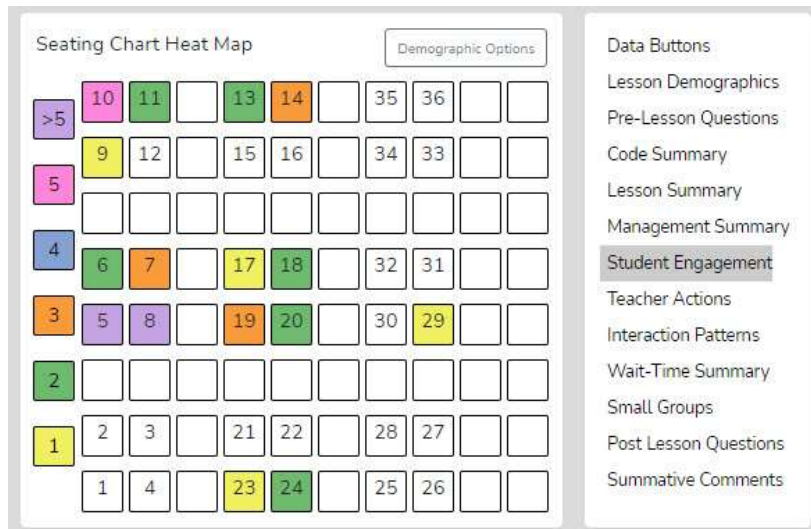
Wait-Time Summary

Post Lesson Questions

Summative Comments

	Misbehavior	Engagement					
	M10	S1	S2	S3	S4	S5	Total
G1	0	0	0	2	0	0	2
G2	0	0	0	2	0	0	2
G3	0	0	0	2	1	0	3
Total	0	0	0	6	1	0	7

The *Group Summary* data collected in conjunction with the student seating number allows for examining group dynamics and amount and levels of S code type of interactions that reveal the impact of a lesson on student-to-student interactions. The table shows S codes and M10 event responses coming from specific groups. If the teacher and observer wondered how the lesson stimulated student actions (S codes) within the small group, this data would indicate thereof. The *Seating Chart Heat Map* would show how much interaction occurred within that group and with color-coding to show the number of contributions each member made.



**Wait-Time Summary** – The wait-time data is only located within the *Wait-Time Summary*. Within the *Wait-time Summary* are general summaries of wait-time by wait-time type, by events, by total time, and averages for each wait-time. In addition, the lower half of the summary provides wait-time averages according to specific teacher or student actions. For example, the user can determine if more wait time is allowed with higher-level questions that require deeper thinking than lower-level questions.

Data Buttons	Wait-Time Type	Total Events	Total Time	Average
Lesson Demographics	Wait Time 1 (T-T)	5	00:17	00:03
Pre-Lesson Questions	Wait Time 2 (S-T)	11	00:18	00:01
Code Summary	Wait Time 3 (T-S)	7	00:16	00:02
Lesson Summary	Code	Wait-Time 1	Wait-Time 2	Wait-Time 3
Management Summary	T01			
Student Engagement	T02	6.50	1.00	
Teacher Actions	T03a	1.00		
Interaction Patterns				
Wait-Time Summary				
Small Groups				
Post Lesson Questions				
Summative Comments				

### Post Lesson Questions – Questions for the teacher to respond to following the lesson and observation.

- Tell me about today's lesson. Probe: What went well? What needed to be improved? If you taught this lesson over again, what would you change? Why?
- What do you think students learned from today's lesson?
- What evidence do you have of this learning?
- What evidence did you observe that learners of all ability levels were engaged in this lesson?
- Based on what happened in today's class, are you planning on making any changes to the next lesson? If so, what are those changes?
- What is the next step for this class in this unit?

**Team Unification and Synergy Using Data and Feedback** – If another member of the team has completed the quantitative coding of the video, before leaving the data analysis screen (or from the *Dashboard*), the user can open the *Team Table* click, toggle on, and view the data gathered and the analysis by that team member. Or the user can jump to any team member's completed quantitative or qualitative observation by clicking on the green checkmark in the expanded *Dashboard*.

**Event-only Codes** - An “event-only” code **only** can be clicked at any time, and it is added to the running record, but no timing is associated with it other than simply noting when it occurred on the lesson clock. There are only four event-codes in SMT, which are M10, M12, U1, and T13. M10 – single student misbehavior - is an event-only code used to note that student misbehavior occurred and when it happened during the lesson, but not for how long the student was misbehaving, nor does it disrupt the timing of the current code in play. For example, let’s say the teacher is lecturing, and a student is somewhat disruptive – the observer can note this misbehavior by tapping the M10 code (or the student’s number and then M10 code), and the misbehavior is noted without disrupting the timing of the lecturing event. The rest of the event-only codes are explained later.

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**Event and Timing Codes** - An event and timing code notes the event, when it occurred in the lesson, and how long it lasted.

- Except for the four event-only codes listed above, all the rest of the codes used for SMT data collection are event and timing codes and time how long that event lasted. For example, how long did it take for the teacher to ask the yes/no questions? How long was the student's response? How much time was spent giving directions for the activity?

**Lesson 3.3 Basic Rules and Options** – SMT is designed to maximize the quality and quantity of classroom observation data that an observer can collect **IF** the user follows some basic rules of use.

1. **Rule #1 – Always click an L code button first.** The L codes are used to designate what type of lesson is in play. Clicking the L code initiates the timing and the clock, and only then can the user enter T, S, M, or U codes. That specific L code remains until the lesson type changes, and then a new L Code is entered.

Tap the L codes at the very beginning of the lesson and the front end of any change in lesson type. Usually, the first L code clicked in any observation is L1 - short administrative tasks that teachers often do at the start of class, like taking attendance, collecting papers, or introducing the plan for the day. Each time the lesson type changes, the observer notes this change by clicking a different L Code as soon as they notice the change in lesson type. For example, suppose the teacher starts with administrative tasks. In that case, the observer clicks L1, then follows with a lecture and students taking notes; the observer would tap *L2: Lecture/notes* and would not tap another L code until the teacher changes to a different lesson type, such as moving into small group discussion (L5).

**\* When using video**, click PLAY and then immediately click an L code to start.

**\* When NOT using video** (while doing a direct observation in the classroom). Click an L code to begin the timing clock and start collecting data – an L code always starts the timing clock.

2. **Rule #2 - Always tap the T and S code buttons** (and two of the M code buttons) **at the end of the event.**

Since T0 to T12, S1-S9, M11, M13, and U2 are event and timing buttons, the observer needs to **tap the button at the end of the event**. For example, when the teacher is asking a question, the observer taps the T code just as soon as they finish asking a question. Or the S code is tapped when the student finishes responding, or the M11 code is tapped when the teacher finishes addressing the misbehaving student. Tapping at the end of the event gives the observer time to determine what type of question is being asked or what category/code the statement or response falls under. Tapping the button at the end of the event also initiates timing for what is going to be the start of timing for the next code entered.

Let's start with a close look at L codes and how they are used in data collection and analysis.

### 3.4 Learn About L Codes: Type of Lesson in Play

#### L Code Training Steps –

1. Read through the L Code definitions below and become familiar with the various L codes.
  - As with any of the codes or buttons, these codes do not have to be memorized as the labels are on the buttons. However, the user should be somewhat familiar with the choices available.
2. Read about how the lesson summary information is shown as a graph to examine student engagement and student misbehavior data.

#### L Code Definitions

**L1: Admin wrk** – Administrator work: The teacher is doing some administrative work like taking attendance, collecting or handing back papers, providing an overview of the class, etc.

**L2: Lecture/notes** – Lecture or notes: The teacher is dispensing notes and information using the smartboard, overhead projector, or simply talking or drawing on the board

**L3: Demonstration** – Demonstration: The teacher is doing a whole-class demonstration

**L4: Class discussion** – Class discussion: The whole class is having a discussion with the teacher and students contributing; at times, the teacher may ask pairs of students to interact briefly with each other – but the main focus discussion occurs as a whole group

**L5: Small group disc** – Small group discussion: The class has been broken up into small groups, perhaps by tables or a cluster of desks, and the primary discussion takes place within the small groups.

**L6: - S presentations** – Student presentations: Individual or small groups of students are presenting their work or findings to the rest of the class.

**L7: Writing activity** – Students are writing: Students are immersed in writing narratives or another writing activity, etc.

**L8: Reading activity** – Students are reading: Students have been asked to read a section of the chapter or an article, etc.

**L9: Worksheets/prob** – Worksheets or practice problems: Students are working on a worksheet or completing practice problems.

**L10: Digital Searching** – Digitally searching for information: Students are working in the computer lab or using phones, laptops, or iPads to search for information.

**L11: Using objects** – Working with objects: Students are using math or science manipulatives or 2d or 3d objects such as maps, globes, etc.

**L12: Lab activity** – Lab activity: Students are completing a lab activity, collecting, and organizing data.

**L13: Playing game** – Playing a game: Students are playing an academic game.

**L14: Review session** – Reviewing materials: Students are reviewing for a quiz or test, either individually, in small groups, or as a whole class.

**L15: Watch Video** – Video: Students are watching a video in class.

**L16: Assessment** – Assessment: Students are taking a quiz, test, or another type of assessment

**Lesson Summary on the Analysis Page** – After completing a lesson observation and entering the analysis screen, displayed in the *Lesson Summary* data window is a timeline showing the order and length of time each type of lesson used during the observation in the form of a horizontal graph. The sequence shown on the *Lesson Summary* (right) is L1-Admin Work, L4 – Whole Class Discussion, and finally, L06 – Student Presentation. This information can be helpful when wondering how much time the teacher used per lesson type. But, more importantly, the lesson type graph is used as a time-context reference when examining *Student Engagement Summary* and *Student Misbehavior Summary* data to show where those events were occurring in the lesson.

### How Can SMT Users Utilize the L Code (Lesson Type) Data?

After collecting and viewing L code data, teachers can use this information and data to help move towards highly effective teaching. The most important aspect of the lesson type data is that *Student Engagement* and *Management Summary* data are overlaid within the context of the lesson type so the SMT user can see where behavior problems or student engagement occurred during the lesson or lesson type.



In addition, the user can consider the following:

- Teachers can view how much time was spent on each segment of the lesson and think about if more or less time was used on lesson segments than intended and how the use of time affected the outcomes of the lesson.

- After the bell rings and the class period begins, teachers can analyze how much time it took to start teaching and then decide what to do differently to begin teaching right at the start of the class period.
- Teachers can examine how much time was used for each lesson segment and the time needed for transitions between each part of the lesson. This allows the teacher to ponder what changes should be made to reduce the time needed for transitioning from one part of the lesson to another.
- If the lesson ended early, teachers could view much time at the end of the lesson, was not used for instruction, and think about some productive things to insert into the lesson to utilize the remaining class time.
- Teachers can consider the whole class period and what might have been done to use the time even a bit more productively.

## Level 4 – Learn About M Codes: Student Misbehaviors and Teacher Reactions

**Management Summary** –We all know how student misbehaviors can tank a lesson or drive teachers out of the classroom. Therefore, it is critical to examine student and teacher behaviors regarding classroom management. The data indicates how the start of class, lesson type, or transitions might affect student behavior. This data, plus a visual representation of specific student misbehavior events and a summary of teacher response to such (or lack thereof), sheds some light on the complex issues surrounding misbehaviors. We might wonder if a certain table of students, a specific classroom area, or one specific student is generating most of the misbehaviors in class. We might wonder how many misbehaviors are occurring without the teacher intervening or how much time is used when the teacher pauses instruction to deal with misbehavior issues.

### In this lesson, the user will learn:

- How to collect data on student misbehaviors and teacher's reactions to misbehaviors
- How to link data to the student seating chart
- How to view the raw and analyzed misbehavior data
- How to use the demographic toggles to parse data by student characteristics
- How to view the misbehavior events and teacher reactions that are linked to video
- Questions to ponder regarding data collected and analyzed

### [Lesson 4.0: Video Overview of M Codes](#)

<https://youtu.be/JR5nZ61kAgw>

**Steps** - During this training, the user will set up a new observation and add a seating chart. The user will then practice entering M codes using seating chart numbers while viewing a pre-recorded lesson teaching five avatars. Finally, the user will view and explore the analysis of the M Code data collected in the observation under *Management Summary*.

**Lesson 4.1: M Codes** – To accomplish the goal of improving classroom management, four M codes are used to provide a picture of student misbehaviors in the classroom and how a teacher reacts.

**M10** – This code highlights single student misbehavior. It is an event-only code used to note that a student's misbehavior occurred and mark when it occurred during the lesson. However, it is NOT noted for how long the student was misbehaving, nor does it disrupt the timing of the current code in play. For example, let's say the teacher is lecturing, and a student is somewhat disruptive – the observer can note this misbehavior by tapping the M10 code, and the misbehavior is noted without disrupting the timing of the lecturing event. If it is a prolonged behavior, the user can tap M10 periodically to note that the behavior continues. The M10 button can be used by itself or with a specific student number. For example, the user can tap a student number before M10, such as 8-M10. If a student's number is used before tapping an M code, the analysis page will show rich data about who, when, and where misbehavior occurs in the classroom. Note that it is up to the observer to determine if something is misbehavior or not, but generally, misbehavior might be defined as any action that disrupts the learning of the individual or other students in the class.

**M11** – This code is used when a teacher addresses a single student's misbehavior. It is an event, and timing code specifically used when the teacher recognizes the student's misbehavior and somehow decides to stop

teaching and address it. The data will show at what time in the lesson the teacher addressed the misbehavior and how long that event lasted. For example, if the teacher stops teaching to talk with an individual student who is misbehaving, stops teaching to send non-verbal signals/verbal cues, or reprimands the student, the teacher's efforts to lecture have ended. At this time, the observer would click the code that signals the end of the current teacher action, such as lecturing (T1), and after the teacher finishes addressing a single student, the observer clicks M11.

**M12** – This code is used when a group of two or more students is misbehaving. It is an event-only code used when a small or large group of students are misbehaving and notes that a group-sized management event occurred. Like the M10 code, it does NOT, however, note for how long the students were misbehaving, nor does it disrupt the timing of the current code in play. This misbehavior incident might be the whole class of students, a small group of students at a table, or a variety of students in the class who are off-task and misbehaving in one form or another. Note that for small group size events, a G code could be inserted in front of the M12 to indicate which small group or groups are off task.

**M13** – This code is used when the teacher stops teaching to speak to the group of students misbehaving. This event and timing code is used when the teacher addresses a small group of students or the whole class. This code tracks the time the teacher stops teaching, addresses the misbehavior(s), and attempts to get the small or entire group of students back on track.

## Lesson 4.2 Practice Coding and Analyzing M Codes

**Setting Up an Observation** - Set up an observation to practice using M Codes with seating chart numbers – Create a *New Observation* with a title of *4.3 Coding M Codes* for the lesson topic. For the video URL, copy and paste the *SMT Training Practice Truck Hill M* <https://youtu.be/YSD7mNBbZ1Q> into the URL window.

*Optional Second Practice Observation* - If you wish to do another practice lesson using M codes, then use *SMT Training Practice Video Float Sink M* for the video. <https://youtu.be/uLJ3Jvn0jHw>

**Using Seating Chart Numbers with M Codes** – Set up a *Seating Chart* for this lesson observation that includes five avatar students seated as shown below; 3 students are seated in the back row, and 2 are seated in the front row, and the teacher facing them. Add in a T to indicate the teacher's position, as noted below.

3 Maria      4 CJ      5 Kevin

1 Ed          2 Sean

T (teacher)

- Review of Setting Up A Student Seating Chart
  - Individual Students - To identify where students are seated and give them a number, first, click on the icon STUDENT, so it turns blue, then click on a square representing the location of where a student is seated. A number will also appear labeled in the square. Repeat this action until all student seat numbers are identified – each number will appear sequentially in squares that are

clicked. To place the teacher on the seating chart, repeat the process outlined above using the TEACHER icon.

When you finish, choose *Save and Start* and choose *Quantitative*.

Note that the user can toggle on or off any set of T, S, M or U codes as well as the wait-time bar to reduce the complexity of the data collection screen. For practicing M codes, the user might want to have only the M codes displayed.

Start the video and click on an L code (in this case, the lesson will be an interactive demonstration) to begin timing. If comfort level allows, use the student seating chart numbers and M codes to note misbehavior and the teacher's response. Simply click on the seating chart number of the misbehaving students before clicking on M10. Or, to keep it simple, just click on M10 or M12 each time a student or the group misbehaves and then click on M11 after the teacher addresses the individual student or M13 after the teacher addresses group misbehavior. However, using student numbers before M10 provides more specific misbehavior data and a seating chart heat map visual of who and how many times regarding misbehavior.

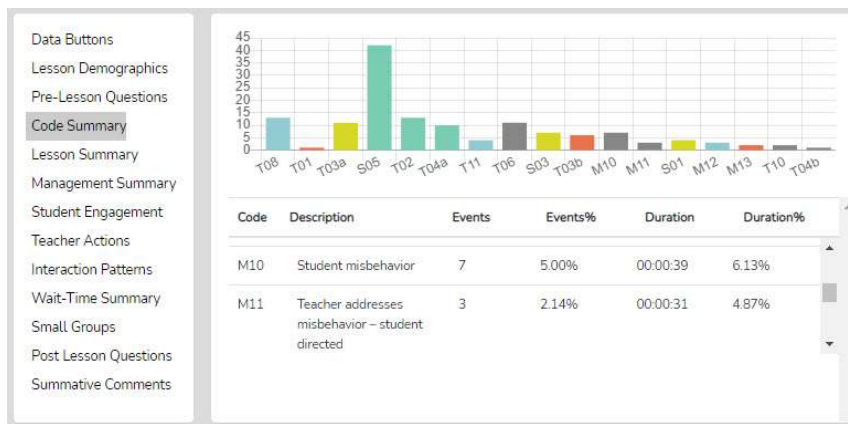
When finished with the observation, click DONE, and the screen will display the *Quantitative Analysis* screen.

Note: Data analysis for all observations can also be accessed from the *Dashboard* by selecting a previously created observation, clicking on the plus symbol (+), and clicking on the green checkmark in the quantitative or qualitative column. This will bring the user to the correlated *Quantitative* or *Qualitative Analysis* screen for that observation.

### **Lesson 4.3 - Quantitative Data Analysis Mode Features**

Like the *Qualitative Data Analysis* mode, the *Quantitative Data Analysis* mode has various features included, which help break down data and highlight various trends in teacher and student actions in the classroom.

**Code Summary** – As shown below, this feature shows how many times each code was used during data collection, including relative and specific use of the M codes. The user will only have M code data to examine for this lesson. Underneath the graph is a data table that displays data for 1) each of the specific codes by frequency of an event, 2) frequency of an event compared to the overall total number of events, 3) amount of time for each type of event, and 4) time accrued for that event compared to the total time of all the events. At the bottom of the data table for your practice observation, you can see that the M code data has been tallied and turned into percentages of events and time.

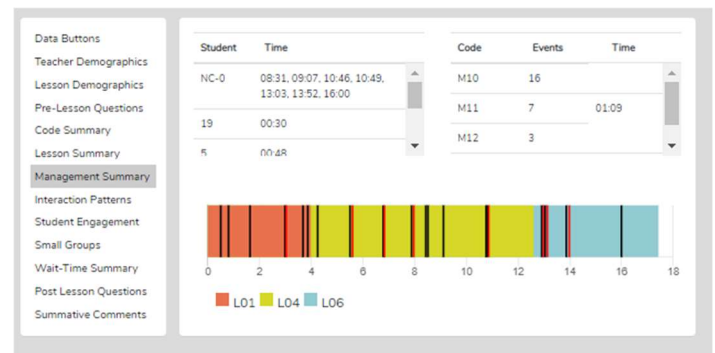


## Management Summary Features

The *Management Summary* displays events of individual student misbehaviors, group misbehaviors when the teacher intervened or responded to the individual behavior

issue or group behavior issue, and how much time was used for the intervention.

As shown in the figure at the right, when first clicking on *Management Summary*, any student misbehavior (M10) or group misbehavior (M12) event has a corresponding black vertical bar displayed on the lesson timeline graph noting when it occurred in the lesson segment. In addition, any teacher reactions to student misbehavior (M11) or group misbehavior (M13) are also shown on the lesson timeline graph but as a vertical red bar.



With the mouse wheel, the user can zoom in or out when the bars become crowded or reset the zoom to normal by clicking the Reset button, the double arrows (top right, above the timeline).

If the M10 events were coded with a student seating number, all those M10 events are displayed in the top left of the *Management Summary* window, separated by specific student numbers. If the user coded an M10 code without using student seating chart numbers, the quadrant in the *Management Summary* window would include NC-0 meaning **N**on-seating **C**hart coded **M** events. The times following are when in the lesson that event or events occurred. For example, NC-0 1:18 means an M code event, without a seating chart number attached to it, happened at 1:18 into the lesson. 19 – 00:30 means that student 19 misbehaved at 00:30 in the lesson.

The far-right side of the window contains the total counts of the M10-M13 codes. These show the number of events of each code and how much time was accrued (in minutes and seconds) due to the teacher responding to misbehaviors in the classroom. The data and time compiled indicate how much teaching time was lost due to the teacher addressing misbehavior issues.

**Links to Video** – Student misbehaviors and the correlating teacher response data points collected during the observation are linked to the clock on the video and are presented as vertical bars on the lesson timeline graph. As such, the user can click on any vertical bar to view the correlating video segment. In addition, the

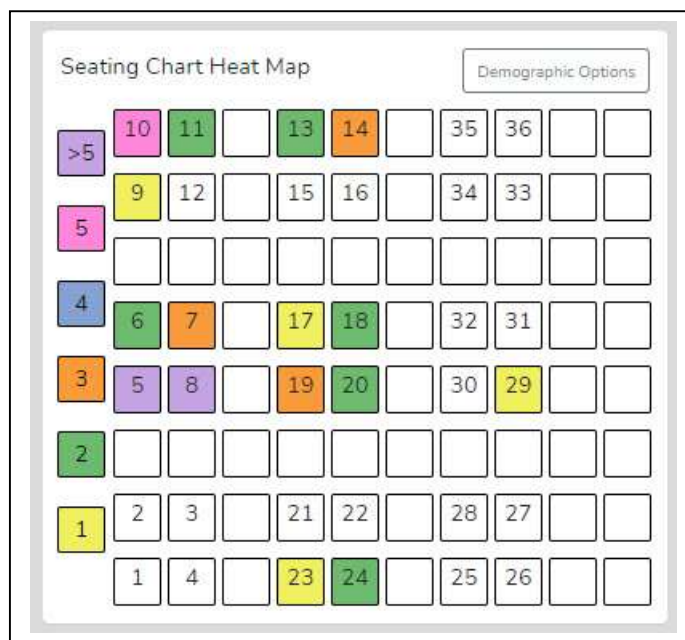


user can isolate the misbehaviors of a particular student. Suppose the user wishes to view all episodes of student 15's misbehaviors. In that case, they can click on student 15 in the *Management Summary* window or on the *Seating Chart Heat Map*, which will cause all the vertical bars to disappear from the lesson timeline graph except for the data points linked to student 15. The red bars, teacher interventions, are also clickable and are linked to the video segments.

**Seating Chart Heat Map** - If a specific student seating chart was defined (or when using the generic seating chart), the management data is visually represented in the seating chart heat map by colors representing misbehavior events ranging from 0 - >5. This visual representation provides the user with a map of the who, where in the classroom, and how many misbehaviors for each student took place during the lesson. This is useful information when attempting to analyze and reduce misbehaviors that impede the teacher's ability to teach and students' efforts to learn.

Also, note that when group data (Gs in seating chart) are collected, Student Misbehaviors (M10) can be coded to a specific group (or still coded to a specific student within that group). An analysis of the small group behaviors and misbehaviors can be found under *Group Summary* – more on this in *Training Level 8 – Small Groups*.

**Demographic Highlighting in the Seating Chart Heat Map** - In addition, if data is collected for specific students by using the student seat number before entering the M code, then the data can be displayed and toggled on or off by clicking on the Gender, ELL, SPED, or Minority buttons. If the observer should wonder how the students with special needs are engaged during the lesson, toggle this information to find out. If the observer or teacher is concerned about equity of participation regarding gender, minority, ELL, or students with special needs, then this data is available.



**Running Record** - At the top right of the quantitative analysis screen is the *Running Record* window, which shows all the events documented throughout the observation in sequence from the lesson start to finish. The user can scroll through the events and can click on **any** event (including behavior management issues) to see the related video. Note that soon the user will be able to export the data to a .csv file for use with powerful statistical packages.

The screenshot displays the 'Running Record' interface. On the left is a video player showing a teacher at a whiteboard. To its right is a table with the following data:

Index	Code	Description	Lesson Clock	Event Length	Wait Time
1	L01	Administrative	00:01:59	00:00:08	
2	L03	Demonstration	00:02:12	00:00:14	
3	T04a	Teachers asks question requiring speculation	00:02:15	00:00:02	00:00:06
4	T02	Teacher is giving directions	00:02:26	00:00:04	
5	T02	Teacher is giving directions	00:02:30	00:00:03	

Below the table are buttons for 'Team Table' and 'Download Data'. At the bottom is a 'Data Buttons' section with a list of categories on the left and a grid of buttons on the right:

- Data Buttons**
  - Lesson Demographics
  - Pre-Lesson Questions
  - Code Summary
  - Lesson Summary
  - Management Summary
  - Student Engagement
  - Teacher Actions
  - Interaction Patterns
  - Wait-Time Summary
  - Small Groups
  - Post Lesson Questions
  - Summative Comments

The grid of buttons includes:

- S1: S asks T ?
- T0: monitor
- L1: Admin wrk
- S2: S asks S ?
- T1: Present info
- L2: Lect/notes
- S3: S comnt 2 T
- T2: Directions
- L3: Demo
- S4: S comnt 2 S
- T3a: yes/no ?
- L4: Class disc
- S5: S answers ?
- T3b: sht ans ?
- L5: Sm grp disc
- S6: S dry erase rsp
- T4a: sht spec ?
- L6: S Psndatns
- S7: S digital rsp
- T4b: lng ans-jstfy
- L7: S Writing
- S8: Thk Pair Shr
- T5: reject ans
- L8: S Reading
- S9: Choral rspns
- T6: Ackn ans
- L9: Wkshd/prob
- M10: S misbeha
- T7: cnfrm ans
- L10: Digital Srch

### Data Buttons and Locating M Code Events in the Running Record

The *Data Buttons* and *Find* feature work as follows - If all qualitative results are toggled off in the *Team Table*, the top-right of the screen shows the *Running Record* of the quantitative data collection episode. If the user clicks on the *Data Buttons*, the set of buttons/codes from the quantitative data-gathering phase pops up in the bottom right quadrant. Suppose the user wishes to locate linked video examples of a specific code. In that case, they can click on a specific M button, which FINDS the first of that specific event type in the *Running Record* window and prompts the linked video to play. At the bottom of the *Running Record* window, a note indicates how many events of that type were located.

Note: The video begins playing at the very start of the time for that data event. If the user needs to see the video before that starting point, they can use the left arrow to rewind the video – each click is 10 seconds of rewind. Clicking NEXT takes the user to the next example of that specific event type. Clicking PREVIOUS takes the user to the previous example of that code, and the video begins playing. Clicking on a different data button will bring up the first example of that data type.

### Things to Ponder - How Can SMT Users Utilize the Specific M Code – Student Misbehavior Data?

Here are some guiding statements to ponder when analyzing the misbehavior data from the *Code Summary*, *Management Summary* data, and related *Seating Chart Heat Map* which will help the user focus on specific data and analysis features.

- How many classroom management events were noted by the observer? (Code Summary)
- How many of those classroom management events were not addressed by the teacher? Note that if when the number of M10 events is added to the number of M12 events, that number is greater than the number of M11 and M13 events, the teacher is probably ignoring some of the student misbehaviors, either intentionally or due to the frustration of not having an impact when they do intervene.
- How much time did the teacher use to intervene in management events? (M11 and M13)
- Check the map to see where the problems are occurring and see if they are proximal or distant to where the teacher is located. (Seating Chart Heat Map)
- Are behavioral issues proximal or distant to where the teacher is located? (Seating Chart Heat Map)
- Think about how the teacher moved around the classroom or stayed in one place. (Noted from watching the video)
- Where in the lesson, or during which lesson type, did the management issues occur? (Vertical bars on the lesson segment timeline)
- How many management issues occurred at the start of class, end of class, or during transitions from one lesson segment to another? (Vertical bars on the lesson segment timeline)
- How much time was needed to get all the students settled and begin the lesson when transitioning from one lesson segment to another? (video)
- How did the students behave or misbehave today as a whole, compared to other days in general? (teacher's impressions)
- Regarding specific students who might tend to misbehave, how was their behavior today? (teacher's impressions)
- Look at the data for specific students who might misbehave and consider their behavior in this specific lesson vs. other lessons. (Counts of misbehaviors)
- Was there anything about this lesson that might have contributed to more or fewer management issues? (Teacher speculation)
- When using the Seating Chart Heat Map and the Demographics toggles, what can you determine about behavior issues regarding select groups of students?

## Level 5 – Learn About S Codes: Student Actions, Student Engagement, and Using the Seating Chart

**Introduction** - For level 5 training, the user will learn how to use the nine S codes. Specifically, the first five relate to individual student responses (S1-S5) (which can be used in association with the seating chart), and the final four relate to whole group responses (S6-S9). Capturing this data provides a rich picture of student engagement in the classroom.

S codes are used when the observer wants to capture student actions using S codes, perhaps in a situation where the goal is to profile how students respond, either individually, within a small group, or the whole class. This allows the user to capture data on which students are engaged in answering questions, communication between the teacher and student, or communication between students regarding the quantity and type of discourse. To accomplish this goal, the observer can click on S1-S5 codes (at the end of the event) or first click on a student number before clicking on the S1-S5 codes (at the end of the event) 1-S5, 4-S3, 15-S5. The S6-S9 codes are not used with a student number because those codes refer to the whole class of students generating responses, such as when the teacher asks the students to write on the dry erase boards. Utilizing all the S codes allows the user to capture all the individual and whole-class responses and helps determine the full extent of student engagement and interactions during the lesson.

### The user will learn:

- The various individual and whole group student action codes (S codes)
- How to collect S codes with or without seating chart numbers
- How to look at both raw and analyzed student engagement data
- How to view the color-coded levels of engagement in the Seating Chart Heat Map
- How to use the Demographic toggles to parse data using student characteristics
- How to view the video linked to each of the data points
- Questions to ponder about teaching when examining the S code data and analysis

**Steps** - During this training, the user will learn the student action codes and then practice entering S codes using seating chart numbers while viewing a pre-recorded lesson of someone teaching five avatar students. Finally, the user will view and explore the analysis of the S Code data collected in the observation under *Student Engagement Summary*.

### [Lesson 5.0 Video Overview of Using S Codes – Data Collection and Analysis](#)

<https://youtu.be/FOAuOEPytRo>

**Student Engagement Summary** – This specific data can tell the user:

- If a few students are responding versus many students contributing responses
- If responses are forthcoming from students who sometimes are left out, such as students with special needs.
- How much of the lesson involves students who are actively contributing - communicating by responding, asking questions, or commenting to the teacher or other students vs. passive and hunkered down in their seats.

- The whole picture regarding student engagement in the classroom, both individually and as a whole class, compared to time used and centered on the teacher's actions.

**Training Progression** – First, the user will collect data and then learn how to look at the analysis pages to develop a rich sense of student engagement in the classroom, which sets the foundation for improving student engagement.

**Lesson 5.1 S Codes** – The S Codes are:

<b>S1: Asks T question</b>	- A Student asks the teacher a question.
<b>S2: Asks S question</b>	- A Student asks another student a question.
<b>S3: Comment to T</b>	- A Student makes a comment to the teacher.
<b>S4: Comment to S</b>	- A Student makes a comment to another student.
<b>S5: Answers question</b>	- A Student answers a question (from the teacher or another student).
<b>S6: Dry erase response</b>	- All or most students answer a question using a dry-erase response board.
<b>S7: Digital response</b>	- All or most students answer a question using a digital device.
<b>S8: Think pair share</b>	- All or most students are asked a question, think, pair up and share responses.
<b>S9: Choral response</b>	- All or most students respond as a group to a question.

**Lesson 5.2 Practice Data Capture Using S Codes and Student Numbers** - For this training, the user will learn to use S codes 1 - 9 in association with seating chart numbers by coding a video of someone teaching five avatar students while using the seating chart.

**Training Steps:**

1. Create a *New Observation* and use the video URL for the SMT Practice Video Float and Sink M - <https://youtu.be/uLJ3Jvn0jHw>. For lesson topic name, type Lesson 5.2 S Codes Seating Chart.
2. Set up a *Seating Chart* for the five avatar students on the video, as shown below, three seated in the back row and two seated in the front row. Add in a T to indicate the teacher's position, as noted below.

3 (Maria)    4 (CJ)    5 (Kevin)

1 (Ed)    2 (Sean)

T

3. Click *Save and Start*.

Note that the user can toggle on or off any set of T, S, M or U codes as well as the wait-time bar to reduce the complexity of the data collection screen. For practicing S codes, the user might want to have only the S codes displayed.

Note: This lesson takes approximately 30-45 minutes to complete and should not be started unless the user has adequate time to complete it. Therefore, after completing the *Seating Chart*, the user can either click *Save and Return* to return to the *Dashboard* (if the user needs to complete training at another time) or if proceeding directly to Lesson 5.3, click *Save and Start*.

If you choose Save and Return to Dashboard and return later to continue with the training, begin at the *Dashboard*. Find the observation you created titled 5.2 S Codes and Seating Chart, click on the plus (+) symbol, and then click on the green START button under the quantitative column - your data collection window will open, with a video in the window.

4. Chose *Quantitative*, and before beginning, review the S code labels and remind yourself of what they represent.
5. Press “play” on the video control and press L1 to sync your data with the video.
  - a. Note: An L code should always be the first code chosen at the start of each observation.
6. Code the video using S codes. Identify individual student responses by clicking on a student seating chart number prior to using an S1-S5 code. For the S6-S9 codes, no student seating chart numbers are used.
  - a. Important reminder: when any student starts an action such as responding to a question, the user should first click on the student number on the seating chart. Then when the student has finished talking, the user immediately clicks on the appropriate S code button. These types of codes that are event-timing buttons are always clicked at the end of the event.
7. When you are finished with observing and coding the video, click DONE. You will be taken to the *Quantitative Data Analysis* screen, where you can continue with lesson 5.3 below. If you are continuing with Lesson 5.3, then later, you can exit SMT, then return to the data analysis of the lesson by using the *Dashboard*.

### Lesson 5.3 S Code – Student Engagement Data Analysis Options

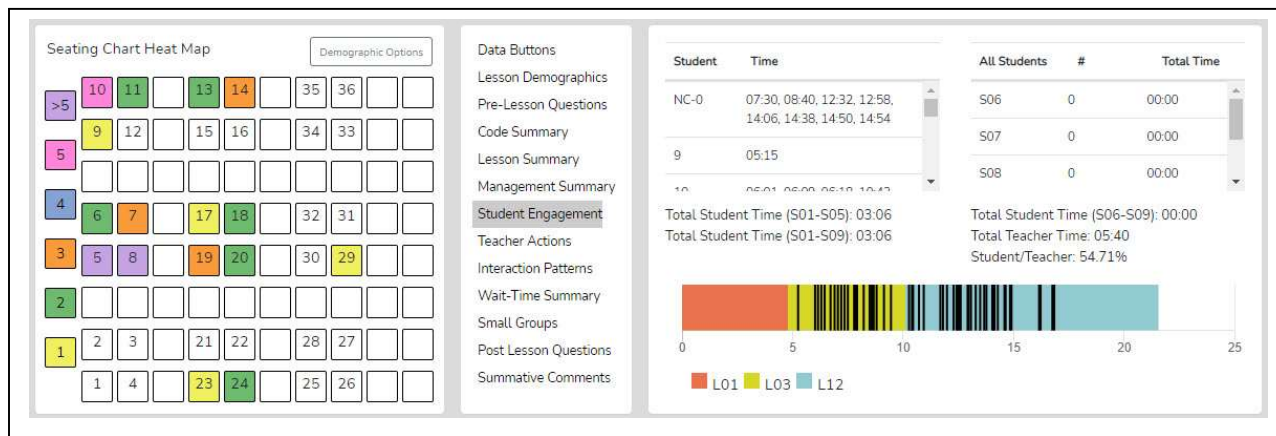
**Introduction** - In this lesson, the user will learn how to examine the details and meaningful information displayed on the quantitative analysis screens and how S code data is linked to the video.

#### Training Steps:

1. If you continued from lesson 5.2, you would already be at the quantitative analysis screen. If not, go to your *Dashboard*, select the lesson you created, click the plus symbol (+), click on the green arrow in the quantitative column, and this will bring you to the quantitative analysis screen.

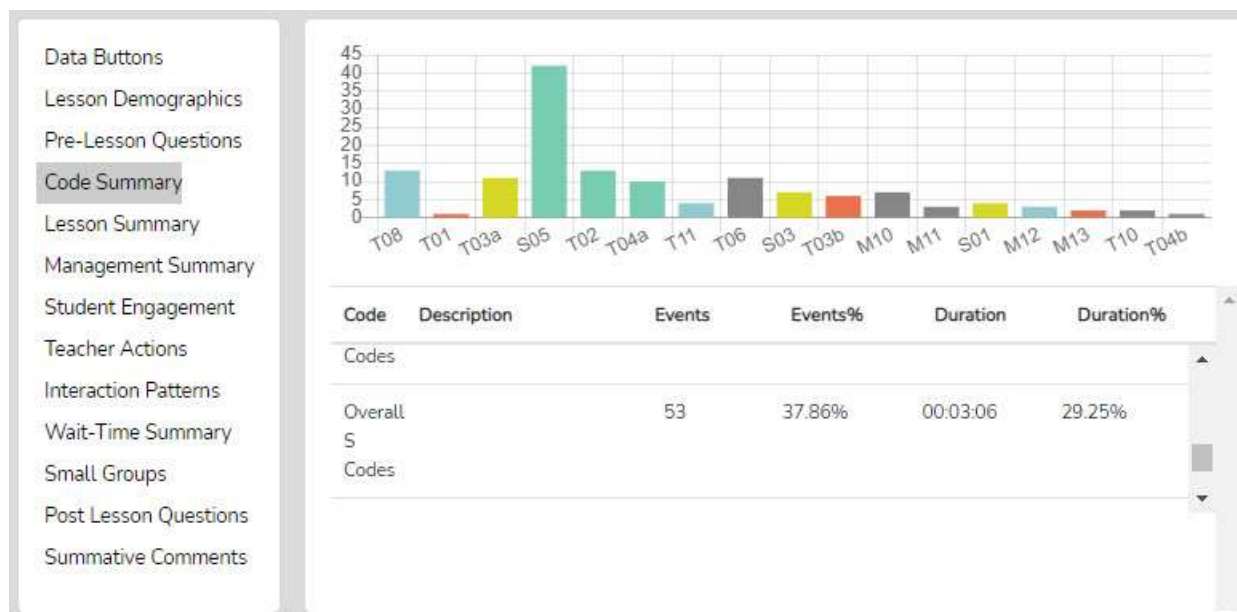
## Student Engagement Summary Features

The Student Engagement summary displays events of individual student code events (S1-S5), whole-group engagement (S6-S9), and how much time was coded for student engagement versus teacher talk.



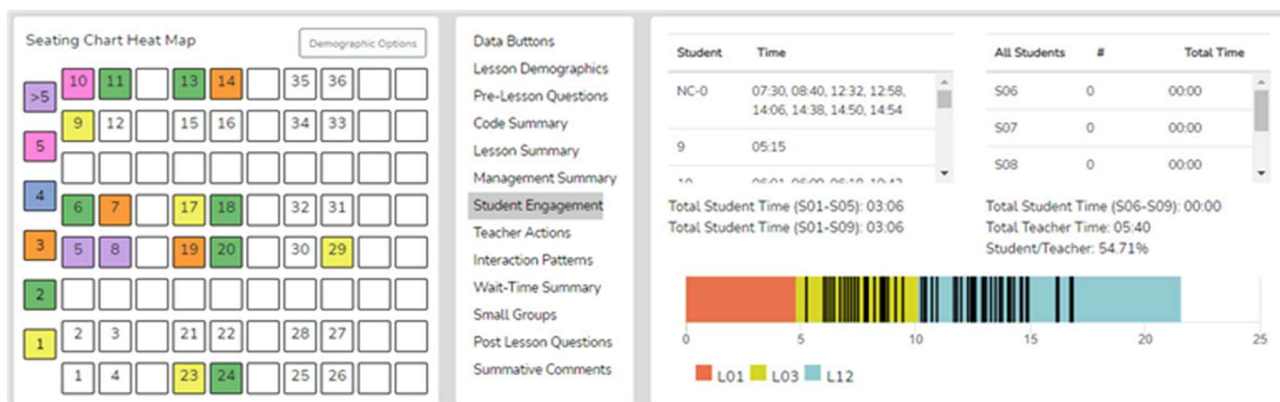
When first clicking on *Student Engagement*, like the M code data analysis page, the user will notice the lesson timeline graph containing black and red vertical bars as well as a couple of tables above the graph.

**Code Summary** –As stated before and shown below, this feature provides a graph of how many times each code was used during data collection, including relative and specific use of the S codes. Underneath the graph is a data table that displays data for each of the specific codes by frequency of an event, frequency of an event compared to the overall total number of events, amount of time for each type of event, and time accrued for that event compared to the total time of all the events. At the bottom of the data table for your practice observation, you can see that the S code data has been tallied and turned into percentages of events and time.





**Student Engagement Summary** – The Student Engagement summary displays data regarding individual student code events (S1-S5) and whole-group engagement (S6-S9) and how much time was coded to student engagement versus teacher talk.



**Tables Above the Graph** - Like the *Management Summary*, if the S1-S5 events were coded with a student seating number, all those events are displayed in the top-left of the *Student Engagement* summary window, separated by specific students. The student seating chart number is displayed, followed by the times that specific students were coded as contributing an S code event. If the user coded an S code without using student seating chart numbers, the quadrant would include NC-0 (followed by clock times), meaning non-seating chart-coded S events. For example, NC-0 1:18 means an S code event, without a seating chart number attached to it, occurred at 1:18 into the lesson.

Whole class responses and engagement is represented by codes S6-S9. Suppose the teacher asks a question directed to the whole class of students or gives direction for them to act related to thinking or answering a question. In that case, the S6 – S9 codes are utilized to gather data on whole-class engagement regarding responding using dry erase boards, digital responses on Chromebooks, iPad, or another device, think-pair-share, or choral responses. The upper right window provides a breakdown of each of the S6-S9 codes by the number of events, the amount of time that is related to each S code, and the tally for all the S6-S9 codes.

**Graph and Vertical Bars** - Below the table is the lesson timeline graph, displaying the lesson segments with vertical bars. When clicking on Student Engagement, black bars are displayed for each student number-coded action (S1-S5) and red bars for the group responses (S6-S9). This allows the user to see where in the timeline of the lesson students contributed and showed actions of student engagement. With the mouse wheel, the user can zoom in or out when the bars become crowded or reset the zoom to normal by clicking the Reset button, the double arrows (top right, above the timeline).

Suppose the user wishes to only see the events on the timeline for a specific student, then first click on a specific student number in the upper left table above the graph. In that case, all bars disappear except for the black bars (events) for that specific student. When clicking on any of the S6, S7, S8, or S9 labels in the upper right table, the red bars for that specific data appear on the graph. If the user wishes to transition from a specific data set to the entire data set, they can simply click on *Student Engagement*.



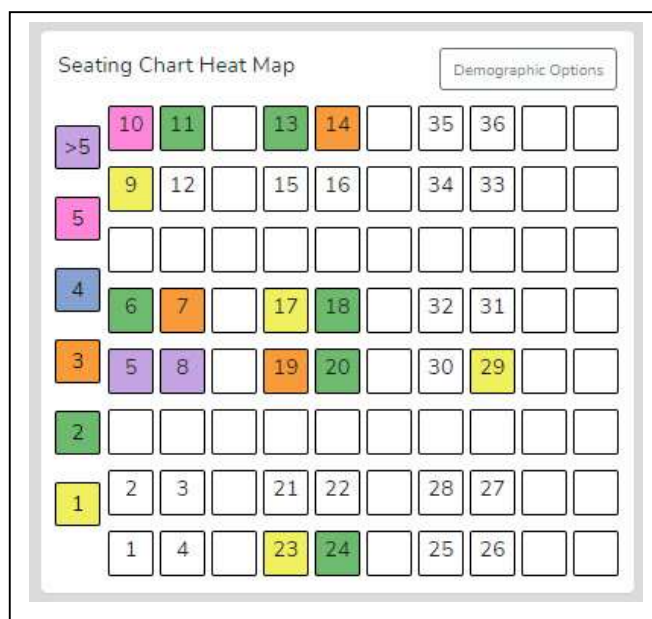
**Links to Video** – Student engagement data points collected during the observation are linked to the clock on the video and are presented as vertical bars on the lesson timeline graph. As such, the user can click on any vertical bar to view the correlating video segment. In addition, the user can isolate the engagement of a particular student. For example, suppose the user wishes to view all episodes of student 15’s engagement. In that case, they can click on student 15 in the *Student Engagement* window or on the *Seating Chart Heat Map*, which will cause all the vertical bars to disappear from the lesson timeline graph except for the data points linked to student 15.

**The Ratio of Student to Teacher Time** - Immediately above the graph is the tally for total S1 - S5 time (individual student engagement events), the total time for S1-S9 codes (total student engagement time for the lesson), total teacher time (T1 through T12 – to be covered in a subsequent lesson), and the percentage of total student engagement time vs. total teacher time. Not coding T codes yet, the S code ratio should show 100%. When coding a lesson using both S and T codes, if the S to T ratio is greater than 50%, students contributed at least 50% of the time in the class. If the ratio showed equals 5%, it means that the students were contributing very little. Note that this ratio is a rough indicator of student engagement in the classroom. A class resulting in a 10/90 ratio looks very different compared to a class with a 90/10 ratio.

**Student Seating Chart Heat Map** - The *Student Engagement* data is also visually represented in the seating chart window by a color-coded heat map indicating which students were coded for engagement and the number of engagement events connected to them. This visual nature of the seating chart heat map provides the user with an instant picture of student engagement – who, how many events are occurring in the classroom, whereas the timeline provides the “when” during the lesson.

#### Demographic Highlighting in the Seating Chart Heat Map

- In addition, if data is collected for specific students by using the student seat number before entering the S code, then the data can be displayed and toggled on or off by clicking on the gender, ELL, Sped, or Minority buttons. If the observer should wonder how the students with special needs are engaged during the lesson, toggle this information to find out. If the observer or teacher is concerned about equity of student participation and engagement regarding gender, minority, ELL, or students with special needs, then this data is available.



**Data Buttons and Locating S Codes in the Running Record** – In the prior training level, the user learned how to locate specific code events in the *Running Record*. This is simply a reminder that the user can locate specific S code events in the *Running Record* and view the linked video using this function.

## Things to Ponder Using S Code – How Can SMT Users Utilize the Specific S Code – Student Engagement Data?

- Consider how many of the students responded to at least one question and how many students were not part of the conversation. (Heat Map)
- Think about your teaching, and how many of the students responded to each other at least once, and what you might change to produce more student-to-student interactions. (*Interaction Patterns S-S #*)
- Think about the average number of responses per student, how that fits your student engagement goals, and how that number might be increased. [Total of S1-S5 plus (the total of S6-S9 x the number of students in the class) / number of students in class]
- Look at the various part of the class or type of lesson segment and determine if or how students were engaged as evidenced by vertical bars. Think about parts of the lesson that were absent of student contributions and engagement and how your lesson might be altered to produce more student engagement.
- Using the demographic toggles on the Seating Chart Heat Map, examine student engagement by demographics such as gender, minority, ELL, and Special Education – think about what the data suggests in terms of equity regarding student engagement.

### Need More Practice Using S Codes with the Seating Chart?

If you wish to practice another lesson using S codes and seating chart numbers, create a new observation using the same seating chart, but use the URL for the video labeled SMT Practice Video Truck Hill M <https://youtu.be/YSD7mNBbZ1Q>.

### Lesson 5.5 Practice Data Capture Using S and M Codes with Seating Chart

**A Complete Understanding** – Having collected data on both S and M codes with analysis of such shown in *Student Engagement* and *Management Summary* results in a much better understanding of the student actions and dynamics of the classroom. Adding in data collection of the teacher’s actions, probably the most important data to collect regarding improving teaching, helps to develop even more of a complete picture.

**Practice S Codes and M Codes** – Now, to merge what you have learned so far, complete an observation using both S and M codes while using student seating chart numbers.

#### Training Steps:

1. Create a *New Observation* using the same video and the same seating chart from Lesson 5.2.
2. Label this observation *Lesson 5.5 S M Seating Chart*.
3. The video URL to copy and paste into the lesson setup is again SMT Practice Video Truck Hill M - <https://youtu.be/YSD7mNBbZ1Q>.
4. Proceed to practice coding using both the S codes and M codes using student seating numbers.
5. When finished, click done and examine the quantitative data analysis screens such as *Code Summary*, *Student Engagement*, *Management Summary*, and *Data Buttons* (Find Function) for teaching effectiveness indicators or things that the teacher might modify to have even more of a positive impact on the learner.

## Level 6 - T Codes: Teacher Actions and Behavior

**Introduction** – This is the level that is going to require a bit more effort and practice. But the T codes are probably the most important data to collect and analyze. It is widely known that teachers have a huge impact on the classroom learning environment. Most sources acknowledge that the teacher is the single most important factor affecting student learning (if the student comes to class). Research is very clear that teacher behaviors and actions impact or affect student learning, student behavior, student self-efficacy, and much more in a significant manner. As such, it is critical to examine teacher behaviors and actions in the context of lessons and teacher-student interactions. After mastering this level, the SMT user will be able to collect a plethora of critical T, M, and S-related data that will produce rich and robust analysis, therefore laying the foundation for evidence-based commentary, feedback, and suggestions for improving teaching.

### The user will learn:

- The fourteen teacher action codes (T codes) and what they represent
- How to collect T codes with or without seating chart numbers
- How to view both raw and analyzed teacher action data
- How to view the video linked to each of the data points
- How to examine Teacher Actions (T codes) vs. Student Actions (S codes) total time and the ratio of T to S times
- How to view the Interaction Patterns data that show tendencies and predominant teacher-student interactions.
- Questions to ponder about teaching when examining the T code data and analysis

**Steps** - During this training, the user will then practice identifying actions representing T codes, the practice data collection entering T codes while viewing a pre-recorded lesson of someone teaching five avatar students. Finally, the user will view and explore the analysis of the T Code data collected in the observation under *Code Summary and Interaction Patterns*.

1. Watch the video overview of using the T codes and learn what each of the T code buttons represents in terms of teacher actions.
2. Read the subsequent pages in the manual pertaining to T codes and become familiar with the T code definitions shown in Lesson 6.1.
3. Complete the paper-pencil activity to practice recognizing teacher actions and pairing them with a T code.
4. Practice identifying T codes while watching a video of a teacher teaching to develop speed and accuracy.
5. Identify key features of the T code analysis and incorporate the resulting data when looking for ways to improve teaching or when providing evidence-based feedback to others.

### Lesson 6.0 Video Overview of Using the T Codes

[https://youtu.be/1Evn9j8e\\_DQ](https://youtu.be/1Evn9j8e_DQ)

**Lesson 6.1 The T Codes** - There are fourteen codes that are used to indicate teacher actions and behaviors. All codes (except T13) are event/timing codes, and the T Codes are:

**T0. Monitoring class:** This code is used when students are working, and the teacher monitors the classroom or perhaps does administrative work, such as taking attendance.

**T1. Presenting Information:** This code is used when the teacher lectures or presents information in the form of extended teacher-initiated commentary. This teacher talk is more than the one to two sentences that characterize a T2 below. One rule of thumb is if the teacher is not giving directions but making statements or providing information that goes over about 15 seconds, they have moved into a “presenting information” phase and coded as a T1.

**T2. Give Directions: Gives Directions, Makes a Statement, or Asks a Rhetorical Question:** This code is used when teacher-initiated statements such as directions, statements, or a rhetorical question to which no answer is expected are used. “Statements” can normally be thought of as one to three sentences.

#### **Four Question Types**

**T3a. Asks Yes/No Question:** This code is used when the teacher asks a question that requires a yes/no answer.

**T3b. Asks Short Answer Question:** This code is used when the teacher asks a question framed for a yes or no response.

**T4a. Asks Thought-provoking Short Answer Question:** This code is used when the teacher asks a question that requires deep thinking, perhaps in the form of speculation, and cannot be answered with 1-2 words but does not ask for justification or explanation for the response.

**T4b. Asks Thought-provoking Extended-answer question:** This code is used when the teacher asks a question that requires deep thinking, perhaps in the form of speculation, cannot be answered with 1-2 words, but also requires a justification for that answer.

#### **Eight Things Teachers Might Do After Students Respond**

**T5. Reject Student Comment, Answer, or Question:** This code is used when the teacher rejects a student’s response in a negative manner, indicating that a student’s answer is wrong or the teacher cuts off a student’s response.

**T6. Acknowledges Student Comment or Answer:** This code is used when the teacher acknowledges the student without evaluation. For example, the teacher might give a neutral response indicating the student was heard but does not confirm or reject the student’s answer.

**T7. Confirms Student Comment or Answer:** This code is used when the teacher evaluates a student’s response positively. For example, in the form of praise.

**T8. Repeats Student Comment:** This code is used when the teacher repeats the student’s response.

**T9. Clarifies or Interprets What Student Said:** This code is used when the teacher re-words or interprets a student’s response. This technique may be used to clarify, emphasize, or improve a student’s response.

**T10. Answers Student Question:** This code is used for short, succinct responses to student questions.

- Note: If the response becomes long-winded and extends beyond 15 seconds, a T1 should be used to indicate that the teacher responded with a mini-lecture when responding to the student question.

**T11. Asks Student to Clarify or Elaborate:** This code is used when the teacher asks a student to extend, repeat, or clarify a student’s response.

**T12. Uses Student Question or Idea:** This code is used when the teacher redirects a student’s question to another student or to the small group or whole class.

## Other

**T13. Annoying Verbals or Non-Verbals:** T13 is an event-only code to be used when noting something nonverbal in nature, such as an annoying habit that is worth noting and relaying to the teacher. Use this when the teacher displays annoying verbals or non-verbals that detract from instruction or perhaps distract students.

**Lesson 6.2 Learning T Codes on Paper:** When observing someone teach, there is a lot of action taking place, and the observer doesn't have much time to sit and think about which teacher action they just saw because the next teacher or student action is taking place. Therefore, learning to recognize a particular T code quickly is important. The SMT team has developed a set of training exercises to develop this skill set and scaffold your skill to a level that will allow you to keep up with the pace of instruction in the classroom. It begins at a slow pace, first with practice on a transcript to develop accuracy in coding T codes before using video. **You will need to download the *Interactions Module* found at [SeeMeTeach.com](http://SeeMeTeach.com) - under the heading *Support and Training*, then *PD Skill Development Modules* and work your way through **Chapters 1-5** of the Interactions Module - follow the instructions to develop proficiency with recognizing specific T code events. Read about the "Teaching Fingerprint" and read about the examples of each code while using the mnemonics to help you remember each code. Then complete the practice sheets coding the teacher's actions on the transcripts, checking your answers with the key, followed by more practice until attaching a code to a teacher's action becomes easy and fast. Learning the T codes on paper is an important step to recognizing a specific teacher action and coding it to one of the 15 categories. When confidence has been developed to recognize T code actions, proceed to Level 6.3.**

**Lesson 6.3 Practice – Data Capture Using T Codes With Video:** Now, you will practice coding only T codes while watching a short video.

1. Set up a *New Observation*, copy the URL for the SMT Practice Video Truck Hill L - <https://youtu.be/pjv0FSyR5sw> into the video window.
  - a. Note: There is no need to create a seating chart this time since S or M codes are not used in this practice session. Also, note that some users need to click pause on the video to give them time to determine which teacher action (code) they just viewed which is ok early on in this process, but the goal is to build up a skill level that keeps up with the pace of teaching.
2. Choose *Save and Start*, then choose *Quantitative*.
3. Begin the data collection by pressing play and immediately press an L code to start the data collection timing clock.

Note that the user can toggle on or off any set of T, S, M or U codes as well as the wait-time bar to reduce the complexity of the data collection screen. For practicing T codes, the user might want to have only the T codes displayed (toggle off the other codes).

Due to the quantity and complexity of the T codes, you might need to practice with more than one video before you have confidence in using T codes. If so, use the links below to access more videos to use to practice coding T codes.

SMT Practice Video Float Sink A - <https://youtu.be/oxxazkrBChg>

SMT Practice Video Float Sink B - <https://youtu.be/k38GViRMJIM>

SMT Practice Swinging Spheres - <https://youtu.be/XIPKXlkeHMA>

## 6.4 T Codes – Teacher Actions Analysis Options

**Introduction** - In this lesson, the user will learn how to analyze the T code data analysis and look for indicators that will help identify a teaching fingerprint as well as identify other indicators that can be used to help improve teaching and as evidence-based feedback to others.

**Lesson 6.4 Video Overview of T Code Analysis**

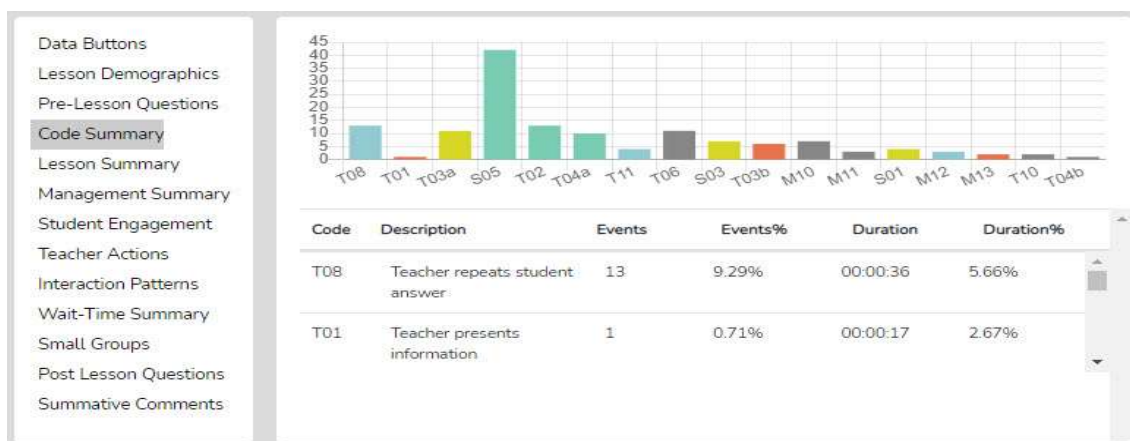
<https://youtu.be/fcHEvdz0X-Q>

### Training Steps:

1. Examine the raw data and analysis from the 6.3 observation that was only coded using T codes.

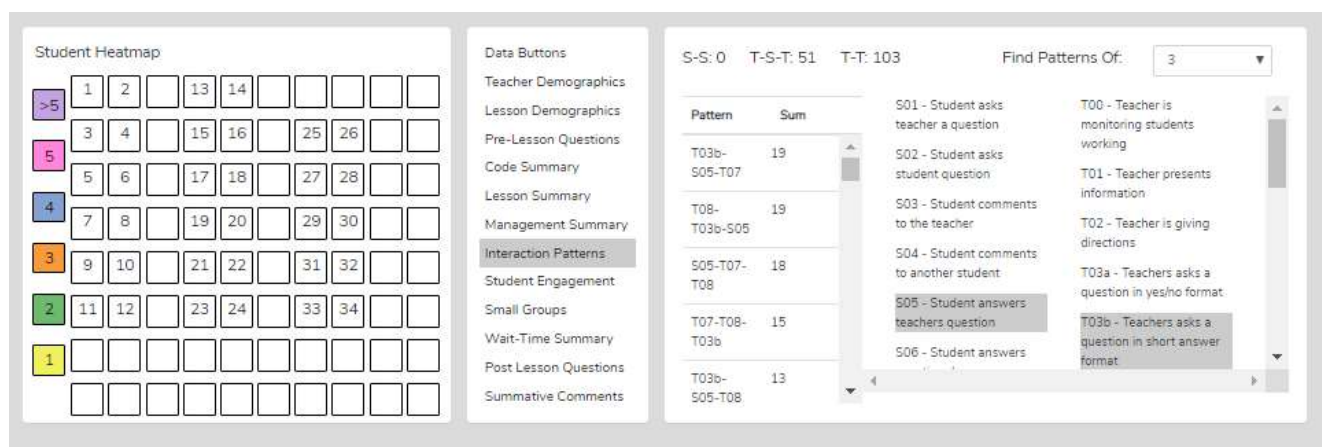
**Code Summary** – As stated before, the *Code Summary* provides a graph of the number of events of each code used during data collection, in this case, showing relative and specific use of T codes. Underneath the graph is a data table that displays data for each of the specific codes by frequency of an event, frequency of an event compared to the overall total number of events, amount of time coded by the specific event, and time accrued for that event compared to the total time of all the events. At the bottom of this data table, the T code data have been tallied and again turned into percentages of events and time. The *Code Summary* data provides indicators of teacher tendencies and helps to answer questions such as:

- What are the counts, percentages, and total time for each T code?
- What were the predominant T codes exhibited in this lesson, and how does this match your expectations?



**Interaction Patterns** – Teachers have teaching habits, tendencies, or overt patterns of how they interact with students. These habits are often the same regardless of the lesson or the class and might be repeated year after year unless specific analysis and intervention occur. These well-ingrained ways of interacting with students are like fingerprints, an interaction fingerprint (Berg, 2019). Research has demonstrated that some patterns are more productive for getting students to think deeply, take risks, listen to other students' ideas, pose more creative answers, or be more thoughtful about the task at hand. The interaction pattern data analysis SMT provides helps to identify predominant patterns displayed by the teacher.

To do this, SMT takes all the T and S codes and looks for sequential patterns, and displays those from most to least. This allows the user to compare patterns of interactions to the goals of instruction. For example, if the most predominant code is T3b-S5-T7 and has a Sum of 19, it means that the teacher exhibited that sequence of three codes 19 times during this lesson observation. The teacher asked a yes/no question, followed by a student response, followed by confirming the answer.



**Why Are Interaction Patterns Important?** - Examining the most to least predominant patterns help us understand how or if our teaching matches our goals for instruction. For example, if our goal of the lesson is to get students to think deeply about the subject matter or processes of science, but we don't find a pattern that includes T4a or T4, or no T11 or T12, then doubt is cast on whether we are facilitating this goal of student thinking, or not.

**Identifying Predominate Patterns of Interaction** – In order to look for predominate patterns of interaction in your observation:

1. Go to *Interaction Patterns* and, first, choose the length of the pattern (from 3-6 events in sequence – it is suggested to begin with a pattern of 3).
2. Look at the left-hand column showing *Pattern and Sum* (which shows the number of events of that sequence).
3. Click on that pattern, and the descriptions of codes within that sequence are highlighted on the right-hand side (this way, the user doesn't have to remember what a code represents).
  - a. For example, if the most predominant code is T3a - T7 - T9 has a Sum of 21, it means that the teacher used that sequence of three codes 21 times during this lesson observation. The teacher asked a yes/no question, followed by a student response, followed by confirming the response.



**Other Predominate Patterns of Interaction** - In addition, at the top of this section of data are counts for how many times:

- T-T was exhibited in the lesson (teacher action followed by teacher action; for example, the teacher asked a question, then rephrased the question).
- S-S was counted (how many times a student action was followed by another student action, such as a student responding to a teacher posed question followed by another student asking that student a question)
- T-S-T was counted (teacher action, followed by student action, followed by teacher action – this is the normal interaction in class, but this pattern could be any number of things - therefore, the pattern count helps identify the predominant fingerprint of the teacher.

Pattern	Sum
T03b-S05-T07	19

What does this information tell us as observers and teachers being observed? In this case, an S-S pattern occurred zero times, indicating that a student did not respond to another student. This essentially is a lesson devoid of student-to-student interactions. Fifty-one times the teacher responded after a student response (the normal classroom interaction pattern that is often less effective), and one hundred and three times, the teacher followed themselves up with another statement or question. This rough measure of classroom interaction tells us that the teacher is the main communicator in the classroom; students are somewhat passive and do not interact with each other in some manner.

#### How SMT Users Can Utilize the Interactions Patterns – Teacher and Student Interactions Data

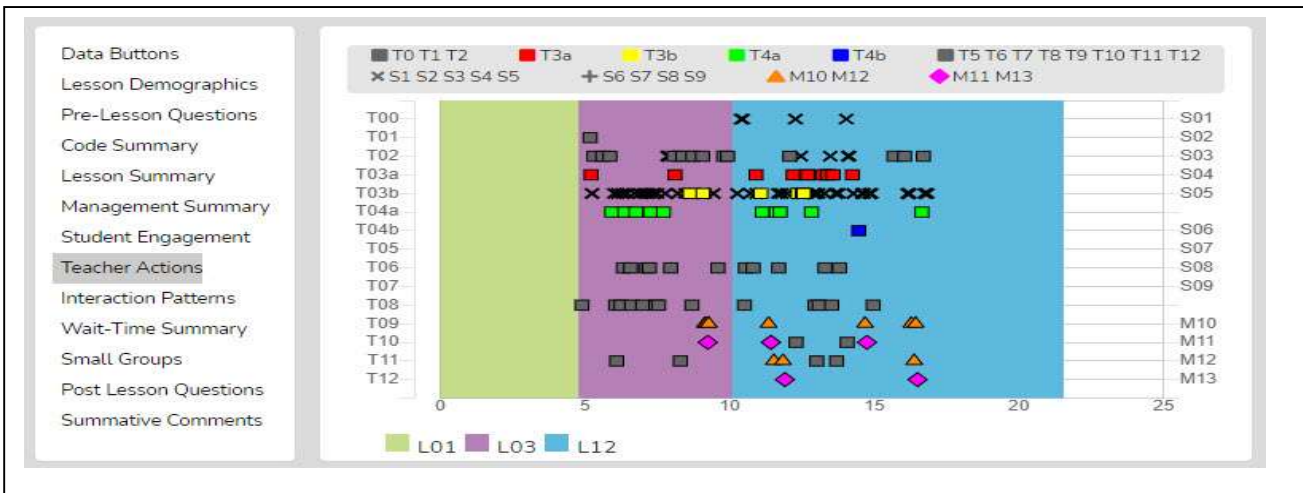
- The longer the lesson, the more probability that the predominant patterns stand out. This allows the user to easily identify the teacher's most frequent patterns of interacting with students. Consider how these patterns support or do not foster the goals and intentions of the lesson.
- Identify what patterns should be present to best support the goals and intentions of the lesson.
- Look at the S-S counts and consider how that amount of student-student interaction fits with the goals of the lesson and the strategy used for the lesson. Identify how changing the interaction pattern might have fostered more student-to-student interaction.
- Look at the T-S-T counts and consider how this number balances with the S-S counts.

**Data Buttons and Locating T Codes in the Running Record** - To search for specific examples of T codes exhibited in the video, go to *Data Buttons*, click on T code that you wish to view on the video, and the video segment should show the teacher displaying that specific T code. For more of that specific T code example, click on *Next* or click on a different T code button to view the video of another T code.

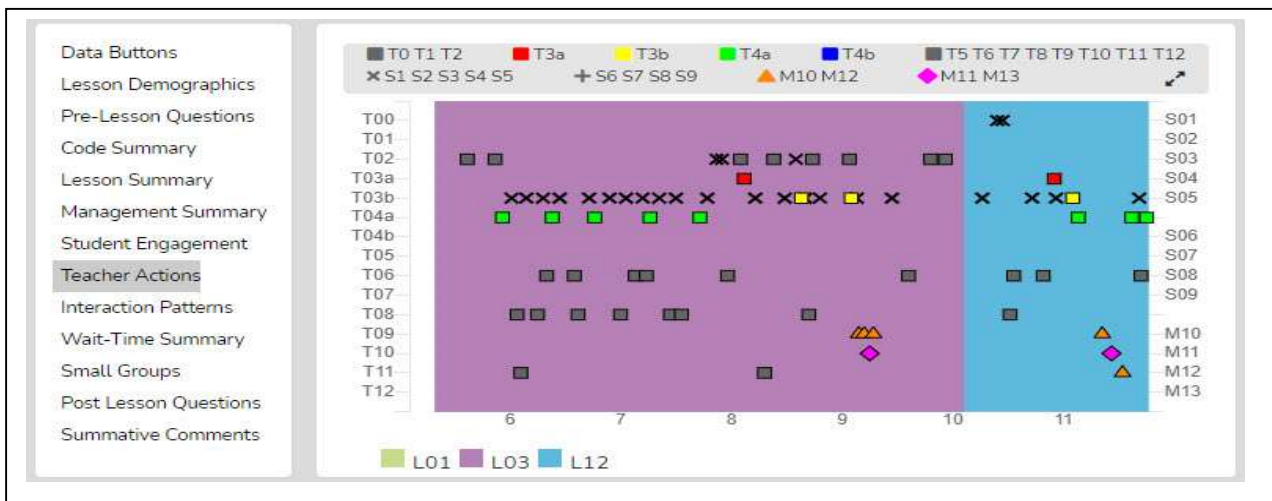
**Teacher Actions Summary** – *Teacher Actions Summary* is a timeline or the whole teaching story from beginning to end of the lesson that displays on a backdrop of the lesson type (colors) in play and shows symbols for when the teacher exhibited various T codes actions, so the user can follow the sequence of teacher actions throughout the lesson. Also displayed on this timeline are M and S code data; in truth, almost all data collected are represented on the timeline, which is a robust set of data representing teacher and student actions. The user can easily see when any management issues occurred in the context of the rest of the teacher and student actions in the lesson. Since this is a visual display of teacher actions, student actions, and misbehaviors, as well as the teacher's reaction to misbehaviors, it provides the user with a visual of the flow of action from beginning to end of the lesson and visually brings forth sequences, predominate or absence of teacher or student actions. For example, if the teacher is curious about their use of questioning, it



is easy to view when any of the four questioning codes were used and what codes occurred prior to or after. The user may find a complete absence of higher-level questions. The user may readily see what they tend to do following a student response. The user can target viewing of any codes by toggling on or off the display of any of the T, S, or M codes. Aside from wait-time data, all the data is represented on this summary screen, which is often a large chunk of data and may clutter the screen. With the mouse wheel, the user can zoom in or out when the symbols become crowded or reset the zoom to normal by clicking the Reset button, which is the double arrows (top right).



As shown below the viewer can zoom in or out to enable data points to separate from each other. Finally, as with other data points in SMT the user can click on any data point (symbol) and the linked video will play.



### Things to Ponder About T Codes – How Can SMT Users Utilize the Specific T Code - Teacher Actions Data

- Looking at *Code Summary*, the data table, and the graph:
  - What were the predominant T codes exhibited in this lesson?
  - When looking at the data for the four question types (T3a, T3b, T4a, and T4): what is the tendency of the teacher to ask open-ended questions requiring students to think more deeply,

to speculate, and construct answers vs. asking questions that require a yes/no or short-answer memory type response?

- If the goal was to dig into student thinking at a deep level, consider the type and number of questions asked (and your memory of the teacher asking questions in the video). What might you conclude?
- Look at how many and what types of questions were asked. How did this affect the amount and type of student engagement?
- Looking at the T5-T12 counts, what can you conclude about how the teacher responds following a student response if their goal was to encourage student responses and keep digging into what students were thinking?
- Looking at *Interaction Patterns*, examine the 3-code pattern tendency, then the 4-code pattern tendency. How are the most common patterns consistent with the goals for the lesson? What are some changes to how the teacher interacts with students that would be more consistent with the intentions for the lesson?
  - How did the teacher initiate questions and then respond to student thinking? How did the teacher's tendencies encourage or discourage student responses and engagement?
  - When students respond – what does the teacher tend to do? Do they tend to judge responses, acknowledge, and then clarify for the student, or instead, ask the student to clarify? Different tendencies are more effective depending on the goals of instruction and level of thinking or engagement from students desired by the teacher.
- Looking at the *Teacher Actions Summary* screen:
  - What question types were used in the lesson? What followed questions in terms of S codes – one student response, or was it more than one student response? After the student(s) responded, what did the teacher do next?
  - How did the teacher use the whole group response engagement S codes (S6-S9) to generate answers and provide maximum feedback to the teacher? If S6-S9 were not used, what evidence exists indicating the teacher is attempting to increase students' oral contributions to the lesson?
  - Knowing that T codes (teacher responses) T6, T11, T12, and sometimes T8 tend to help get and keep students thinking more so than T5, T7, T9, and T10, what does the visual tell you about the teachers use of the various response codes?
  - What stands out about the student misbehavior actions M10 and M12, and then how would you characterize the teacher's reaction to student misbehaviors M11 and M13?

## Level 7 – SMT Black Belt: T, S, and M Codes, Developing More Speed, Accuracy, Sophisticated Data Analysis, and U Codes

**Introduction** – Level 7 is about developing more speed, becoming more accurate when clicking on codes to match the action, and learning a bit more about data analysis to dig deeper into the data and provide higher quality and more sophisticated feedback to the teacher being observed.

### The user will learn:

- To develop more speed and become more accurate when gathering T, S, and M codes.
- How to merge T, S, M codes into an analysis that considers all the codes and the relationships between them.
- About optional U codes

### Training Steps:

1. Watch the video overview that shows using all the codes in action.
2. Complete a series of coding videos using the T, S, and M Codes slowly.
3. Use higher speed with the following videos.
4. Learn more about the complete analysis from the many data points and the data analysis, heat maps, graphs, and charts.

### [Lesson 7.0 Video Overview of Data Collection and Data Analysis Using T, S, and M Codes](#)

<https://youtu.be/bjXvB5RrvOc>

**Lesson 7.1 – Practice Capturing T, S, and M Codes at Slow Speed:** Data analysis can be very robust and powerful when both T and S codes are collected. Therefore, most observations use both T and S codes. If student misbehavior is an issue in a classroom with off-task chatting or other student misbehaviors, then using M codes helps uncover trends and patterns. The training has already provided practice using S, M, and T codes but now merges the use of those three codes in an observation.

### Training Steps:

1. Create a *New Observation*, using any of the following videos for the observation.
2. Set up a *Seating Chart* using the same five avatar seating chart.
3. Choose *Save and Start*.
4. Choose Quantitative.
5. Complete the observation using T, S, and M codes while using the seating chart with student numbers for the S and M codes.

### Videos for Practicing Observations

SMT Practice Video Float A - <https://youtu.be/oxxazkrBChg>

SMT Practice Video Float Sink B - <https://youtu.be/k38GViRMJIM>

SMT Practice Video Truck Hill L - <https://youtu.be/pjv0FSyR5sw>

## Lesson 7.2 – Data Analysis Using For T, S, and M Codes

**Introduction** - Being able to understand teaching strengths and weaknesses is the linchpin for the continued growth of the skills needed to become a highly effective teacher. Knowing what data can be used to provide more specific feedback to the teacher is the target of this lesson. Collecting T, S, and M data compounds the level of rich analysis possible when using SMT.

Once accurate data has been collected, there are many analysis features of this tool from which to draw conclusions or use to establish new targets for modifying teaching to move toward the highly effective teacher level.

### Training Steps:

1. Read through the following section to better understand the potential analysis when using the T, S, and M codes.

### Questions to Ponder About T, S, and M Codes – The Combined Actions Data

Since this observation included T, S, and M code data, the user could contemplate all the “Questions to Ponder” from the previous M, S, and T training. In addition, now that T actions are coded and analyzed along with S and M actions, there are additional things to consider due to the interplay between the teacher and student. For example, users could consider how a change in teacher actions might:

- Stimulate more individual student engagement.
- Stimulate more student-to-student exchanges.
- Reduce behavior issues.
- Encourage students to offer up more questions that would clarify their thinking.
- Help the teacher understand where the student is faltering.

## Lesson 7.3 Collecting Data Using U Codes - User Identified Labels

**Introduction** – The following are short lessons that focus on learning about U Codes, which are codes that the observer can define depending on their specific need to document another type of action or event that is not defined by existing S, T, or M codes. This lesson is an information-only lesson, so it will only take a short amount of time to complete.



**Types of U Codes** - One of the U codes is an event-only code (U1), and one is an event/timing code (U2). Which U code is chosen depends on whether the user wants the action timed for how long it lasts. If the length of the event is essential, then the user should use the U2 code. If the user only wants to note that the event happened and mark when on the lesson

clock it occurred, the U1 code will suffice.

**Why Would the User Need to Use a U Code?** Suggestions include:

- a. Since using “praise” is common and is not the same as T6 “acknowledging” or T7 “confirming,” then the user could use and click U1 to note the number of times praise was used and when (as U1 is an event and timing code) or instead use code U2 to include how much time was spent praising the student.
- b. The U2 code (event and timing code) can be used to note how much time was used to transition from one part of the lesson to another.

Note: Student numbers can be used in front of either U1 or U2 codes if the user feels it is important to tag the action to a specific student.

**Lesson 7.4 U Code Data Analysis** – There are a couple of places to find U code data in the quantitative analysis.

- *Running Record* – In *Data Buttons*, the user can click on U1 or U2 (the *Find* function) to locate U code data in the *Running Record* window.
- The *Code Summary* also has data on the count of U1 since it is an event-only code and the count and timing of U2.

## Level 8 – SMT Black Belt 2: Incorporating T, S, and M Codes, Seating Chart, Wait-Time

**Introduction** - At this level, the user has decided to collect the maximum amount of data using the L, T, S, U, and M codes using a seating chart AND collecting wait-time data. For any observation, collecting wait time is optional. But once the user learns how to use the wait-time bar, they can easily develop a rhythm for incorporating it into the sequence of buttons. Since wait-time is a critical factor that significantly impacts student engagement, it is worth it to include wait-time into the data collection. Therefore, at this level of training, the focus is on learning how to collect wait-time data and using all the other codes.

### The user will learn:

- How to collect wait-time data in association with T codes and S and M codes in association with seating chart numbers.
- How to analyze wait-time averages and wait-time specific to T and S codes.
- Questions to ponder about the teacher's use of wait-time.

**Steps** - First, the user will learn to collect wait-time data while collecting T code data and S and M code data using seating chart numbers. Then the user will view and explore the analysis of the wait-time data, followed by pondering how wait-time might be generally improved or specifically increased regarding T codes such as the four questioning types or the responding codes.

### [Lesson 9.0 Video Overview of Using T, S, and M Codes, Using Seating Chart, Wait-Time, and Speed](#)

[https://youtu.be/\\_lxHQ1HMoW0](https://youtu.be/_lxHQ1HMoW0)

## Lesson 9.1 About Collecting Wait-Time

**What is Wait-Time?** Generally speaking, wait-time is the lapse in time between comments, statements, responses, or questions posed by either the teacher or student(s).

Wait-time 1 (defined as WT1) is the lapse in time between a teacher posing a question (T3a, T3b, T4a, or a T4 code) and then following up the question with a statement, response, or another question (coded by another T code).

Wait-time 2 (defined as WT2) is the lapse in time between a student responding to a question posed by the teacher and the teacher following up the student response with a statement, response, or another question (coded by another T code).

Wait-time 3 (defined as WT3) is the lapse in time between a teacher posing a question (T3a, T3b, T4a, or a T4 code) and a student action/response occurring (coded by another S code). WT3 is like WT1, but the student action ends the pause, not the teacher's action.

Wait-time 4 (WT4) is the lapse in time between a student action/response and another student action/response begins. WT4 is like WT2 but ends with a student action, not the teacher's action.

Many teachers do not utilize wait-time in their classrooms. However, if the goal is to get students to think, and we ask questions that require thoughtful answers, speculation, and justification for their ideas, then perhaps we should also give students a bit of time to think about the question and construct a response. As such, research indicates that if teachers increase their average wait time to at least 3.5 seconds, there is an extensive list of possible positive things that might happen, which does not occur when the average wait time is 1 second or less. In short, knowing the average wait time can be very helpful.

### **Collecting Wait-time Data the Simple and Fast Way – SMT Beginning User**

If the user only wants to collect wait time, it is quite simple, and the user doesn't have to learn or use any specific T or S codes while doing so.

#### **Method 1 - Steps and Output for Easy Way to Collect Wait-Time:**

- To collect WT in a simple manner, use the following actions, repeated. After a T or S action ends, the user taps ANY T button to note the end of a T action or ANY S button to note the end of an S action. This triggers the wait-time bar to indicate "Wait-time Timing," and the clock will keep timing until the user clicks on this wait-time bar (now shows Wait-Time Off) just as soon as the teacher or a student begins to vocalize something. This is one cycle of wait-time and the whole data collection period of the lesson is a repeat of those actions. Now the wait-time for that incident has been recorded, and the next cycle begins with the user's next action when they click on a T or S button as soon as that person is done talking. The wait-time will be summarized under the *Wait-Time Summary* tab in the quantitative analysis mode.
- There is a bonus set of data when WT is recorded in such a manner. The total T time vs total S time will be listed under *Code Summary*. This ratio notes how much of the lesson was teacher talk vs. how much of the lesson was student talk. This ratio is an important number since a T to S ratio of 90%/10% is a very teacher-centered lesson with very little student engagement. A 60/40 lesson has much more student engagement, and a 40/60 lesson looks very different in terms of student engagement.

#### **Method 2 - Steps and Output for Regular Way to Collect Wait-Time:**

## Steps for Collecting Wait-time 1 Data

1. During the lesson, when a T or S code is tapped at the end of an event, the wait-time bar changes from white to blue, and the bar now displays “Wait Time Timing.”
2. Timing will continue until the observer notes that the teacher or a student begins to talk. To do this, the observer taps the WT bar to turn off timing, which also changes the label on the WT bar to “Wait Time Off.”
3. WT is recorded for the preceding code in the *Running Record*.
4. And the cycle begins again with the user ready to tap a T or S code as that person finishes talking.

Since all T and S codes are tapped at the end of an event, tapping the wait-time bar to turn off wait-time also initiates the start of timing for what is going to be the next code.

The screenshot shows the SMT software interface. At the top, there is a table with columns: Index, Code, Description, and Event Length. Below this is a grid of buttons for event codes. On the left, S codes (S1-M11) are in blue boxes. On the right, T codes (T0-T9) are in green boxes. In the center, there is a vertical bar with a 'WT' label and a 'Wait Time Off' button. The interface is designed for quick tapping of codes during a lesson.

Note: The observer does not have to worry about which WT they are capturing. If they just tap the WT bar to turn off WT timing, then WT data is collected, and the software knows if the pause is WT1, 2, 3, or 4.

Unlike the easy method above, in this case, the user is also noting the type of T actions or type of S actions taking place in the lesson. Therefore instead of tapping any old T or S code, they tap the specific T or specific S code being exhibited. The value of this method is that the software will give the user averages for WT 1-4 and report the WT in association with the T or S codes that preceded the WT. This can be important data as it might show the user using more WT for higher-level questions than for lower-level questions, or it might show very little WT in association with some type of teacher responses vs. other types.

## How to Collect Wait-Time Using Student Numbers

1. When the teacher has finished asking a question and the T code is tapped, the W-T bar turns to blue and is timing.
2. As soon as a student begins to respond, the user taps the W-T bar, turning off the wait-time and tapping the student number.
3. When the student finishes speaking, the appropriate S code should be tapped.

## Questions to Ponder and How SMT Users Can Utilize the Wait-Time Data – Student and Teacher Think Time

- How does the WT1 average correspond to the teacher’s intention for using wait-time to give students ample opportunity to think about the teacher’s question?
- How does the WT2 average correspond to the teacher’s intention to use wait time to give students ample time to think about a student's response and respond to that student? (Look at the relationship between WT2 average and the S-S count in *Interaction Patterns*.)
- How does the average WT for question types differ regarding higher-level questions and needing more think-time to generate an answer?
- If the WT average is lower than expected or desired, what is the teacher’s concrete plan for increasing their WT?



## Lesson 9.2 Practice Collecting Wait-Time, and T, M, and S Codes Using a Seating Chart

### Training Steps:

1. Set up a New Observation using any of the following URLs.

SMT Practice Video Float A - <https://youtu.be/oxxazkrBChg>

SMT Practice Video Truck Hill L - <https://youtu.be/pjv0FSyR5sw>

SMT Practice Video Swinging Spheres - <https://youtu.be/XIPKXlkeHMA>

2. Label the *Lesson Subject* as Lesson 9.2 WT

3. Add a seating chart for the five avatar students

4. Choose *Quantitative* observation

5. Collect data using T, M, and S codes using student seating chart numbers and the wait-time bar.

6. When finished, click *Done*, then proceed to Lesson 9.3.

Note: If returning to this lesson later, go to the *Dashboard* locate *Lesson 9.2 WT*, click on the plus symbol to open up the expanded *Dashboard*, and click on the green checkmark under the *Quantitative* column to return to the quantitative analysis screen for the WT data collected.

## Lesson 9.3 Analyzing Data Including Wait-time Analysis

**Wait-Time Summary** – The wait-time data is only located within the *Wait-Time Summary*. Within the *Wait-time Summary* are general summaries of wait-time by wait-time type, by events, by total time, and averages for each wait-time (shown below). Wait-time averages are also broken down by specific T and S code types. This type of critical data summary can answer questions and identify tendencies in the classroom, such as does the teacher use more wait time when they pose a higher-level question requiring more think time?

Data Buttons

Lesson Demographics

Pre-Lesson Questions

Code Summary

Lesson Summary

Management Summary

Student Engagement

Teacher Actions

Interaction Patterns

Wait-Time Summary

Small Groups

Post Lesson Questions

Summative Comments

Wait-Time Type	Total Events	Total Time	Average
Wait Time 1 (T-T)	5	00:17	00:03
Wait Time 2 (S-T)	11	00:18	00:01
Wait Time 3 (T-S)	7	00:16	00:02

Code	Wait-Time 1	Wait-Time 2	Wait-Time 3	Wait-Time 4
T01				
T02	6.50		1.00	
T03a	1.00			

## Level 9 – SMT Black Belt 3 - Learn About G Codes: Small Group Interactions

**Introduction** - A common pedagogical strategy used in classrooms is to group students for labs, discussions, cooperative learning, working problem sets, or a variety of other reasons. All educators hope that rich and equitable interactions occur between small group members and that all small group members are involved in the work and conversation. However, small groups are often notorious for having a subset of the group doing most of the work, or one or two members take control of the work or discussion resulting in the other group members playing a very passive role or conversation in the group diverts to non-lesson related topics.

The goal of instruction is to get ALL students involved equitably and productively related to the goals and objectives for that lesson. We know that there are ways to make group work more productive by structuring a lesson using cooperative learning roles. This pedagogically sound strategy has most or all of the group members equally engaged and contributing to the lesson. But how do we know that our plans were effective concerning such? Student numbers are also present when groups are set up in SMT using the seating chart. When using a group code for collecting any S or M code data, the data contains both the group number and student number. Observing and collecting this data can be useful when examining group dynamics and engagement when analyzing individual student engagement or examining individual student misbehaviors or misbehaviors arising as part of a group.

### The user will learn:

- How to collect and analyze T code data associated with the small group and S code, and M code associated with the small group seating chart numbers.
- Questions to ask about the teacher's interactions with small groups
- Questions to ask to determine if small groups are functioning with equity and efficiency

**Steps** - First, the user will learn to collect S code data using small group seating chart numbers. Then the user will view and explore the analysis of the S code data within each group shown within *Group Summary* and learn how the indicators may suggest how to elevate student interactions or approach more equitable interactions within a group.

### [Lesson 8.0 Video Overview of Data Collection and Analysis Using G Codes](#)

[https://youtu.be/8l\\_RtkGnTy8](https://youtu.be/8l_RtkGnTy8)

### Lesson 8.1 Introduction to Group Setup

– When setting up a new observation in the *Seating Chart*, after entering individual student numbers on the seating chart, the user also can design small groups of students by group number. Therefore, while capturing data during an observation, M and S code data can be prefaced by a group number and the student number within that group.

**Lesson 8.2: Practicing Setup for Groups in the Seating Chart** - This lesson will ask the user to set up student numbers on a seating chart and then identify which students belong to specific groups.

Observation Setup  
Pre-Lesson Questions  
**Seating Chart**  
Student Demographics  
Lesson Plan  
Summative Forms  
Post-Lesson Questions

### Seating Chart

G3:10	G3:11		G4:13	G4:14					
G3:9	G3:12		G4:15	G4:16					
G2:6	G2:7		G5:17	G5:18					
G2:5	G2:8		G5:19	G5:20					
G1:2	G1:3		G6:21	G6:22					
G1:1	G1:4		G6:23	G6:24					

Student Group Teacher Observer

Save and Return Home Next Student Demographics Save and Start

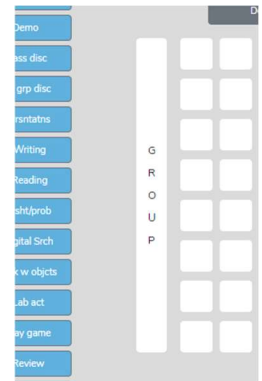
### Steps

1. Use *New Observation* to set up a lesson – in this case, use *Live Observation* since there is no specific video for such. For lesson topic type, *Lesson 8.3*
2. Set up the seating chart as follows with four groups of 4 students.
  - a. Reminder: Click on the *Student* icon, and it should turn blue. Then click on seats to identify where students are sitting.
3. Click on the *Group* icon, and then click on the students in the same group.
4. Click on the *Group* icon again, then click on the students in the next group and repeat until groups are identified.
5. If time permits, click on *Save and Start, Quantitative*, and view how the seating chart is displayed on the observation screen.
  - a. Note: If you wish to see how the group number is tagged to an S code, practice clicking on the *Group* button prior to clicking on a student seating chart number, then click on an S code and view the *Running Record* in the data analysis screen.

**Lesson 8.3 Collecting Group-related Data** - When listening to the teacher interacting with small groups and members or when examining how small group members interact with each other, the data collection is similar in sequence to when entering a student number prior to an S code. The user can choose to enter a group number (G5) prior to an S code (S5) to indicate the answer came from the group (G5-S5), or a student-to-student comment came from within that group (G5-S4), or a student in Group 2 asks the teacher a question (G2-S1).

Conversely, if examining student participation within a group, the user could code student numbers with S1-S5, and the seating chart heat map would show how much interaction occurred within that group.

Note: As shown in the image to the right, to designate that a specific interaction came from a specific group number, click on the *Group Bar* prior to clicking on any student within that group. Then click the specific desired S code.



## Lesson 8.4 Data Analysis Using G Codes

After finishing with the lesson observation and proceeding to the analysis page, check out the *Seating Chart Heat Map* in association with *Student Engagement* to look at the data per student and the visual representations per seating chart.

Note: Small groups might easily generate more than five events per student. If the number of events per student is greater than five, the user can get a count of all the events for a particular S code by going to the *Group Summary*. The number of S code events is displayed here for each small group. For a more sophisticated analysis, use the .xls export function to create a statistical package - in progress.

**What Can be Learned When Collecting Individual Student Interactions Within a Group?** We know that in some small groups, one or two students often dominate the conversation. We also know that a lesson can be structured using roles so that most of the group members will be equally engaged and contribute to the lesson. Using the S codes embedded within a particular G number allows for an examination of such and a look at the specific within-group communication dynamics and engagement.

Significant features in the Quantitative Data Analysis for G codes (groups) and S codes (individuals) are:

In the *Group Summary* section:

- A table shows S code and M10 event responses coming from specific groups.

Data Buttons							
Teacher Demographics							
Lesson Demographics							
Pre-Lesson Questions							
Code Summary							
Lesson Summary							
Management Summary							
Interaction Patterns							
Student Engagement							
Small Groups							
Wait-Time Summary							
Post Lesson Questions							
Summative Comments							

	Misbehavior	Engagement					
	M10	S1	S2	S3	S4	S5	Total
G1	0	0	0	2	0	0	2
G2	0	0	0	2	0	0	2
G3	0	0	0	2	1	0	3
Total	0	0	0	6	1	0	7

In the *Seating Chart Heat Map* quadrant:

- Seating chart heat map showing individual student responses or misbehaviors in the context of which group they were a member.

In the *Student Engagement section*:

- A table showing individual student engagement (S1-S5) and whole-class responses (S5-S9).
- A graph showing where in the lesson segment the actions occurred with vertical black bars for individual student responses (S1-S5) and vertical red bars for whole-class responses (S6-S9).

In the *Code Summary* section:

- A graph and table displaying a summary of the predominant use of the nine S codes which indicates the frequency of events and quantity of time associated with the specific S codes.

### **Questions to Ponder Regarding Group Engagement and Equity Among Group Members Data**

- When the teacher approached the small groups and interacted with them, what was their intention? What did they want to accomplish by doing so versus observing the groups in action?
- What was noticed about the teacher's interactions with the small groups?
- How did the teacher's interactions foster the goals for the small group and the lesson? In what ways, if any, did the teacher's interactions lessen the intention of the lesson or weaken the intended purpose of having students work in small groups?
- Small groups are a great place to ask good questions and to foster student-to-student interactions – what did the observer notice regarding such? How might the teacher improve?
- How was the teacher's ability to pace themselves and get around to all small groups without taking too much time with one small group?
- We know the power of using cooperative learning strategies with small group structures (versus simply students in a group expected to work together). What might the teacher have done differently regarding small group strategies, and what impact do might it have on student engagement, thinking, and learning?

## Level 10 – SMT Master Trainer: T, S, M Codes, Seating Chart, Wait-time, and Speed

*Level 10 – SMT Master Trainer* can only be achieved by passing a practical exam offered and proctored by SMT. Candidates will be given a video URL link at a specific time. Within a limited amount of time, they will be required to code the video using T, S, M codes, a seating chart, and the wait-time bar. Their data will have to be accurate and reliable to a certain degree before being considered passing. Also, using evidence-based analysis, their feedback, and recommendations provided to the teacher need to be substantive and utilize most or all of the pertinent data. To achieve Level 10 certification, contact SMT for instructions.

At this certified level, the user can/has:

- Used the L, T, S, and M codes.
- Tagged M and S codes to student numbers and group numbers.
- Used a seating chart heat map with student demographics.
- Collected wait-time data.
- Captured data at the rate of normal classroom interaction.
- Captured data that falls within the boundaries of acceptable validity and reliability.
- Fluently discussed the data analysis screens.
- Used the evidence and analysis to provide high-quality feedback to the teacher.
- Collected data for use in a research study.
- Has completed an inter-rater reliability check, comparing the user's data to an expert user's data.
- Provided outstanding feedback and recommendations that are evidence-based.

**The user will learn:**

- Nothing new just completes a test to determine speed, the accuracy of coding, and level of understanding when examining the raw and analyzed data as incorporated into feedback and coaching

**Steps** – When the user feels ready to take a practical exam using SMT for observation, they first contact SMT to schedule an exam. Suppose the user performs within the boundaries of acceptable practice. In that case, SMT awards the user a certificate of SMT Master Trainer which means the user is SMT qualified to train others and consult for SMT.

Why does SMT offer a Level 10 – SMT Master Trainer Certification? There are three reasons:

1. Many people or companies offer program evaluation services to institutions that have received grants with intentions of providing effective professional development for teachers or designing and implementing a new curriculum purporting to effect positive change in classrooms or classroom activity. SMT can be used to collect rich data and indicators of the effect of funded activities on teachers and classrooms. Someone will want to know if the observer is collecting valid and reliable data and if they can use the data and analysis to provide evidence-based recommendations. SMT offers this Level 10 certification to validate the evaluator's claims of being able to collect valid and reliable data.

2. SMT will consider someone with a *Level 10 – SMT Master Trainer* certification to be suitable for becoming an *SMT Master Trainer*. *SMT Master Trainers* work with school districts or institutions to train and develop the observation skills of other teachers and administrators in schools or in higher education for faculty and pre-service teachers.

3. Teachers, administrators, teacher education faculty, future teachers, graduate students, education consultants, or program evaluators may want the highest level of training and SMT certification as they want or need to show professional levels of skill concerning evidence-based observation. For example:

- Teachers can bring their SMT observation to a conference with the administrator to demonstrate professional skills and strengths, and areas they are working to develop.
- Teacher candidates for NBCT can embed the data collected using SMT into their narrative of their teaching.
- Administrators can offer remediation plans to teachers based on data and evidence gathered from SMT.
- Teacher education faculty working with future teachers can document levels of growth for the student, their program, and for oversight agencies such as the Department of Public Instruction who looks for documented evidence of program effectiveness.
- Future teachers can use data collected with SMT as evidence when submitting their high stakes edTPA video and written analyses of their teaching or use in their end-of-program portfolio.
- Program evaluators or teaching improvement consultants can use SMT when providing their services.

## Appendix A: Questions to Ponder Compilation

The following are the *Questions the Teacher Can Ponder* compiled from each of the training sections.

**Questions to Ponder When Viewing the Code Summary Data** - The *Code Summary* data provide general indicators of teacher tendencies, student actions, and misbehaviors and help to answer questions such as:

- What were the predominant T codes exhibited in this lesson?
- When looking at the data for the four question types (T3a, T3b, T4a, and T4), what is the tendency of the teacher to ask open-ended questions requiring students to think more deeply, speculate and construct answers vs. asking questions that need a yes/no or short-answer memory type response? If the goal was to dig into student thinking at a deep level, considering the type and number of questions asked, what might you conclude?
- What does the teacher tend to do following a student response? Do they tend to judge responses, acknowledge, and then clarify for a student, or instead ask a student to explain?
- Considering the type and number of questions asked, what might you conclude if the goal was to dig into student thinking at a deep level? What changes would foster more of this?
- What is the total % of T codes vs. % of S codes? (This is an indicator of whether the teacher is doing most of the talking and events or if the talking is balanced between the teacher and students, and at what level the students are contributing to the teacher-student or student-student interactions in that lesson.)

### Questions to Ponder When Viewing L Code Data – Type of Lesson in Play

- After the bell rings and the class period begins, how much time did it take to start teaching?
- What might the teacher do differently to begin teaching at the start of the class period?
- How much time was spent on each segment of the lesson?
- If the teacher used more or less time on lesson segments than intended, why did that occur, and how did that affect the outcomes of the lesson?
- How much time did the transitions in-between each part of the lesson add up to?
- What might the teacher do to reduce the time needed for transitioning from one part of the lesson to another?
- How much time at the end of the lesson was not used for instruction?
- If the lesson ended early, what productive things could the teacher have done to utilize the remaining class time?
- Considering the whole class period, what might the teacher have done to use the time even a bit more productively?

### Questions to Ponder When Viewing the M Code - Student Misbehavior Data

When Viewing the Code Summary:

- How many were classroom management events noted by the observer?
- How many of those classroom management events were not addressed by the teacher?
  - Note that when the number of M10 events is added to the number of M12 events, if that number is greater than the number of M11 and M13 events, the teacher is probably ignoring



some of the student misbehaviors either intentionally or due to the frustration of not having an impact when they do intervene.

- How much time did the teacher use to intervene in management events? (M11 and M13)

When Viewing the Seating Chart Heat Map:

- Where in the classroom are the problems occurring?
- Is there a small group or table of students who are exhibiting most of the misbehaviors?
- Are behavioral issues proximal or distant to where the teacher is located?

When Viewing the Management Summary:

- Where in the lesson, or during which lesson type, did the management issues occur? (Vertical bars on the lesson segment timeline)
- How many management issues occurred at the start of class, end of class, or during transitions from one lesson segment to another? (Vertical bars on the lesson segment timeline)

When Viewing the Video:

- How much time was needed to get all the students settled and begin the lesson when transitioning from one lesson segment to another?
- How was the teacher's movement around the classroom?
- How did the students behave or misbehave today as a whole, compared to other days in general?
- Regarding specific students who might tend to misbehave, how was their behavior today?
- Was there anything about this lesson that might have contributed to more or fewer management issues?

### **Questions to Ponder Using S Code – Student Engagement Data**

When Viewing the Code Summary:

- Compare the quantity of each type of S code exhibited during the lesson.

When Viewing the Seating Chart Heat Map:

- The heat map provides a visual distribution of student contributions – how would the teacher summarize this data, and how do the contributions match the teacher's intentions and expectations?
- How many of the students responded to at least one question and how many students were not part of the conversation?
- Using the demographic toggles on the Seating Chart Heat Map, examine student engagement by demographics such as gender, minority, ELL, and Special Education – think about what the data suggests in terms of equity regarding student engagement. How might you increase equity regarding student engagement?

When Viewing Interaction Patterns:

- Think about your teaching, and how many of the students responded to each other at least once, and what you might change to produce more student-to-student interactions. (*Interaction Patterns S-S #*)

When Viewing Student Engagement:

- What is the average number of responses per student? How does that fit your student engagement goals, and how might that number be increased. [Total of S1-S5 plus (the total of S6-S9 x the number of students in the class) / number of students in class]
- During which part of the class or type of lesson segment were students engaged, as evidenced by vertical bars? Which parts of the lesson were absent of student contributions and engagement, and how could you alter your lesson to produce more student engagement?

### **Questions to Ponder About T Codes – Teacher Actions Data**

When Viewing the Code Summary:

- What were the predominant T codes exhibited in this lesson?
- When looking at the data for the four question types (T3A, T3b, T4a, and T4) - what is the tendency of the teacher to ask open-ended questions requiring students to think more deeply, to speculate, and construct answers vs. asking questions that require a yes/no or short-answer memory type response?
- If the goal was to dig into student thinking at a deep level, considering the type and number of questions asked, what might the user conclude?
- Look at how many and what types of questions were asked. How did this affect the amount and type of student engagement?
- Looking at the T5-T12 counts, what can the user conclude about how the teacher responds following a student response if their goal was to encourage student responses and keep digging into what students were thinking?
- Look at how the teacher-initiated questions and then responded to student thinking - think about how the teacher's tendencies encouraged or discouraged student responses and engagement.
- When students respond – what does the teacher tend to do? Do they tend to judge responses, or acknowledge, and then clarify for the student, or instead ask the student to clarify?

When Looking at Interaction Patterns:

- Look for a 3-code pattern tendency, then a 4-code pattern tendency. How are the most common patterns consistent with the goals for the lesson? What are some changes to how the teacher interacts with students that would be more consistent with their intentions for the lesson?

### **Questions to Ponder About the Lesson After Collecting T, S, and M Codes**

When Viewing the Code Summary:

- Examine the quantity of T, S, and M codes. Then consider any of the questions posed above in the sections looking at only T, only S, or only M codes.
- Look at and compare the percentage of T codes vs. S codes and conclude if this lesson was more teacher-centered or student-centered, or balanced regarding such. Then consider how this result met with the teacher's intentions or goals for the lesson. What was consistent or inconsistent with their intentions and the strategy you chose for this lesson?

When Viewing the Interaction Patterns:

- Examine the counts for S-S, T-S-T, and T-T. If the teacher wanted to achieve more S-S interactions, what does the data indicate?

- Examine the most predominant patterns of interaction with students. What types of questions are in the most predominant patterns? What types of teacher reactions to student responses are in the most predominant patterns? How does the type of questions and responses use fit with the teacher's goals for instruction, and what might the teacher modify to achieve questions or responses that are more consistent with their intentions?

When Viewing the Seating Chart Heat Map:

- Looking at the quantity of student engagement in the class, how is it distributed, and what would the heat map look like if you raised student engagement to an optimal level?

Looking at the *Teacher Actions Plus* screen:

- What question types were used in the lesson? What followed questions in terms of S codes – one student response or was it more than one student response? After, the student(s) responded what did the teacher tend to do next?
- How did the teacher use the whole group response engagement S codes (S6-S9) to engage all students in generating answers and providing maximum feedback to the teacher? If S6-S9 were not used, what evidence is there that the teacher attempted to increase student's oral contributions to the lesson?
- Knowing that T codes (teacher responses) T6, T11, T12, and sometimes T8 tend to help get and keep students thinking more so than T5, T7, T9 and T10, what does the visual tell you about the teachers use of the various response codes?
- What stands out about the student misbehavior actions M10 and M12, and then how would you characterize the teacher's reaction to student misbehaviors M11 and M13?
- How was the distribution of S codes and student contributions to the lesson?
- What was the mix of S codes? How many S1-S4 codes were present during the observation?

### **Questions to Ponder Regarding Group Engagement and Equity Among Group Members Data**

- When the teacher approached the small groups and interacted with them, what was their intention? What did the teacher want to accomplish by doing so versus observing the groups in action?
- What did the user notice about the teacher's interactions with the small groups?
- How did the teacher's interactions foster the goals for the small group and the lesson? In what ways, if any, did the teacher's interactions lessen the intention of the lesson or weaken the intended purpose of having students work in small groups?
- Small groups are a great place to ask good questions and to foster student-to-student interactions – what did the user notice regarding such? How might the teacher improve?
- How was the teacher's ability to pace themselves and get around to all small groups without taking too much time with one small group?
- We know the power of using cooperative learning strategies with small group structures (versus simply students in a group expected to work together). What might the teacher have done differently regarding small group strategies, and what impact might it have on student engagement, thinking, and learning?

### Questions to Ponder About the Wait-Time Data – Student and Teacher Think Time

- How does the WT1 average correspond to the teacher's intention for using wait-time to give students ample opportunity to think about the teacher's question?
- How does the WT2 average correspond to the teacher's intention to use wait-time to give students ample time to think about a student's response and respond to that student? (Look at the relationship between WT2 average and the S-S count in *Interaction Patterns*.)
- How does the average WT for question types differ regarding higher-level questions and needing more think-time to generate an answer?
- If the WT average is lower than expected or desired, what is the teacher's concrete plan for increasing their WT?

## Appendix B: Master List of Training Video Overviews and Video URL's Used for Practice

Note that there are overview videos for each level of training that provide a first look at specific features or functions. A series of lessons are designed to scaffold the user's expertise from complete beginner to "Black Belt" user status. As the user progresses through training, they will typically first be asked to view the overview video for that section, then read a section in the manual that reiterates and expands on the topic, followed by practicing (in SMT or on paper) what they learned from the video and reading.

The following list contains links to the overview videos and the URLs, which can be copied and pasted into the video URL window when setting up a *New Observation* to practice using SMT at the various training levels. These URLs and links to the video overviews are also embedded in each training section.

### Master List for SeeMeTeach® Training - Practice Videos and YouTube Links

SMT Web Page Promo	<a href="https://youtu.be/EhDyTVW5AGY">https://youtu.be/EhDyTVW5AGY</a>
SMT Training Level 1 Video Overview	<a href="https://youtu.be/MwuAilguHUw">https://youtu.be/MwuAilguHUw</a>
SMT Training - How To Add a Lesson Plan	<a href="https://youtu.be/IPKZZgcyk44">https://youtu.be/IPKZZgcyk44</a>
SMT Training – How To Use Summative Forms	<a href="https://youtu.be/FtG7p1AZf3w">https://youtu.be/FtG7p1AZf3w</a>
SMT Training Level 2 Qualitative Comments Mode	<a href="https://youtu.be/tprgqtfq_RA">https://youtu.be/tprgqtfq_RA</a>
SMT Training Level 3 Quantitative Mode Basic Info	<a href="https://youtu.be/r1MMczuREfs">https://youtu.be/r1MMczuREfs</a>
SMT Training Level 4 M Codes	<a href="https://youtu.be/JR5nZ61kAgw">https://youtu.be/JR5nZ61kAgw</a>
SMT Training Level 5 Using M, S Codes with the Seating Chart	<a href="https://youtu.be/FOAuOEPytRo">https://youtu.be/FOAuOEPytRo</a>
SMT Training Level 6 T Codes Pt A	<a href="https://youtu.be/1Evn9j8e_DQ">https://youtu.be/1Evn9j8e_DQ</a>
SMT Training Level 6 T Codes Pt B	<a href="https://youtu.be/fcHEvdz0X-Q">https://youtu.be/fcHEvdz0X-Q</a>
SMT Training Level 7 T M and S Codes	<a href="https://youtu.be/bjXvB5RrvOc">https://youtu.be/bjXvB5RrvOc</a>
SMT Training Level 8 Small Groups	<a href="https://youtu.be/8l_RtkGnTy8">https://youtu.be/8l_RtkGnTy8</a>
SMT Training Level 9 All Codes, Seating Chart and WT	<a href="https://youtu.be/_lxHQ1HMoW0">https://youtu.be/_lxHQ1HMoW0</a>
SMT Practice Video Float Sink A	<a href="https://youtu.be/oxxazkrBChg">https://youtu.be/oxxazkrBChg</a>
SMT Practice Video Float Sink B	<a href="https://youtu.be/k38GViRMJIM">https://youtu.be/k38GViRMJIM</a>
SMT Practice Video Float Sink M	<a href="https://youtu.be/uLJ3Jvn0jHw">https://youtu.be/uLJ3Jvn0jHw</a>
SMT Practice Video Swinging Spheres	<a href="https://youtu.be/XIPKXlkeHMA">https://youtu.be/XIPKXlkeHMA</a>
SMT Practice Video Truck Hill L	<a href="https://youtu.be/pjv0FSyR5sw">https://youtu.be/pjv0FSyR5sw</a>
SMT Practice Video Truck Hill M	<a href="https://youtu.be/YSD7mNBbZ1Q">https://youtu.be/YSD7mNBbZ1Q</a>

## Appendix C: Capturing and Storing Video and Audio

### Capturing Quality Audio and Video

If the user is not doing a live observation, then the video used for the observation should have:

- A video with a wide-angle view of the room with most students and the teacher is desired as the observer always has a fixed reference point. Placing the camera at the back of the room, perhaps higher than head height, will put most of the action occurring within the camera shot, allowing the person(s) to connect the actions and events with the individuals involved or speaking.
- Audio ideally captures everything the teacher said and most of what students are saying.
  - Note: If the teacher is talking and the room is quiet, most microphones capture the teacher's voice and most of the student's questions and answers. But during a lab activity or when the class is working in small groups, and the teacher is walking around interacting with various small groups, capturing the audio of teacher and student interactions can be difficult. Usually, the class is videotaped from a fixed position and captures the whole panorama of the class. Therefore, the camera microphone is also fixed in place, making it challenging to collect good audio and, thus, data on small groups. Small groups are a good source of teacher-student dialogue. Such interactions should be collected and analyzed as the teacher-student interactions can be analyzed and often improved. Therefore, relying on the microphone of the video-recording source may not be best. See Lavalier Microphone Bluetooth to Phone for a solution to this problem.

### **Lavalier Microphone Bluetooth to Phone for Recording Audio and Video**

- For capturing high-quality audio, secure an omni-directional lavalier microphone that will connect via Bluetooth to your phone or camera source. There are several options; therefore, reading the reviews helps steer one to a microphone that might capture clear audio. The teacher will want the audio of themselves and the students when working with individuals, small groups, or whole groups. An omnidirectional microphone will pick up sounds from any direction. A unidirectional microphone will pick up sounds coming from mostly one direction. The user will probably want an omnidirectional microphone and one that will capture sounds from close and far away. Some microphone lavalier packages come with more than one microphone. The reason for purchasing more than one microphone is that the teacher might want to wear one and place the other in the middle of a small group table to capture the conversation of the small group or a group working together during a lab activity.

### **Solutions to Audio Issues**

- Teachers can wear a omni-directional lavalier microphone that feeds back to the audio input of the camera. For example, teachers can use a product called Swivel, which uses an iPad placed on a swivel mechanism that tracks the teacher around the classroom and captures video. This product also makes use of a lavalier microphone the teacher wears, which feeds audio back to the iPad. SMT has found that the video and audio captured quality is quite good (but has no affiliation with the company or the recommended product).
- Teachers can also get a lanyard attached to a plastic sleeve. A smartphone can be placed into the plastic sleeve with the camera and microphone exposed and facing outward. The video will capture what the teacher sees when the teacher walks around and interacts with individual students and small groups. Acceptable audio will also be obtained, but the downside is the video which rapidly changes direction and perspective. It is much easier for an observer watching the video to have the footage originate from a stable and fixed position so that all the students and the teacher are on the video and from the perspective of an observer who is placed in the back of the room.

- Computer webcams can also be oriented in the classroom to capture most video and audio.
- Any other type of digital device can be placed in the front or back of the room to capture video and audio.

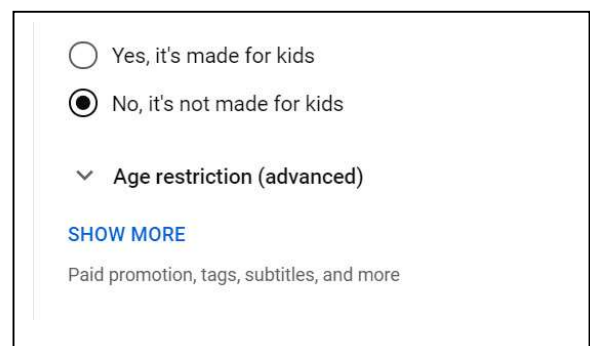
## Hardware

Recommended tools for capturing quality video and audio of teaching segments are:

- Swivel – Place your iPad on the Swivel, attach the lavalier microphone to your shirt, and the Swivel collects great audio and video as it pans along with your movement while you teach.
- Logitech Web Camera w/Microphone – a quality way of capturing audio and video.

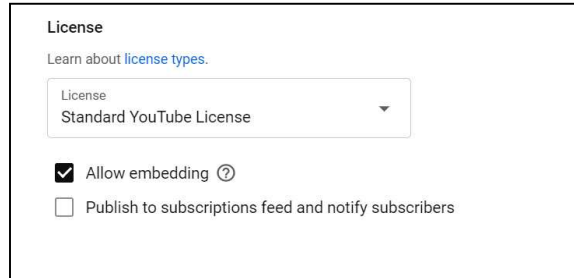
## Video Segments

- Editing Video Down in Size to a Key Segment
  - The user needs to upload only the segment of the video they wish to observe and analyze. For example, perhaps the user captured 45 minutes of footage but only wants to view and comment on the 20-minute lab activity segment. Therefore, the user should edit the video to cut out everything but the desired portion and then upload the video to the user's YouTube Channel or other means of storage where team members can get access.
- Storing the Video - Upload to YouTube
  - The video should be stored so it has a URL address that the user and/or team member(s) can access. SMT suggests a *YouTube Channel* for such purposes unless the school district or institution has its own server that is accessible and won't block users from accessing the video. Or, video can be stored on SMT's secure cloud storage. The various options are present when creating a New Observation.
  - When uploading the video to YouTube, it is important to do the following:
  - **Choose the toggle for an unlisted video** – do not select private or public.
    - Videos should not be listed for public consumption due to privacy laws regarding children. In addition, if it is listed as “private,” other team members will not be able to view the video as SMT will not be able to access the video.
    - As an “unlisted” video (without adding tags or keywords and with a title that is non-descript), the video should be accessible only to the team members.
  - **After initiating uploading the video to YouTube, the owner must toggle some choices. Toggle on the following:**
    - Toggle “No, it's not made for kids” so the circle is dark, then, click SHOW MORE which presents more options.

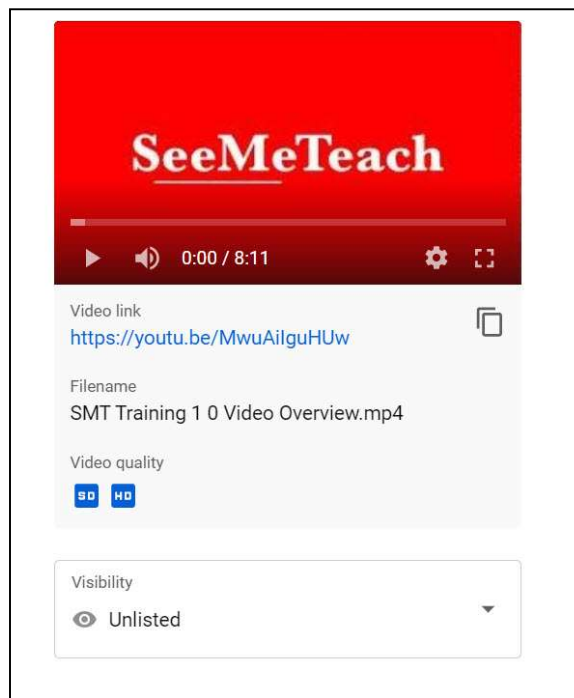


☐ Yes, it's made for kids  
☒ No, it's not made for kids  
 ▼ Age restriction (advanced)  
[SHOW MORE](#)  
 Paid promotion, tags, subtitles, and more

Then toggle on “Allow embedding” but leave the other choices unchecked.

A screenshot of the YouTube License settings panel. At the top, it says "License" with a link "Learn about license types." Below this is a dropdown menu labeled "License" with "Standard YouTube License" selected. Underneath are two checkboxes: "Allow embedding" which is checked, and "Publish to subscriptions feed and notify subscribers" which is unchecked.

On the right-hand side of the YouTube page is the URL of the video that needs to be copied and pasted into the SMT New Observation URL window. The “Visibility” is also noted; in this case, it is “Unlisted,” and if not, then use the drop-down to make it “Unlisted.”

A screenshot of a YouTube video player. The video has a red background with the text "SeeMeTeach" in white. Below the video player is a white box containing video details: "Video link" with the URL "https://youtu.be/MwuAilguHUw", "Filename" "SMT Training 1 0 Video Overview.mp4", "Video quality" with "SD" and "HD" options, and "Visibility" with a dropdown menu showing "Unlisted".

- Storing the Video - SMT’s Cloud Storage
  - Another option for linking video to the SMT New Observation is to use SMT’s cloud storage. When choosing this option, the user will be asked to choose the file to upload into cloud storage. Unlike YouTube, there are no toggles to consider.
- Storing the Video Elsewhere
  - If the video is stored someplace other than YouTube or SMT’s cloud storage, the user must check to make sure that SeeMeTeach® can access the video for the user and other team members. Server protection and security software on school servers may make it difficult to store video locally.



## Setting Up the YouTube Channel

For a Teacher Education Program or a School District, does each person need their own YouTube account, or do all the videos get uploaded into one Channel?

- Option A: Each user loads their own (unlisted) video to their own YouTube account (as an unlisted – not public or private). From there, they can copy and paste the URL into the video window when setting up a *New Observation*.
  - There is an advantage to this as the individual is responsible for the video that is uploaded.
- Option B: An administrator or program leader may or may not choose to have control of the videos used to set up the *New Observations*. Therefore, they upload all (unlisted) videos into their YouTube channel and share the video URL to specific persons at their discretion.

## Indemnification and Protection of the Video

- To abate concerns about capturing video of classrooms and privacy of teachers and their students, SMT registration, Terms of Use, policies, and procedures were designed and created to minimize these concerns. For example:
  - Only two people control the video used for the observation, the teacher and the observer. The video is captured and stored by either the teacher or primary observer in a safe and secure location that has controlled access. The user can store the video on their private Youtube Channel or on SMT's cloud storage.
  - The other two potential team members can view the video but have no rights regarding control of the video.
    - Note: Before any use of SMT has taken place, the teacher, primary observer, and any other team members (maximum of 2) will have both agreed to the *Terms of Service*, stating they will not show or share the video with any party or person that does not have routine contact with the students shown on the video.

## Using Audio-Only When Video Is Not Allowed

- Suppose the school policy prevents videotaping in a classroom, but teachers are allowed to audiotape. In that case, there are three options for using audio-only:
  - A. Capture and upload an audio file such as an mp3 file. During a *New Observation* setup, the user can choose *Classroom observation from an audio file* and load the file, which will play from the video window.
  - B. Capture an mp4 file using a video camera with the lens covered, so no images of students are captured, but the audio is captured. Then follow the instructions for uploading the file to YouTube and link the YouTube video to SMT by choosing *Observation Type – Classroom observation from YouTube*. Or a second option is to choose *Classroom observation from a video file, locate and link* that file on your computer, which then stores that mp4 file in secure cloud storage.

C. If your video contains both video and audio, but you cannot publicly show the video, but you want to still use the audio in an SMT observation and analysis:

1. Create a blank videotape that is longer in time than the audiotape of the lesson recorded. When filming the blank tape, keep the lens cover on and turn down the audio to zero or completely turn off the sound.
2. In your video editor (Camtasia or other), import the blank video file and place it on the timeline. The user may want to overlay a title screen with the teacher's name or identifier. Separate the audio track from the video track. Delete the audio on the original "blank" tape and keep the blank video portion.
3. Import the video file of teaching and place it on a second and different track from the blank video. Separate this tape's video and audio portions and delete the video portion.
4. Now on the timeline, there should be the blank video track and the audio of the teaching track.
5. Trim down the length of the tracks until they are just a second or two longer than the classroom audio track or the file you are creating will be unnecessarily longer than what the user needs to place into SMT for analysis.
6. Save and export to an mp4 file that can then be uploaded to the user's YouTube (unlisted) channel or simply save on the computer and upload to cloud storage when setting up a New Observation.

## **Appendix E: Individual Users – Frequently Asked Questions**

### **FAQ: If I have an individual account, who can I invite to my observation team?**

Answer: Any other individual user who has an SMT registered account can accept an invitation to join an observation. You need to know the email they are using for their SMT account. Someone who is a member of a group account (Teacher Education or K-12 School) cannot join your individual account when they are already in a group account. To join your observation team, they would need a separate individual SMT account using an email that is different from their group account. This prevents crossover observations from individual to group accounts and is in place for security and confidentiality reasons.

### **FAQ: Since four is the maximum number of observers for any observation, does that mean I can only have four colleagues as observation team members?**

Answer: No. While you can only have three other colleagues joining an observation (with you making a total of four on the team), your list of potential colleagues to choose from is limited only by how many people you know who have a registered SMT account. From that list, you can choose any three to join an observation. And you could choose a different three for the next observation. When choosing observation partners, if using video, keep in mind confidentiality and protection of minors when it comes to deciding who can view the video

### **FAQ: I have an individual account, but my school will now use SMT for observation. Can I keep my individual account and still participate in the school's group account?**

Answer: Yes, you can keep the individual account, but for the group account, you will need to use an email that is different than the one used for the individual account. Most individual account users registered for SMT using their personal email accounts, not their school email.

### **FAQ: The registration cost covers me for how much time?**

Answer: Each registration is good for one year from the date of registration. For the user's convenience, registration will automatically roll over unless they cancel their registration. And SMT gives plenty of notice before the new registration begins. The user will receive an email 30 days before the roll-over to allow them plenty of time to cancel their registration before renewal.

### **FAQ: Can I cancel my initial registration or cancel it after the renewal has taken place.**

Answer: Once registration or renewal is finalized, the user can still cancel at any time by going to SMT, login, and under *Billing*, there is a button to cancel the account. If the registration or renewal process has already occurred, no refunds will be given to the user. However, since the user paid their registration, they will still have access to and can use that account until that initial registration or renewal period ends. Because the user canceled the account, the next renewal will not occur. A reminder that registration renewal emails are automatically sent to the SMT user's account email.

## Appendix F: Teacher Education - Frequently Asked Questions

### **FAQ: How can I set up an SMT account for myself (methods instructor) and the 35 future teachers in my class?**

Answer: Go to [www.seemeteach.com](http://www.seemeteach.com), and under *Plans and Pricing*, you will find the link for registration and payment for a school or a teacher preparation plan. The class leader or administrator who sets up the account can, of course, participate in the group, and they are not counted toward the number of paid slots for their group. At the time of registration, they need to know and enter how many paid accounts (teachers or other administrators) they wish to have in their group and the group members' emails.

### **FAQ: If I have a group consisting of the clinical experience supervisor and 25 fieldwork students, and I want to add four more fieldwork students and cooperating teachers to my group, what do I do?**

Answer: At this time, email [orders@seemeteach.com](mailto:orders@seemeteach.com) and let them know how many more users to add to your group account. Include the institution's name, department, program, group leader or administrator's name, email used for the group SMT account, and a phone number. SMT will add those additional slots to your account and invoice the administrator for the change in registration.

### **FAQ: I have 21 users in my group, but one person left the program and will no longer be a part of our SMT group. Can I fill that slot with another person?**

Answer: Yes, you can fill that slot with another person. Go to SMT Login, Contacts, and Remove the user that has left the group. That should free up a slot, showing how many more users can be invited into the group before you have reached the paid registration limit. If that number is one or more, then invite a new user to the group. They will get an email with an invitation that they will need to click on to accept (and they create a password, etc.). The new user, of course, doesn't pay because the group administrator has already paid for the members of the group. If the administrator needs more slots than what they initially required – see the answer to the FAQ above in which you contact [orders@seemeteach.com](mailto:orders@seemeteach.com) for support.

### **FAQ: I am the university supervisor for ten fieldwork students. I want to form a group of 10 students plus myself. How do we pay for SMT registration?**

Answer: There are a couple of things to consider.

- First, a typical "group" registration (see alternative group formation below) can be paid by:
  - one credit card payment that covers all members of the group, or
  - the group administrator initiates payment via purchase order (email to [orders@seemeteach.com](mailto:orders@seemeteach.com) or fax 866-414-3456, and SMT generates an invoice sent to the administrator of the group.

Remember, when forming a group, the user who is the group administrator has a free account, so in the case of 1 group admin and ten students, the request to SMT is for 11 users in the account, but the cost is only for ten users.

- Second, if each student in the group is paying for their registration, how can the group administrator collect the money from the ten fieldwork students?
  - Some universities add a course fee of \$20 per student to cover the cost of SMT registration. Then when the fieldwork supervisor (and the administrator of the SMT group) registers

themselves and their students, they pay with a department credit card or provide a *Purchase Order* number so an invoice can be sent to the department for payment.

- Note that sometimes teacher education programs pay for the registration cost for the cooperating or mentor teacher so they too can participate and collaborate in observations and feedback.
- Third, if the two group payment suggestions above are not feasible, then perhaps the **alternate group registration via a single-user plan** process works better. The alternative way to establish a group is to set up an informal group where the university supervisor and fieldwork students all register as *Single Users* and then invite each other (and accept) as collaborators. Also, read the response below to understand why this might be a preferable option.

**FAQ: In a teacher preparation program, if I am a methods instructor who has assignments linked to Fall semester fieldwork placements and my students who are registered SMT users finish my course and their fieldwork, then enter a different course in the Spring semester with a course instructor/fieldwork supervisor who wants them to use SMT to process their student teaching observations, is it best to form registered groups or best to have all the students and the instructor/supervisor register as single users – the alternative group registration?**

Answer: Unlike teachers in a school who stay within that group for the whole school year, teacher education students start and finish courses or start and complete fieldwork or student teaching experiences during a semester. So, it is probably best in some scenarios is to have teacher education students register as single users and have each student pay the registration fee that will cover them for one whole year. Then for the 1<sup>st</sup> semester, each user can invite those who need to be part of their collaborative teams, such as their methods instructor (or vice versa), their cooperating teacher, their university supervisor, and fellow fieldwork students if they are working together at a school placement. This process might also be best in the case of an assignment from the methods instructor, which requires small groups to collaborate on observation and provide feedback. When the semester ends and the teacher education students are in different classes or have new collaborators, under their *Contacts List*, they can *Remove* users that no longer should be collaborators and add new collaborators as needed. The benefit of all those users being within one formal group using the group plan vs. a single user plan is that no group user can invite someone into the group who shouldn't have access. As such, if videos are used for observation, they remain accessible to only the group members and the instructor – the people who usually have access to those classrooms.

**FAQ: With the power of SMT and how the potential for collaboration between the university supervisor, student-teacher, and cooperating teacher is built right into SMT, how can we get more cooperating teachers involved in using SMT and being part of the collaborative team, sharing observation notes, data, and summative forms?**

Answer: Universities highly value cooperating teachers for feedback and mentoring. Some universities secure grants and gifts from donors to cover the registration cost for the cooperating teachers. Some institutions simply build it in as an expense, while other universities have the fieldwork student or student-teacher pay a course fee covering the cooperating teacher's SMT registration.

**FAQ: If I am in a school group or a teacher education group, I know that I can only have collaborators from a select group of people that the group administrator has invited to the group. If I want to have colleagues outside of the group collaborate with me on observations and feedback, how can I do so?**

Answer: You are correct. You cannot collaborate with anyone outside the group as part of that group account. First, keep in mind that privacy rules would probably prevent you from sharing any video of students in K-12 with those who would not normally be working with those students. In addition, school district policies and laws need to be considered, especially concerning *the United States, where the Children's Online Privacy Protection Act ("COPPA") applies to children under the age of 13 and requires parental permission to record or store any video of children under the age of 13.*

However, suppose you sign up as a single user. In that case, you can invite any person you would like to include as collaborators on observations unless they are part of a group account, in which case that email cannot be used for both accounts. If that is the case, use their alternate email when collaborating with you. Remember that SMT will only let a specific email address work for either a group or as a single user, but not both. For example, if your school email address is used with your school group, you must use a different email address such as @gmail or @yahoo when you register for your single user account.

**FAQ: The registration cost covers me for how much time?**

Answer: Each registration is good for one year from the date of registration. For the user's convenience, registration will automatically roll over unless they cancel their registration. And SMT gives plenty of notice before the new registration begins. The user or administrator will receive an email 30 days before the roll-over to allow them plenty of time to cancel their registration before renewal. The renewal email will be sent to the administrator who established the group for schools or teacher education groups that paid for the group members.

**FAQ: Can I cancel my initial registration or cancel it after the renewal has taken place.**

Answer: Once initial registration or renewal is finalized, the user can still cancel at any time by going to SMT, login, and under *Billing*, there is a button to cancel the account. If the registration or renewal process has already occurred (*a reminder that registration will renew is automatically sent to the email associated with the SMT user's account*), no refunds will be given to the user. However, since the user paid their registration, they will still have access to and can use that account until that initial registration or renewal period ends. Because the user canceled their account, the next renewal will not occur.

## Appendix E: K-12 Schools – Frequently Asked Questions

### **FAQ: How can I set up a school account for myself (the Principal) and my 35 teachers in my school?**

Answer: Go to [www.seemeteach.com](http://www.seemeteach.com), and under *Plans and Pricing*, you will find the link for registration and payment for a school or a teacher preparation plan. The administrator who sets up the account can participate in the group, and they are not counted in the number of paid slots for their group. At the time of registration, they need to know and enter how many paid accounts (teachers or other administrators) they wish to have in their group and will be asked to enter the emails of group members they plan to invite into the group.

### **FAQ: If I have a school group consisting of the Principal and 25 teachers, and I want to add four more teachers to my group, what do I do?**

Answer: At this time, email [orders@seemeteach.com](mailto:orders@seemeteach.com) and let them know how many more users to add to your group account. Include the name of the school district, the school, and the group administrator's name and email used for the group SMT account, along with a phone number. SMT will add those slots to your account and invoice the administrator for the change in registration.

### **FAQ: I have 21 users in my group, but one teacher left the school and will no longer be a part of our SMT group. Can I fill that slot with the teacher who takes their place?**

Answer: Yes, you can fill that slot with another person. Go to SMT Login, Contacts, and first remove the user that has left the group to free up space for the new person. Then SMT will show how many more users can be invited into the group before reaching the paid registration limit. If that number is one or more, invite a new user to the group. They will get an email with an invitation that they will need to click on to accept (and they create a password, etc.). The new user, of course, doesn't pay because the group administrator has already paid for the members of the group. If the administrator needs more slots than what they initially required – see the answer to the FAQ above in which you contact [orders@seemeteach.com](mailto:orders@seemeteach.com) for support.

### **FAQ: With the power of SMT and how the potential for collaboration between the university supervisor, student-teacher, and cooperating teacher is built right into SMT, how can we get more university supervisors and student teachers involved in using SMT and being part of the collaborative team, sharing observation notes, data, and summative forms?**

Answer: Universities highly value collaboration between the university supervisor and the cooperating teacher for the feedback and mentoring. The school might suggest that the teacher education program use SMT as an observation platform because SMT gathers a ton of data for feedback, recommendations, indicators of growth, and decision-making. Some universities secure grants and gifts from donors to cover the cost of registration for the university and cooperating teachers. Others build it in as an expense, while other universities have the fieldwork student or student-teacher pay a course fee covering the cooperating teacher's SMT registration.

### **FAQ: If I am in a school group or a teacher education group, I know that I can only have collaborators from a select group of people that the group administrator has invited to the group. If I want to have colleagues outside of the group collaborate with me on observations and feedback, how can I do so?**

Answer: You are correct. You cannot collaborate with anyone outside the group as part of that group account. First, keep in mind that privacy rules would probably prevent you from sharing any video of students in K-12

with those who would not normally be working with those students. In addition, school district policies and laws need to be considered, especially concerning *the United States, where the Children's Online Privacy Protection Act ("COPPA") applies to children under the age of 13 and requires parental permission to record or store any video of children under the age of 13.*

However, if you sign up as a single user, you can invite any person you would like to include as collaborators on observations. Remember that SMT will only let a specific email address work for either a group or as a single user, but not both. For example, if your school email address is used with your school group, you must use a different email address such as @gmail or @yahoo when you register for your single user account.

**FAQ: The registration cost covers me for how much time?**

Answer: Each registration is good for one year from the date of registration. For the user's convenience, registration will automatically roll over unless they cancel their registration. And SMT gives plenty of notice before the new registration begins. The user or administrator will receive an email 30 days before the roll-over to allow them plenty of time to cancel their registration before renewal.

**FAQ: Can I cancel my initial registration or cancel it after the renewal has taken place.**

Answer: Once registration or renewal is finalized, the user can still cancel at any time by going to SMT, login, and under *Billing*, there is a button to cancel the account. If the registration or renewal process has already occurred, no refunds will be given to the user. However, since the user paid their registration, the user will still have access to and can use that account until that initial registration or renewal period ends. Because the user canceled the account, the next renewal will not occur. A reminder that registration renewal emails are automatically sent to the SMT user's account email. The renewal email will be sent to the administrator who established the group for schools or teacher education groups.





## Appendix G: Terms of Service Agreement

Before using SMT, you must read and agree to the complete **Terms of Service/Privacy Agreement**. The **TOS/PA** was provided during the registration process but is also located at the bottom of each page on the SMT website. Make note that the **TOS/PA** may be modified when necessary; modifications may occur after your initial reading during registration, so you are hereby advised to periodically read the TOS/PA for changes that may apply to you.

The following is a condensed version but is NOT a substitute for reading the complete **TOS/PA** document.

In short, SMT was designed and priced so that anyone could have access to and use this powerful tool. The once per year registration fee covers the registrant's personal use for one year. Registration will automatically renew to allow for continued usage of SMT unless the user opts to cancel the renewal.

If you are a participant in a school or teacher preparation group, your fee may be paid by the institution. For those who are part of a group, such as a school or a teacher education program, your participation may depend on continued employment at that school or district or whether you are an active student in a teacher preparation program or have completed teacher training at that school an institution. After moving on to employment at another school, your membership could change to that of the new school group (if they use SMT) or be used independently by you by registering as a single user.

As a single user, you may elect to invite others to be a part of your observation team based solely on your discretion and per the **TOS/PA**. A single user may choose to continue using SMT independently of your school, teacher education program, or ancillary to what they do for observations. Suppose the user is part of a school or teacher education group and wants to utilize SMT independently outside of the group. If so, they will also be required to register as a Single User with an email different from the one used and associated with the group.

Whether you pay the registration fee or whether your school or teacher education program pays the fee, the use of SMT is for non-commercial use only. You, as a registered user, or any user, may not use SMT in any manner related to a consulting contract, any method of commercial purpose, or for-profit, performing a paid service without first establishing a written agreement with SeeMeTeach<sup>®</sup> before any such intended use. The definition of the use of SMT includes:

- \* any work related to consulting or as a grant evaluator
- \* any teacher or future teacher-related observation
- \* any evaluation provided to a teacher, school, district, school board, university, or any teacher preparation program (formal or informal) while serving as a consultant or independent contractor.

In other words, you may not make money by using SeeMeTeach<sup>®</sup> in any manner without first procuring a written agreement and a licensing agreement between SeeMeTeach<sup>®</sup> and yourself/your company.

## **Appendix H. Learning and Practicing the Teacher Action Codes**

### **Learning How to Analyze Teacher-Student Interactions - The SATIC Coding System**

There are different schemes for analyzing teaching. SATIC is a teacher behavior assessment scheme devised by Dorothy M. Schlitt and Michael Abraham (1972), modified by Clough (2006), and further modified by Berg (2020). SATIC is a system that helps uncover and identify the specific tendencies and patterns teachers use when interacting with their students. The value of SATIC is that it provides a system for observing teachers and a mechanism that provides a much better understanding of what teachers do or don't do while interacting with students. With this data in hand, teachers can reflect, observers can provide feedback, coaches can suggest changes. Teachers can make changes to interactions with students based on their goals for lessons, what the data indicates, and what educational research shows to be effective.

One cannot make accurate statements about teaching unless attention is focused on the particulars and specifics of teaching. Teachers who are proficient reflective practitioners summarize a teaching episode with specific comments regarding the many things teachers say or do during the course of a class period that contributes to the whole of "affective" or "not so affective" teaching. At the root of all these positive general statements are specific teacher interaction behaviors that facilitate rather than impede the positive learning outcome. How teachers interact with their students can turn a passive activity into a super engaging activity, turns a stilted discussion into a robust interchange, or elevate a risky, no-questions-asked environment into a classroom where creative thinking is allowed and encouraged.

Being able to talk in terms of discrete teacher behaviors provides the teacher and the observer with specifics to look for and feedback specifics to talk about when keying in on what was powerful within the lesson and what needs improvement. That is why being able to use a mechanism like SATIC is essential as it allows teachers to identify, examine, reflect, and converse about specific teacher behaviors that significantly affect the learning environment.

### **Overview of the SATIC Lessons**

SATIC is about identifying and examining specific teacher interactions and then developing the skills to provide specific and thorough statements about a teacher's interactions with students in the classroom. To become proficient in using SATIC and thereby benefit from the process of using SATIC, the reader needs to develop fluency by first learning to walk and then run. So, this module starts you out by first learning the

discrete categories and examples of teacher actions, followed by practice sheets with keys to check the accuracy. By the end of this work, the reader should be able to accurately identify most teacher behaviors that occur during an interaction. However, keep in mind that no system is perfect; now and then, a teacher's behavior might not fall cleanly into one category or another. In that case, the best guess suffices if the reader consistently codes that teacher's behavior when it happens. Coding will count how many times it happened and when the teacher tends to use that behavior in relation to other teacher actions. With data in hand, the observer decides if that tendency or pattern is productive or not based on the goals for instruction during that teaching episode. Following practice with the written examples in this module, the reader will then return to the SMT training manual and proceed through the video-based part of the teacher actions (T codes) training.

### **Instructions For Learning SATIC**

The categories found in the SATIC system are there because they were identified as prominent behaviors observed when teachers are interacting with students. SATIC has four groupings broken down into *Monitoring*, *Initiating* and *Responding*, and *Annoying*, with only a total of 14 discrete teacher actions that fall under those groupings. Each discrete teacher action is named and defined. The reader's goal is to develop a functional understanding of teacher actions so that they would be able to identify and make a note of the specific teacher actions being observed when observing a teacher.

**Monitoring** - The first grouping with only one action is a catch-all for when the teacher is monitoring or doing any of the many administrative tasks vs. actively teaching students.

**Initiatory Teacher Actions** - In the second grouping called *Initiatory Teacher Actions* is lecturing, giving directions, and four types of questions from low level to higher. Note that this scheme uses only four question types vs. other systems that have 5-8 categories which are way too many for a fast-paced observation.

**Responding Teacher Actions** - The third grouping labeled *Responding Teacher Actions* would include those teacher actions that follow a student asking or answering a question or making a comment. Later in the module, the reader will learn that the eight teacher actions within *Responding Teacher Actions* can be separated into "teacher-centered" versus "student-centered." In short, teacher-centered actions keep the teacher at the center of focus, while student-centered actions turn the focus back to the student (how these

are grouped into sub-categories will become obvious as you study them). Separating and keeping track of teacher-centered versus student-centered is essential, as emphasizing one versus the other during teacher-student interactions significantly impacts many aspects of classroom instruction.

**Annoying** – The last group is one category called Annoying Non-Verbals or Verbals and includes any teacher action that is noticeable and annoying to students or the observer and serves to distract the learner's focus on the lesson.

Now proceed to Sheet 4.1 and view the teacher action categories and examples provided.

*Monitoring*

**0. Monitoring:** This code is used when students are working, and the teacher is monitoring the classroom or perhaps doing administrative work, such as taking attendance.

*Initiatory Teacher Actions*

**T1. Lectures or Presenting Information:** This code is used when the teacher lectures or presents information in the form of extended teacher-initiated commentary.

**T2. Gives Directions, Makes a Statement, or Asks a Rhetorical Question:** This code is used when teacher-initiated statements such as directions, statements, comments, or a rhetorical question to which no answer is expected are used. Examples:

- a. Sort sets of directions
- b. Rhetorical Questions such as: Does that make sense? Are you ready to start?

**Four Question Types**

**T3a. Asks Yes/No Question:** This code is used when the teacher asks a question that requires a yes/no answer. Examples:

- a. Can you explain photosynthesis?
- b. If I add a red filter over the light, will the paper turn green?
- c. Can you pick out the bird that doesn't fit with the others in the group?

**T3b. Asks Short Answer Question:** This code is used when the teacher asks a question that requires a 1-2-word answer. This also might be a multiple-choice or a memory-type response. Examples:

- a. Is iron metal or nonmetal?
- d. Would that be a verb or a noun?
- e. When did they fight the war of 1812?
- f. To what species does man belong?
- g. What is the capital of North Dakota?
- h. Tell us what we did in yesterday's lab.

**T4a. Asks Thought-provoking Short Answer Question:** This code is used when the teacher asks a question that requires deep thinking than a 3a or 3b, perhaps in the form of speculation, and cannot be answered with 1-2 words but does not ask for justification or explanation for the response. Examples:

- a. Predict what you think will happen when I ...
- b. What might happen to the system when I raise the pressure?

**T4b. Asks Thought-provoking Extended-answer question:** This code is used when the teacher asks a question that requires deeper thinking, much like a 4a but in addition also requires a justification for that answer.

Examples:

- a. Given the results of the last two experiments, which of the two metals were in solution and how do you know?
- b. Look at the graph - what you would choose to make the cart go down the hill the fastest and explain why you would choose those things?

*Responding Teacher Actions - Eight Things Teachers Might Do After Students Respond*

**T5. Reject Student Comment, Answer, or Question:** This code is used when the teacher rejects a student's response in a negative manner, indicating that a student's answer is wrong or the teacher cuts off a student's response. Examples:

- a. No, try that one again.
- b. Wrong!
- c. Susie, could you help him out?

**T6. Acknowledges Student Comment or Answer:** This code is used when the teacher acknowledges the student without evaluation. For example, the teacher might give a neutral response indicating the student was heard but does not confirm or reject the student's answer.

Examples:

- a. O.K. [in a non-confirmatory sense]
- b. All right
- c. I see
- d. That's an interesting idea.

**T7. Confirms Student Comment or Answer:** This code is used when the teacher evaluates a student's response positively. For example, in the form of praise. Examples:

- a. That's right
- b. Good job!

**T8. Repeats Student Comment:** This code is used when the teacher repeats the student's response. This technique may be used to:

- a. To indicate that the student response was heard.
- b. To allow other students to hear the response.
- c. To enable the student to listen to what he or she said.

Examples:

Adam – I think it would go down the hill much faster when you add weight to the car.  
Teacher – So you think it would go down faster with more weight added to the car.

**T9. Clarifies or Interprets What Student Said:** This code is used when the teacher re-words or interprets a student's response by adding more information or meaning on top of what the student said. This technique may be used to clarify, emphasize, or improve a student's answer. Example:

- a. The question was posed by the teacher, "Why did the rocket ship keep speeding up as it entered the atmosphere?" The student responds, "Gravity?" and then the teacher follows up and clarifies the student's answer by saying, "Yes, gravity increases as you get closer to the earth, the rocket ship speeds up, and it will keep speeding up until it hits the earth."
- b. The teacher asks – "What makes a good short story?" The student responds, "A plot." The teacher follows up with a clarification by adding meaning, such as "A short story has to have a good plot, meaning quickly developed characters, the brevity of language, a strong opening sentence or paragraph that grabs the reader's attention, and ...."

**T10. Answers Student Question:** This code is used for short, succinct responses to student questions.

- Note: Initially, it might look like the teacher is answering the question, but if the response becomes long-winded and extends beyond 15 seconds, the user should code a T10, then when the diatribe has ended, code a T1 to indicate that the teacher responded with a mini-lecture in addition to responding to the student question.

**T11. Asks A Student to Clarify or Elaborate:** This code is used when the teacher asks a student to extend, repeat, or clarify a student's response. Examples:

- a. Tell me more about that idea.
- b. What do you mean by that?
- c. Please explain your idea.

**T12. Uses Student Question or Idea:** This code is used when the teacher redirects a student's question to another student or to the small group or whole class. Examples:

- a. John said that gravity was involved. What do you think about that idea?
- b. Shaneka gave two reasons why the community was upset about the new lawn chemical law. Turn to your partner and discuss whether you agree or disagree and why.

**T13. Annoying Non-Verbals or Verbals:** T13 is an event-only code used when noting something nonverbal in nature, such as an annoying habit that is worth noting and relaying to the teacher. Use this when the teacher displays annoying non-verbals or verbals that detract from instruction or perhaps distract students. There are many factors that influence whether students will participate in class and answer questions or get involved with class discussion, or alternatively inhibit their participation. Non-verbal behaviors can be inviting or non-inviting.

#### Inviting Behaviors

- arms open – palms open and arms spread apart like you are welcoming and inviting them and pulling questions into you
- smile – it is hard to make non-inviting facial expressions when you are smiling
- eyes wide so eyebrows are not scrunched together
- leaning forward

#### Non-Inviting Behaviors

- arms crossed
- eyebrows scrunched down
- tightening the muscles around your mouth area
- turning your back to the students
- leaning backward, away from the students



## Code As-Is and Without Interpretation

Note that when you view a teacher teaching and begin identifying specific teacher actions, code the statement or question as the teacher asks it, not how the student responded, nor what you think the teacher intended. For example, the teacher might ask, *“Do you think recycling is an important thing to do?”* Clearly code this as a T3a, a yes/no question. The student responds, *“Yes, because if we don’t recycle the world’s supply of ...”* a response that became a five-sentence answer. Although the student went on to supply a lengthy answer, clearly beyond the yes/no question asked of them, it is still coded as a T3a. Why is it important to code as is, without interpretation? Frequently, asking a T3a will produce a single word yes/no response, and then the teacher must follow up with a T11 requesting the student to tell them more to achieve their intentions of finding out what the student knows about the content. Whereas asking an open-ended question will often produce a student answer that offers insight into their thinking. So instead of asking a yes/no type of question, consider asking a T4a or T4b instead of asking two questions to get to the point you want.

With practice, the user will learn to recognize discrete teachers’ actions represented by code # and develop fluency and speed. In time you will be thinking about the number, or name, of the category as you see it occur; in your mind, you might be thinking, that’s a 1, 3a, 8, 3a, 6, 1, and so on. So, begin by studying the list of codes and the examples and then start working on the practice examples. There are only 14 defined teacher actions to learn. Use the definition sheet at first, but then attempt to wean oneself away from the definition sheet and try to remember the number and name of each category when reading or viewing. Learning and knowing the various discrete teacher actions and the code number greatly helps the SMT user when they begin observing and coding a lesson as less time will be spent on trying to decide which category the action best fits, and the user also knows where within the list from top to bottom the category/button resides, thereby a faster click. Next, the reader is provided some tips and mnemonics for remembering the T codes.

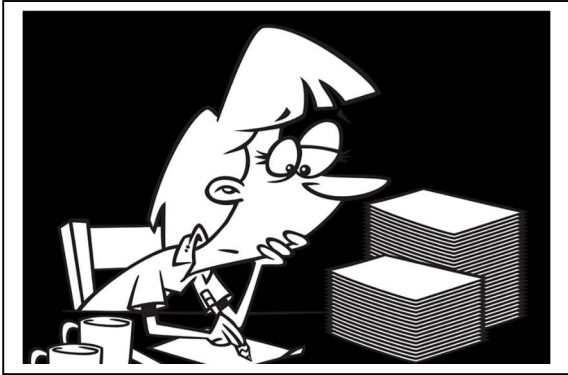
## Tips Mnemonics for Learning the T Codes

The T codes are used to represent teacher actions. Observing and accurately describing the teacher’s role and actions as they are teaching is a critical aspect of providing feedback and coaching teachers toward improving instruction. Part of becoming a fluent SMT user is improving knowledge of the T codes and what individual codes represent to cut down on novice SMT user think time. Identifying a discrete behavior and then immediately knowing which code to click

leads to more accurate data and allows the user to keep up with the sometimes-fast pace of teaching. There are some mnemonics and tips that might be helpful when learning and using the codes.

### Monitoring

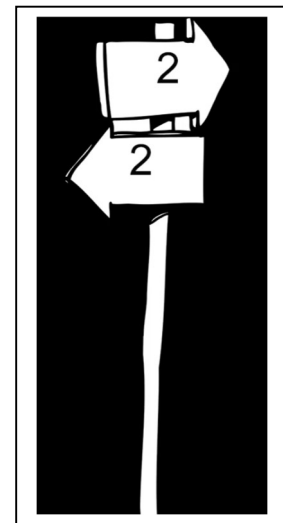
**T0** – Monitoring: 0 or zero is the code for a teacher who is not teaching but rather monitoring the class or doing administrative tasks. So, zero “teaching” is occurring, and therefore T0 is the code.



### Initiatory Teacher Actions

**T1** – Lecture: 1 is a number that is vertical, standing straight and tall, much like a teacher standing in the front of the room, talking and lecturing, so visualize the #1 as a teacher talking or lecturing.

**T2** – Statement, giving directions, or a rhetorical question: A 2 is sort of like a question mark, and when students are confused about what to do, teachers clear up the confusion by giving directions. The teacher's action of giving directions is not linked to any other action. Anytime the teacher provides directions, it is a T2. The teacher making short statements consisting of a couple of sentences or asking rhetorical questions also falls under a T2. Note that what might start out as a teacher statement sometimes extends into a lengthy, more lecture-like action, so to separate a T2 from a T1, consider that a T2 is roughly less than 15 seconds or less and when the teacher talks reach roughly 15 seconds a T2 code is entered, then after the rest of teacher talk ends a T1 is coded.



**Only Four Question Types** - While some teacher observation schemes employ a system of 7-8 types of questions, the system used with SMT has only four different types for the following reasons: a) in the midst of watching a teacher, the number of teacher and student actions is large, and the observer has very little time to determine question type – the four categories are minimal, yet they cover everything from simple yes/no questions to questions requiring deep thinking with justification. In short, this system works in that important data is collected, but the process and determining which question type is being exhibited is not overwhelming to the observer.

There are only two question types in each of the two groupings of 3's and 4's. T3-type questions are generally considered lower-level thinking questions than T4 questions. So, when observing and hearing a teacher pose a question, the observer's first thought should be to screen as to whether it is posed as a yes/no or short answer question, and if not, then move to the T4's and sort it out based on the examples and tips below.



**T3a – Yes/No Questions:** The lowest level question on the scale of thinking is a question posed that only requires a yes/no response. Any question that begins with *would you*, *could you*, *do you*, *will you*, or *are you*, are automatically coded as a T3a. While a question posed as a yes/no question might require deeper thinking even to generate a yes or no response, the observer still codes it as a T3a because a yes/no question CAN quickly be answered without thought. Any student can answer this question by vocalizing a “yes” or a “no,” and unless teachers follow up, they cannot say for sure whether the student’s response was a guess or not. When using SMT, each question is coded as vocalized and not as the observer speculates about the teacher’s intentions. Yes/no questions are coded as such because a yes/no type of question can be improved and uncover more student thinking by asking a better question.

**T3b – Factual, Memory, Short Answer Questions:** Maybe a step up in difficulty from yes/no questions; this question is asking for information, probably a factual answer, something students should have learned and can recall. At least this question requires students to put some words together for a response, so T3b is asking

a question that requires a short answer or a memorized, factual response. Short answer questions are one step up from a T3a, so remember that they are coded as a T3b.

Examples include:

- Is iron metal or nonmetal?
- Would that be a verb or a noun?
- When did they fight the war of 1812?
- To what species does man belong?
- What is the capital of North Dakota?
- Tell us what we did in yesterday's lab.

**T4a** – Questions Requiring Speculation: First, there is recognition by the observer that it is not a yes/no question and not a short answer or recall type question, so the user is considering whether it is a T4a or T4b. While both types of questions require deep thinking and ask students to generate a response to the question, with T4a, students are **NOT asked to explain the reasoning behind their answer or justify their response.**

Examples include:

- a. Predict what you think will happen when I ...
- b. What might happen to the system when I raise the pressure?

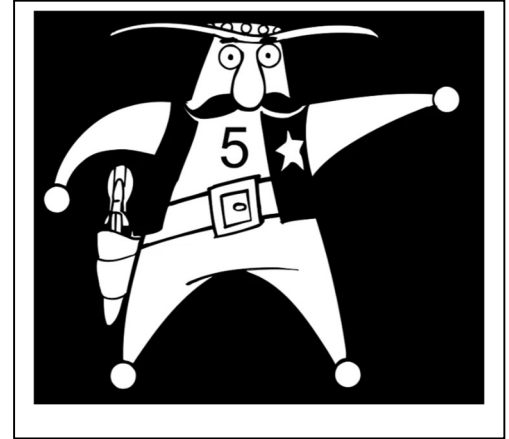
**T4b** – Questions Requiring Speculation and Justification: A question requiring deeper thinking, and students generate a response **and explain the reasoning behind their response or justify their response.**

- a. Given the results of the last two experiments - which of the two metals were in solution, **and** how do you know?
- b. Look at the graph - what you would choose to make the cart go down the hill the fastest **and** explain why you would want those things?

## Responding Teacher Actions

The next seven behaviors are things teachers do AFTER getting a student response. To be clear, a teacher asks a question or makes a comment, a student responds, THEN the teacher does one or more of the following.

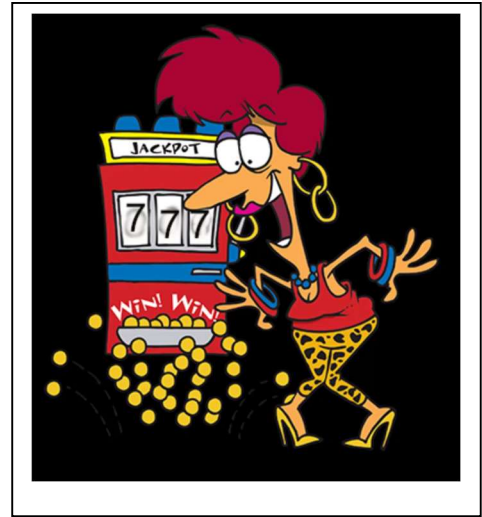
**T5 – Judging Response Indicating Wrong:** T5 is the teacher's action that codes to indicate that the student's response was wrong and that their answer was incorrect. To remember this, think of a 5-pointed lawman's star, and the lawman who is wearing the badge is present because something is wrong. Visualize a 5-pointed star and the word "wrong."



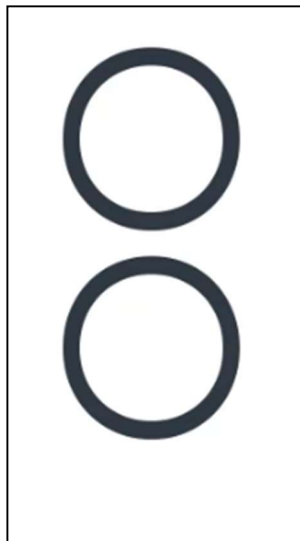
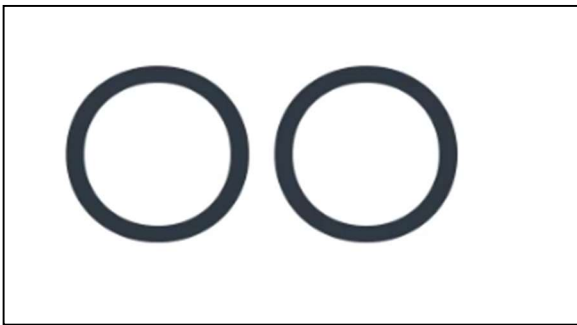
**T6 – Acknowledging Response:** 6 is sort of halfway between 1 and 12 on this scale, and something in the middle is neutral. T6 is when the teacher acknowledges but doesn't judge; they simply let the student know they heard the answer but didn't indicate to the student or the class whether the student's response was correct or incorrect. They give a neutral response, a non-confirmatory response; they acknowledge the student's answer in some manner.

- a. O.K. [in a non-confirmatory sense]
- b. All right
- c. I see
- d. That's an interesting idea.

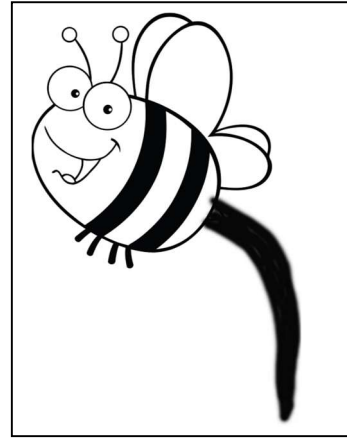
**T7** – Judging Response Indicating Correct: 7 is supposedly a lucky number. Hitting the 7 wins the jackpot. 7 is when the teacher tells the student that their response was correct, on target, a win!



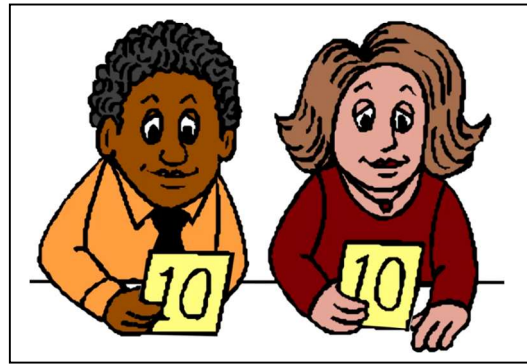
**T8** – Repeating Student's Response: A way to remember that the number 8 represents "repeating" is because it is made up of two stacked circles. The first circle is repeated and put together with the second circle forms an 8. An 8 is when the teacher repeats the student's response.



**T9** – Clarifying the Student’s Response: For T9, I think of a bee with its stinger pointed downward about to inject something. When teachers hear a student's response and then proceed to say a bit more about the topic that includes things the student did not say, in effect clarifying the student’s response and adding meaning and information beyond what the student said, it is a T9. T9 is the teacher clarifying and adding meaning to the student’s response.



**T10** – Answering A Question: A 10 is a perfect score, and who in the class knows the most about the content – the teacher, so when a teacher answers a student’s question, it is a 10!



**T11** – Asking the Student To Clarify: 11 is two one’s side by side. When 1 (one) student gives a response, and the teacher asks that same student (1 again) to explain their answer or to clarify their answer, it is a 1 followed by another 1 or a T11. So, a T11 is asking the student to clarify their answer.

**T12** – Using A Student’s Idea with the Rest of the Class: When the first student (1) responds, and the teacher uses that response to initiate responses from the rest of the class (or to another student), they have now moved on to student 2. So, 1 followed by 2 = T12. A T12 uses a student’s idea and bounces it out to the rest of the class in some manner.

**T13** – Annoying non-verbals or verbals can be remembered by thinking of 13 as the unlucky number and something the teacher needs to avoid doing, as the action is not useful for instruction and perhaps a distraction for the students.





Teacher Actions and Behaviors		Sheet 4.2
<b>Monitoring</b>		
0. Monitoring or administrative tasks		
<b>Initiatory Teacher Actions - Talk</b>		
1. Lectures or gives directions		
2. Makes statement or asks rhetorical question		
<b>Four types of questions</b>		
3a yes/no question		
3b. short-answer question		
4a. thought-provoking short-answer question		
4b. Extended-answer question		
<b>Responding Teacher Actions – 8 things teachers do after students respond</b>		
5. Rejects student comment		
6. Acknowledges student comment		
7. Confirms student comment		
8. Repeats student comment		
9. Clarifies or interprets what student said		
10. Answers student question		
11. Asks student to clarify or elaborate		
12. Uses student question or idea		
<b>Annoying Behaviors</b>		
13. Annoying non-verbals or verbals		

## Practicing Identifying Teacher Actions and T Codes Using Transcripts

**Practice Sheets** - There are numerous practice sheets for identifying teacher actions (T codes) for science, math, English, and social studies. If the reader is an elementary teacher, a teacher of students with special needs, or an ESL/Bilingual teacher, choose the practice sheets that best fit what you teach. These are listed below and located thereafter.

Have the one-page SATIC Code Summary (Sheet 4.2) of the T codes ready and start by writing a T code for each numbered blank. Then check your answers with the key that also explains why that code is the best identifier. This practice will help the reader increase their accuracy when identifying an action that is associated with a T code. Note that a teacher's action might be interpreted slightly differently at times than another person would, but their explanation would justify how they coded the teacher's action.

**Return to Training Level 6 After Practicing Coding Transcripts** - Following this practice, the user should be ready to return to Training Level 6 to use SMT to watch video and practice identifying T codes by clicking the buttons. Note that at first, it is OK to pause the video when necessary, as your skill level may not match the pace of teaching. The goal is to develop your skill to keep up with the sometimes-fast pace of the video. As you continue in the SMT Training Level 6, you will learn how SMT analyzes and displays the data in various summaries such as Code Summary, Lesson Summary, Management Summary, Student Engagement Summary, Teacher Actions Plus, Interaction Patterns, and Small Group Summary. Teaching episodes contain a rich and robust set of data, so the SMT analyses provide the SMT user with an amazing array of indicators of teaching to draw from when reflecting on teaching, providing feedback, and coaching teachers to higher levels of effectiveness.

**Optional Work In the Teacher Actions and Interaction Module** - What you have learned here also covers everything up to Chapter 6 in the *Teacher Actions and Interactions Module*. These are the other chapters and components of that module.

- *Chapter 6 - More Practice Identifying T Codes Using the Mealworm Activity Transcript* contains a whole science lesson called Mealworms that has been transcribed and can be used for more

practice identifying T codes. There is a key for this practice so the user can check their answers and perhaps further refine their identification of T codes. But what happens following the data collection? How can the data be analyzed and used? Chapter 6 also shows what one can do with the Mealworms data and how trends, tendencies, and patterns of instruction can be identified from the raw data.

- *Chapter 7 – Altering Interaction Behaviors in The Mealworm Activity – A Do-Over* examines how the teacher might have interacted with students to produce more student thinking and teach in a manner consistent with goals for an inquiry lesson. There are predictable teacher actions that mesh with inquiry teaching.
- Chapter 8 examines *Teacher-centered vs. Student-centered Teacher Actions* examines which teacher behaviors **tend** to keep the teacher at the center of the instruction (less student engagement and less understanding of what students think and know) vs. fostering student engagement and keeping the students at the center of instruction?
- Chapter 9 - *Wait-time and Non-Verbals: Teacher Actions With A Huge Effect on Learning and Student Engagement* focuses on the importance of using wait-time and non-verbals that foster student contributions and student engagement in lessons.
- *Chapter 10 - Identifying Your Own Patterns and Tendencies: What is your interaction fingerprint?* Stresses that everyone has habits and teachers have teaching habits and then asks you to predict how you tend to interact with students.
- *Chapter 11 - Matching Behavior to Goals for Students* examines how teacher actions and teacher-student interactions should match up with the goals for the lesson.
- *Chapter 12 – General Tips for Changing Teacher Behaviors* provide numerous tips and suggestions for posing questions and increasing student contributions, thinking, and engagement during a lesson.

## **Practice Sheets for Science, Mathematics, Social Studies, and English**

Science Practice 1 – Observations Sheet 5.10

Science Practice 1 – Sheet 5.10 Observations KEY

Science Practice 2 – Reaction Experiment Sheet 5.11

Science Practice 2 – Sheet 5.11 Reaction Experiment KEY

Mathematics Practice 1 – Fractions Sheet 5.20

Mathematics Practice 1 – Sheet 5.20 Fractions Key

Mathematics Practice 2 – Domain and Range Sheet 5.21

Mathematics Practice 2 – Sheet 5.21 Domain and Range KEY

Mathematics Practice 3 – Graphing Polynomials Sheet 5.22

Mathematics Practice 3 – Sheet 5.22 Graphing Polynomials KEY

Mathematics Practice 4 – Solving for X Sheet 5.23

Mathematics Practice 4 – Sheet 5.23 Solving for X KEY

Social Studies Practice 1– Stock Market and Great Depression Sheet 5.30

Social Studies Practice 1 – Sheet 5.30 Stock Market and Great Depression KEY

Social Studies Practice 2 – Middle Eastern Ethnicities Sheet 5.31

Social Studies Practice 2 – Sheet 5.31 Middle Eastern Ethnicities KEY

English Practice 1 – Using a Colon Sheet 5.40

English Practice 1 – Sheet 5.40 Using a Colon KEY

English Practice 2 – Learning About Assonance Sheet 5.41

English Practice 2 – Sheet 5.41 Learning About Assonance KEY

English Practice 3 – Learning About Consonance Sheet 5.42

English Practice 3 – Sheet 5.41 Learning About Consonance KEY

English Practice 4 – Learning About Parallelism Sheet 5.43

English Practice 4 – Sheet 5.43 Learning About Parallelism KEY

- Teacher: John, you know you're not supposed to talk out of turn in my classroom, right? 1. \_\_\_\_\_
- John: What? Who do you think you are to tell me what to do?
- Teacher: I am your teacher. 2. \_\_\_\_\_
- Teacher: Ok. Now that we have settled that little matter, we are ready to begin. 3. \_\_\_\_\_
- Teacher: As you know, we are beginning the unit today with blah, blah, blah, (18 seconds on my watch). 4. \_\_\_\_\_
- Teacher: What procedure did we use in yesterday's lab? 5. \_\_\_\_\_
- Sara: We put the stuff in the liquid and got a reaction.
- Teacher: Explain to us what you mean by the reaction. 6. \_\_\_\_\_
- Sara: Well, it fizzed a small amount.
- Teacher: When you say it fizzed, what did you observe? 7. \_\_\_\_\_
- Sara: Little bubbles came up to the surface of the liquid, so I thought it was a reaction.
- Teacher: Jose, you were working with Sara. She saw little bubbles and thought that was evidence of a reaction. Do you agree or disagree with her, and why? 8. \_\_\_\_\_
- Jose: I agree because it created a gas.
- Teacher: Fred – Jose suggested that it was a reaction because it created a gas – what do you think? 9. \_\_\_\_\_
- Fred: I think the bubbles were carbon monoxide.
- Teacher: Good grief. Where did you get an idea like that? 10. \_\_\_\_\_
- Fred: What kind of a response is that? Don't you know that using judgmental responses negatively influences my creativity and dissuades me from further responses?
- Teacher: No, I didn't. 11. \_\_\_\_\_
- Teacher: Hey, Julie - what might the little bubbles be made of? 12. \_\_\_\_\_

Julie:	Well, I think it is just carbon dioxide since it is a carbonated drink.	
Teacher:	That's an interesting idea.	13. _____
Teacher:	Jim, could you explain the chemical reaction that produces the bubbles?	14. _____
Jim:	No	
Teacher:	Well, Jim, if you had to make a guess as to how the chemicals might combine to produce the bubbles, what might your best guess be?	15. _____
Jim:	Since you put it that way and lowered the risk factor, I now feel like I can venture a guess. I think that blah, blah, blah, blah, blah.	
Teacher:	I see.	16. _____
Teacher:	That is the silliest thing I have heard in my 45 years as a teacher.	17. _____
Jim:	So much for taking risks down the road.	
Teacher:	Susan, you heard what Jim said. How do your thoughts about the chemical reaction compare to Jim's?	18. _____
Susan.	I don't know. Maybe a reaction.	
Teacher.	So, you think that the chemicals combine because the sodium and the Iodine simply switch places due to the oxidation numbers and polarity of the molecules?	19. _____
Susan:	Yes.	
Teacher:	You are right on target!	20. _____

## Science Practice 1 – Sheet 5.10 Observations KEY

<i>Example</i>	<i>SATIC Coding</i>	<i>Reason</i>
1.	2	Rhetorical comment not expecting an answer
2.	10	Answers the student's question
3.	2	Making a statement – short teacher talk less than 15 secs
4.	1	Teacher lecture – longer than 15 secs
5.	3b	Only asking students to recall – takes a short answer
6.	11	Is asking the student to clarify their use of reaction
7.	11	Continues by asking the student to tell them more and clarify
8.	12	Takes what Clara said and asks other students to react
9.	12	12 because the teacher is still working off of Clara's answer and asking Fred what he thought - to speculate about what the bubbles were made of – this often requires higher-level thinking.
10.	5	Clearly rejecting the student's answer
11.	10	Answering the student's question
12.	4a	The teacher had an interaction with Fred about something else, now s/he is sort of starting over and asking Julie to speculate so it might be a 4 if worded differently (such as "and why do you think so?"), but is probably a 4a since it can be answered with a one-two word answer.
13.	6	A non-judgmental way of responding
14.	3a	Worded as a yes/no question – remember we code the question as to how it was worded – not as to what we think the teacher intended on asking
15.	4a, 4b	Has reworded the question, asked the student to speculate and has turned the question into an open-ended question requiring more than a yes/no or short answer response
16.	6	A non-judgmental way of responding
17.	5	Clearly, a put down and rejecting the student answer
18.	12	Using Jim's answer and asking Susan to compare
19.	9	S/he is taking Susan's response and clarifying or interpreting the answer – in this case, the teacher is adding in way more than Susan ever said.
20.	7	Confirms what Susan said

## Science Practice 2 – Reaction Experiment

## Sheet 5.11

Teacher:	Class, you are ready to begin, right?	1.	_____
Teacher:	Let's get started.	2.	_____
Teacher:	Good morning class. Today we are studying the topic you have been reading about for three weeks. You know all the vocabulary words. I believe there were 112 new words from yesterday. Since you understand the terminology, we are ready to do an experiment. So today we are focusing on... (introduction continues for another minute)	3.	_____
Teacher:	Now, looking at page 145, what do we do first?	4.	_____
Student:	We put in the carbonated super fizzy stuff.		
Teacher:	Right! Good job, Adam.	5.	_____
Teacher:	What do you think might happen if we put in too much fizzy stuff?	6.	_____
Student:	I think it might not fizz.		
Teacher:	Are you saying that too much carbonation might cause a reverse reaction?	7.	_____
Student:	Yes.		
Teacher:	Well, you're not quite right.	8.	_____
Teacher:	What really happens is that too much carbonation produces a basic solution, and the reaction stops.	9.	_____
Teacher:	Students, what might happen if we add acid to this solution, and why do you think so?	10.	_____
Student:	The reaction would stop.		
Teacher:	I see.	11.	_____
Teacher:	So, you said the reaction would stop?	12.	_____
Student:	Duh, that's what I said.		
Teacher:	So, I would like to know more – would you tell me why the fizzing might stop?	13.	_____
Student:	No.		



Teacher:	Who in class has an idea why the fizzing might stop?	14.	_____
Teacher:	Ok. Well, if the fizzing stops, that means the carbonation has run out, and the acid added to the water cancels out the life cycle of the carbonation. This is a process ... (More than 15 seconds)	15.	_____
Teacher:	Are there any questions?	16.	_____
Student:	Yea, what is a life cycle.		
Teacher:	That's not important. Let's move on.	17.	_____
Teacher:	What factors might affect the results of today's experiment?	18.	_____
Student:	Light and heat.		
Teacher:	Interesting that you picked those two things, Sally. Jose, Sally thought light and heat might affect the experiment – do you agree with her, and how do you think those two factors might affect the experiment.	19.	_____
Student:	Well, the light might cancel out the exothermic reaction since the mitochondria are light-sensitive. But heat probably wouldn't affect this at all.		
Teacher:	Joe. Both Sally and Jose think light might affect this experiment. What do you think?	20.	_____
Student:	I think that both Sally and Jose are dreaming.		
Teacher:	Could you tell me more about why you think they are dreaming?	21.	_____
Student:	blah, blah, blah, blah		
Teacher:	Well, you're all wrong.	22.	_____

## Science Practice 2 – Sheet 5.11 Reaction Experiment KEY

<i>Example</i>	<i>SATIC Coding</i>	<i>Reason</i>
1.	2	Rhetorical – not expecting a response
2.	2	A short statement
3.	1	Teacher talk – 15 seconds or more
4	3b	Asking a question that requires looking at the book and just repeating directions
5.	7	Confirming and praising Adam's answer
6.	4a	Asking students to speculate – "what do you think might happen?"
7.	9 or 3a	Careful here – probably a T9 because the teacher is interpreting what the student said and adding more on to the word "fizz" – it would really be a solid 9 if the teacher had stated in response to the student "yes, too much carbonation might cause a reverse reaction." But it is posed as a question so it sort of sounds like the teacher is asking the student to clarify, but the teacher is adding in all the extra meaning way beyond anything the student said, so I wouldn't code it as an 11. It would be an 11 if the teacher said, "Tell me more about why you think it wouldn't fizz." It also sounds like it is a 3a because they asked a yes/no question, but this is really linked to the prior couple sentences, so it is not an initiating code, but a response code
8.	5	Rejecting the student's answer
9.	2	The teacher has reverted to just making a statement and answering their own question
10.	4b	Asking the students to speculate about what might happen
11.	6	Acknowledging the student's response without judgment
12.	8	Repeating the student's answer
13.	11	The teacher is asking the student to clarify. Even though they followed up in a yes/no question manner, the teacher was asking the student to explain their answer. The teacher also could have asked, "Take a guess as to why the fizzing might stop" and it would be coded as an 11.
14.	12	The teacher is using the student's idea (the fizzing might stop) and asking others to comment. You might have coded this as a 3b since all students have to do is say "I do" to this question.
15.	1	Teacher reverts to lecture
16.	3a	A yes/no question that hardly ever gets student responses – instead could ask, "What questions do you have ..."
17.	5	Clearly rejecting a student's question
18.	4a	Asking students to speculate
19.	12	Using Sally's ideas and asking another student to compare his idea with hers
20.	12	Asking still another student to compare his idea with theirs
21.	11	Asking Joe to clarify his response
22	5	Rejecting Joe's answer



- Teacher: Ok. Today we are working with fractions. 1. \_\_\_\_\_
- Teacher: How many of you know what a fraction is? 2. \_\_\_\_\_
- Students: (a few hands were raised)
- Teacher: Ok. It is very important to understand how to use fractions. 3. \_\_\_\_\_
- Teacher: Let's take the first example. If we take  $\frac{2}{8}$ ths of a whole pie, would you have more or less than half of a pie? 4. \_\_\_\_\_
- Teacher: Jesse? 5. \_\_\_\_\_
- Jesse: I think it is more than half.
- Teacher: Nope. Sorry. 6. \_\_\_\_\_
- Teacher: Andrea? 7. \_\_\_\_\_
- Andrea: I think it is less than half.
- Teacher: You are correct. 8. \_\_\_\_\_
- Teacher: Ok, the next example – how about  $\frac{4}{7}$ ths? More than or less than half? 9. \_\_\_\_\_
- Becca: More than!!
- Teacher: Right! But, do you know that, or are you guessing? 10. \_\_\_\_\_
- Becca: I know that!
- Teacher: Now tell me how you know that for sure. 11. \_\_\_\_\_
- Becca: Ok. So,  $7 - 4$  is 3, so 4 is bigger than 3.
- Teacher: Ok. Let me clarify. You see, the 7 on the denominator is the number of parts, and the 4 means 4 out of 7 parts, so 3.5 parts would be half. Therefore 4 is more than half. 12. \_\_\_\_\_
- Teacher: You'll see what I mean, right? 13. \_\_\_\_\_
- Teacher: Ok. Next example. How about  $\frac{5}{11}$ ths – is that more than half? 14. \_\_\_\_\_
- Katie: Yes.
- Teacher: Nope. John, could you help her out? 15. \_\_\_\_\_

John:	Well, I thought it was more too!	
Teacher:	Goodness sakes alive children!	16. _____
Teacher:	Jose. Tells us what you think.	17. _____
Jose:	Well, if you calculate the numbers, it is less than half.	
Teacher:	Jose, tell us more about what you mean?	18. _____
Jose:	Well, one of 11 is 5.5 and 5 is less than 5.5, so the fraction is less than half.	
Teacher:	Dominique, what do you think about Jose's answer?	19. _____
Dominique:	He is right!	
Teacher:	What makes you think he is right?	20. _____
Dominique:	His math is correct.	
Teacher:	You are correct – great job!!	21. _____
Teacher:	Now, come up with an example in the form of a story that uses fractions and has something to do with your daily life.	22. _____

## Mathematics Practice 1 – Sheet 5.20 Fractions Key

<i>Example</i>	<i>SATIC Coding</i>	<i>Reason</i>
1.	2	Teacher statement – shorter than 15 seconds
2.	3a	Yes/No question – asks for a raised hand – like a yes no
3.	6 & 2	Acknowledges then makes a statement
4.	3b	Short answer question – answer is “more” or “less.”
5.	3b	By calling on a student, she is just repeating the short question asked in #4
6.	5	Tells the student they are wrong
7.	3b	By calling on a student, she is just repeating the short question asked in #4
8.	7	Confirms that the student is correct
9.	3b	Another short answer question - answer is “more” or “less.”
10.	7 & 3b	Confirms first then asks a short answer question – answer is “I know that” or “just guessing.”
11.	11	Asks the student to clarify and tell her more
12.	6 & 9	Acknowledges in a neutral way, then clarifies and adds on more information to the student's response
13.	2	Rhetorical question
14.	6 & 3a	Acknowledges in a neutral way, then asks a yes/no question
15.	7 & 3a	Confirms the student's response, then asks a yes/no question
16.	5	Indicates the students are wrong by making an exasperated statement
17.	3b	Continues to follow up with the short answer question posed earlier
18.	11	Asks the student to explain more about their answer
19.	12	Asks another student to react to what Jose said
20.	11	Asks her to explain more about why she thinks Jose is right
21.	7	Confirms that the student is correct
22.	4	Asks students to create a story and use what they know by connecting it to their daily life – clearly not a 3a or 3b, and does more than asks students to speculate

Teacher:	Welcome to class everyone, today we will be discussing... blah blah blah (clearly for longer than 15 seconds).	1. _____
Teacher:	Tom could you explain to the class what we did yesterday for those that were not here?	2. _____
Tom:	Absolutely not	
Teacher:	Okay	3. _____
Teacher:	If you could give your best guess as to what yesterday's class was about, what would you say?	4. _____
Tom:	You talked about the domain and range of functions.	
Teacher:	Exactly, good job Tom!	5. _____
Teacher:	Susan, out of domain and range which one can you describe the best?	6. _____
Susan:	Domain.	
Teacher:	Okay, we can work with that. What is your definition of domain?	7. _____
Susan:	The domain of a function is a bunch of numbers.	
Teacher:	Fred – how does your definition of the domain of the function compare to Susan's.	8. _____
Fred:	Well, I think that its more than just a bunch of numbers in that it is the numbers that are the outputs of the function.	
Teacher:	That is incorrect Fred.	9. _____
Teacher:	The domain is the set of inputs within a function.	10. _____
Teacher:	Sally, what is it that Fred described to me?	11. _____
Sally:	Fred described the Range of a function.	
Teacher:	Class did you hear Sally say that Fred described the range of a function and not the domain?	12. _____

Teacher:	Is Sally correct in her analysis of Fred's description?	13. _____
Class:	Yes!	
John:	How do we know if a number is not in the domain or range?	
Teacher:	Well, if the function can never give us a particular output, like in the function $x$ "squared" we will never get a negative output, so the range is only positive numbers. For the domain, the output does not exist for the given input. So if we had a fraction, like 1 over $x$ , 0 could not be an input because the output would be 1 divided by 0 which is undefined.	14. _____
Teacher:	And this brings us to where we are going today, how to determine the domain and range of a function.	15. _____
Teacher:	Do you think that -2 is in the range of the line given by the function $f(x) = 3x-2$ ?	16. _____
Jennifer:	I think so.	
Teacher:	Why did you come up with that idea of -2 being in the range of this line?	17. _____
Jennifer:	When I plug in 0 for $x$ we get an output of -2, so -2 must be a part of the outputs of this function.	
Teacher:	Exactly, if we want to see if something is in the output, we need to find an input that gives us the output we are looking for. This can give us an equation such as $-2=3x-2$ , in which we would solve for $x$ . (Length of the statement was 23 seconds)	18. _____
Teacher:	If the profit that I made from selling shirts was given by the function $f(s)=4s-64$ , where $s$ is the number of shirts that I sell, how many do I need to sell to make \$16 of profit?	19. _____
Tom:	I think you need to sell 20 shirts.	
Teacher:	Explain how you got to that answer Tom.	20. _____



Tom: I added 64 to both sides of the equation,  $16=4s-64$ ,  
and then divided both sides by 4 to get  $s=20$ .

Teacher: Very good Tom, you're right on the money.

21. \_\_\_\_\_

## Mathematics Practice 2 – Sheet 5.21 Domain and Range KEY

<i>Example</i>	<i>SATIC Coding</i>	<i>Reason</i>
1.	1	Teacher is explaining the topic and presenting information for the day.
2.	3b	This is a short answer question recalling information.
3.	6	“Okay” is an acknowledgement, not an affirmation or rejection.
4.	4a	Similar to the earlier question, except that now the teacher is asking Tom to make an educated guess, which requires more thought.
5.	7	Affirmation of student answer.
6.	3b	Answer is a choice between two options, making this a short answer question.
7.	3b	Answer is a recalled definition, making this a short answer question.
8.	12	The teacher is asking another student to compare their answer with Susan’s, using her thoughts as a springboard for the next question.
9.	5	Rejection of student answer.
10.	2	This is a short statement meant to correct the incorrect answer.
11.	3b	This is a short answer question requiring recall of a vocabulary word and it’s definition.
12.	8	Teacher repeats what Sally answered.
13.	3a	This is a chorus yes/no question for the class.
14.	10	John asked a question before this, so it is an answer to his question.
15.	2	Teacher gives a short statement to describe what they are going to complete in class today.
16.	3a	This is a yes/no question.
17.	11	While the teacher is asking Jennifer an extended thinking question (Code 4b), the teacher is asking her to elaborate on why she responded the way she did, making this an elaboration/clarification code.
18.	1	Teacher spoke for >15-20 seconds, presenting information to assist in clarification of what the student said.
19.	4a	This is a short answer question because it requires a simple answer, however, it requires extended thought to complete the math problem.
20.	11	Teacher is requesting that Tom further explain his ideas as to how he got to his answer.
21.	7	Affirmation of student answer.

- Teacher: Good afternoon, everyone. I hope everyone is having a great day. Today we will be continuing to discuss how to graphs of second-degree polynomials and then how to factor these polynomials. 1. \_\_\_\_\_
- Teacher: Is everyone ready to begin? 2. \_\_\_\_\_
- Teacher: Alright then. Let's begin today's lesson. 3. \_\_\_\_\_
- Teacher: So, what exactly is a second-degree polynomial? 4. \_\_\_\_\_
- Bryan: Isn't it a quadratic equation?
- Teacher: It is indeed a quadratic equation. 5. \_\_\_\_\_
- Teacher: But what does the equation look like when it is graphed? Maddie? 6. \_\_\_\_\_
- Maddie: Is it a Parabola?
- Teacher: Alright. That's a good guess. 7. \_\_\_\_\_
- Teacher: Anyone else have a different answer? 8. \_\_\_\_\_
- Silence*
- Teacher: Maddie is correct. 9. \_\_\_\_\_
- Teacher: It is indeed a parabola and the equation for that is  $y = ax^2 + bx + c$  and the line will be a parabola. 10. \_\_\_\_\_
- Tyler: What exactly does a parabola look like?
- Teacher: Can someone in the class answer the question for Tyler? 11. \_\_\_\_\_
- Sidney: Isn't a graph a parabola when a line looks like a sideways "S"?
- Teacher: Not exactly. 12. \_\_\_\_\_
- Teacher: Can Anyone else help Tyler out? 13. \_\_\_\_\_
- Amanda: What was the question again?
- Teacher: What does a parabola look like? 14. \_\_\_\_\_

Amanda:	A parabola looks like a U.	
Teacher:	Why do you think that, Amanda?	15. _____
Amanda:	The reason I think it looks like a U is because the line should be symmetrical since the polynomial is squared.	
Teacher:	That is a correct. Thank you, Amanda.	16. _____
Teacher:	A graph is a sideways "S" shape when the equation is a 3rd degree polynomial, for people who were wondering where Sidney was coming from.	17. _____
Teacher:	What do you guys think would happen if the polynomial would be negative?	18. _____
Keenan:	It will flip over the X axis and look like an upside down "u".	
Teacher:	Excellent job!	19. _____
Teacher:	Now that we understand what the graphs of these polynomials are, we can now factor these same polynomials.....	20. _____

### Mathematics Practice 3 – Sheet 5.22 Graphing Polynomials KEY

<i>Example</i>	<i>SATIC Coding</i>	<i>Reason</i>
1.	1	It does not specify the length of the statement, however, it is a presentation of the information that will be covered today.
2.	2	This is a rhetorical question, as the teacher is not expecting responses and moves on regardless.
3.	2	Makes a statement to begin the lesson.
4.	3b	Teacher asks a short answer question requiring definition recall.
5.	8 or 10	This can be interpreted as an answer to the student question (T10) or it can be considered a repetition of the student's question in a statement (T8).
6.	3b	Teacher asks a short answer question requiring image recall.
7.	6	This is an acknowledgement of the student answer without confirming.
8.	3b	Teacher asks the same short answer question requiring image recall, opening to the rest of the class. It does not use Maddie's idea, so it is not a T12.
9.	7	Teacher confirms student answer.
10.	9	Teacher expands on the correct answer to fully explain the concept to the rest of the class.
11.	12	A student asked a question and instead of answering it, the teacher opens the question to the rest of the class, using Tyler's idea for more discussion.
12.	5	Teacher rejects the student's answer.
13.	3b	Teacher asks the same short answer question, opening to the rest of the class. It does not use Sidney's answer, so it is not a T12.
14.	10	While this is a question, this was said as a direct answer to a student question.
15.	4b	Teacher is asking Amanda to why she believes something, making this a thought-provoking long-answer question.
16.	7	Teacher confirms student response.
17.	2	Teacher makes a statement to explain an earlier incorrect answer.
18.	4a	Teacher asks a short thought-provoking question, making students conceptualize a graph.
19.	7	Teacher confirms student response.
20.	1	Teacher begins presenting information/lecturing for the remainder of the class.

- Teacher: Good Morning class! Today we are going to be learning about solving equations for X, we do this to solve for the variable of an equation, we will use this when working with graphs and solving equations throughout multiple chapters this year. 1. \_\_\_\_\_
- Teacher: All right class, are we ready to get started? 2. \_\_\_\_\_
- Teacher: Okay, let's begin. 3. \_\_\_\_\_
- Teacher: Has anybody seen these types of equations before?  
(Example on the board: Solve  $x - 18 = -5$ ) 4. \_\_\_\_\_
- Steve: Yes!
- Teacher: Okay Steve, how would you go about starting to solve this problem? 5. \_\_\_\_\_
- Steve: I think that you start with adding 18 to the right side and then I'm not sure.
- Teacher: That's very good Steve! 6. \_\_\_\_\_
- Teacher: When we add 18 to the right side of the equation, we get 13 and that is then equal to X, which solves the problem. 7. \_\_\_\_\_
- Teacher: Do you want to go over more of these simpler examples? 8. \_\_\_\_\_
- Anna: Yes, please!
- Teacher: Sounds good! 9. \_\_\_\_\_
- Teacher: How would we want to start this problem  $4x + 13 - 9 = 24$ ? 10. \_\_\_\_\_
- Leslie: You start by solving  $13 - 9$  which equals 4, and then you subtract that from the right side of the equation.
- Teacher: Yes Leslie! That's correct. 11. \_\_\_\_\_
- Teacher: Can somebody else tell me the next step that we would take? 12. \_\_\_\_\_

George: I think it's solved then  $4x$  is equal to 20, right?

Teacher: Nope! Want to try again?

13. \_\_\_\_\_

George: Maybe you divide 20 by 4 to get  $x$  by itself?

Teacher: Yes! That's correct George!

14. \_\_\_\_\_

## Mathematics Practice 4 – Solving for X KEY

<i>Example</i>	<i>SATIC Coding</i>	<i>Reason</i>
1.	1	Teacher is presenting information to the class to begin the lesson.
2.	2	Teacher asks a rhetorical question; they are going to continue regardless of the answer.
3.	2	Teacher makes a short statement, directing the conversation.
4.	3a	Teacher asks a yes/no question.
5.	4b	Teacher asks an extended answer question requiring the student to explain the thought process behind solving a problem.
6.	7	Teacher affirms student response.
7.	9	Here the teacher does use the students answer (T12) but does not frame a new idea. Instead, they elaborate further on the student answer, making this a T9.
8.	3a	Teacher asks a yes/no question.
9.	2	Teacher makes a short statement.
10.	4a	Teacher asks students to think about how they would go about solving the problem and give the first step.
11.	7	Teacher confirms student response.
12.	4a	Technically, this is a yes/no question, making it literally a T3a, however, in the context of the dialogue, this is a repetition of the earlier solving problem, requiring students to think and provide the next step of the problem (T4a).
13.	5	Teacher rejects student response.
14.	7	Teacher confirms student response.



Susan: Hey Teach! The stock market dropped three hundred points today. It crashed! We're going into another Great Depression! Did you hear?

Teacher: Yes, I heard, but no I don't think we are going into another "Depression."

1. \_\_\_\_\_

Susan: Yeah, man! Three hundred points! Go to the bank and get all your money, now!

Teacher: Are you seriously worried?

2. \_\_\_\_\_

Susan: I don't know why you're not freaking out! There could be millions of jobless people because of this, even worse than the Great Recession that our Great Grand Parents lived through.

Teacher: OK, let's start right there. During this recent Great Recession, the unemployment rate was usually right around ten percent. So, one out of every ten people that wanted a job didn't have a job.

3. \_\_\_\_\_

Teacher: Any guess for the Great Depression unemployment?

4. \_\_\_\_\_

Kyra: Wow, ten percent doesn't sound all that bad, but I've heard that this was basically the end of the world. Great Depression unemployment, (*thoughtful pause*) twenty percent?

Teacher: Actually, yeah, you're pretty close.

5. \_\_\_\_\_

Teacher: During the Great Depression unemployment hovered around twenty percent, with a maximum of around thirty percent, but most likely neither the thirty percent, nor our more recent ten percent, counts the millions of millions of people that gave up trying to get jobs.

6. \_\_\_\_\_

Humberto: Wow, so that means that at least one out of every four people that wanted a job didn't have a job. Was that one a lot more serious than this recent one?

Teacher: Ehh, depends on who you are, I guess.

7. \_\_\_\_\_

Teacher:	Anyway, that was one of the other causes of why the Great Depression went on for 12 years. If people can't work, they can't buy things.	8.	_____
Teacher:	And if people can't buy things what else might happen?	9.	_____
Amy:	Then companies can't make money and give people jobs.		
Teacher:	Exactly.	10.	_____
Teacher:	Companies can't make money and give people jobs.	11.	_____
Teacher:	It was kind of a never-ending cycle of unemployment. There was another cycle that some people might point to as a cause of the Great Depression, or at least why some people may have expected a depression at that time.	12.	_____
Humberto:	Wait! Another cycle? So, you mean some people could have predicted the Great Depression, and even the Great Recession.		
Teacher:	Yep.	13.	_____
Teacher:	In fact, students take out your notebooks and write some things down.	14.	_____
Teacher:	In fact, some people did predict the Great Recession. It's called the Business Cycle or Economic Cycle. Sometimes businesses are making money because people are buying things, sometimes they are losing money because people can't buy things.	15.	_____
Teacher:	Have you heard of this?	16.	_____
Zach:	Oh yeah, I've heard of this. They're not always called depressions or recessions either. Sometimes they're called panics or crises.		
Teacher:	You know it. It's kind of like the saying, "What goes up must come down."	17.	_____
Zach:	And right before the Depression and Recession everything was up; people were buying things and businesses were making money. So, we have the	18.	_____

	Business Cycle as a long-term cause and unemployment as a short-term cause.	
Teacher:	What might be some other causes of the Great Depression and explain how you think those things caused it?	
Susan:	Maybe people overspending and using their credit card? I mean racking up debt that they couldn't afford to pay back. You know my cousin's parents just bought an eight thousand dollar living room set. So were credit cards a cause of the Great Depression?!	
Teacher:	Not credit cards exactly, but credit.	19. _____
Teacher:	Ok, write this down too.	20. _____
Teacher:	People would buy things without having the money to pay for them right away. Instead, the company would pay for it for the person by using credit. So, if the company suddenly decided they wanted their money ...	21. _____
Teacher:	What do you suppose would happen then?	22. _____
Amy:	Then the person would have to pay it right away?	
Teacher:	If the company gave out too much credit, and then couldn't get people, potentially unemployed people, to give them the money for their stuff, then what do you suppose would happen?	23. _____
Joey:	The company would go broke?	
Teacher:	Interesting answer.	24. _____
Teacher:	Ok. Someone else – how does your answer compare with Joey's guess?	25. _____
Fred:	Well, I'm not sure the company would go broke.	
Teacher:	I would like to know more about why you think the company wouldn't go broke.	26. _____
Fred:	Well wouldn't all functioning companies have a bunch of cash in the bank?	
Teacher:	That's some fairy tale idea about companies you have Fred. Nope, not at all.	27. _____

Teacher:	And this didn't just happen with individuals, it happened with countries. America loaned out billions of dollars to countries for World War One.	28.	_____
Zach:	So, let me guess. Then other countries owed us money and couldn't pay us back.		
Teacher:	They owed us money and couldn't pay us back.	29.	_____
Teacher:	That is correct. That is exactly what happened.	30.	_____
Susan:	So, does that mean those countries went bankrupt trying to pay us, and America lost money when they couldn't pay us.		
Teacher:	Yes, that is exactly what happened.	31.	_____
Humberto:	So, was that the final cause of the Great Depression?		
Teacher:	Well, it's by no means the final cause, there were a couple of others, but I don't have time for that right now.	32.	_____
Teacher:	Let's wrap it up with what we started with: the stock market, and this goes right in line with the idea of credit.	33.	_____
Teacher:	How might have credit played a role?	34.	_____
Joey:	What?! People were investing with credit?		
Teacher:	You're darn right. They bought everything else on credit, so why not stock? It's called buying on expected returns. You assume that your first stock is going to make five hundred dollars, so they then buy another stock with five hundred dollars' worth of credit.	35.	_____
Teacher:	And if the first stock unexpectedly ends up losing money then what might happen?	36.	_____
Fred:	So, you have no money to pay, so both you and the company lose money.		
Teacher:	You think that both you and the company lose money?	37.	_____
Teacher:	Interesting. I think I understand what you are saying.	38.	_____
Teacher:	Class. Partner up and discuss Fred's idea about what might happen.	39.	_____

Teacher: Do you think he was correct?

40. \_\_\_\_\_

Teacher: Wait. The bell is going to ring. Put your notebooks  
back on the shelf and you are dismissed.

41. \_\_\_\_\_

## Social Studies Practice 1 – Sheet 5.30 Stock Market and Great Depression KEY

<i>Example</i>	<i>SATIC Coding</i>	<i>Reason</i>
1.	10	Teacher answers a student question.
2.	3a	Teacher asks a yes/no question.
3.	1	Teacher is presenting new information to the students.
4.	4a	Technically, this is a yes/no question, making it literally a T3a, however, in the context of the dialogue, this is a short answer question requiring students to think about the question (T4a).
5.	7	Teacher confirms student response.
6.	1	Teacher is presenting new information to the students.
7.	10	Teacher answers a student question.
8.	2	Teacher makes a short statement about the topic.
9.	4a	Teacher asks a thought-provoking question requiring students to give a short response.
10.	7	Teacher confirms student response.
11.	8	Teacher repeats what the student answered.
12.	1	Teacher is presenting new information to the students.
13.	10	Teacher answers student question.
14.	2	Teacher gives students directions.
15.	1	Teacher is presenting new information to the students.
16.	3a	Teacher asks a yes/no question.
17.	2	Teacher makes a short statement about the topic.
18.	4b	Teacher asks a thought-provoking question requiring students to give an extended response.
19.	10	Teacher answers student question.
20.	2	Teacher gives students directions.
21.	1	Teacher is presenting new information to the students.
22.	4a	Teacher asks a thought-provoking question requiring students to give a short response.
23.	4a	Teacher asks a thought-provoking question requiring students to give a short response. The teacher is not using the student's response to continue the conversation.
24.	6	Teacher acknowledges student response.
25.	12	Teacher uses Joey's response to continue questioning class. While they do not directly use Joey's comment, they are asking students to compare their ideas with Joey's, making this a T12.
26.	11	Teacher requests that a student elaborate on their response.
27.	5	Teacher rejects student response.
28.	1	Teacher is presenting new information to the students.
29.	8	Teacher repeats student comment.
30.	7	Teacher confirms student response.

31.	7	Teacher confirms student response.
32.	10	Teacher answers student question.
33.	2	Teacher is making a short statement about the topic.
34.	4a	Teacher asks a thought-provoking question requiring students to give a short response.
35.	7 & 1	First, the teacher confirms the student response (T7). Then, the teacher presents new information to the students (T1). There is a rhetorical question here as well, but it is included in the presentation of material and is not coded separately.
36.	4a	Teacher asks a thought-provoking question requiring students to give a short response.
37.	8	Teacher is repeating what the student responded. This could also be read as the teacher repeating in order to confirm that they heard/understood correctly, in which case it may be considered a clarification(T11), but the repetition of statement is clearer here.
38.	6	Teacher acknowledges student response.
39.	12	Teacher uses a student response to begin a new conversation within groups.
40.	3a	Teacher asks a yes/no question.
41.	2	Teacher gives students directions.

- Teacher: Here is what we are going to do today. We've got some map activities that we are going to look at the different peoples of the middle east. The main idea we are going to get from this lesson is the middle east is made up of a very diverse group of people that live in very close proximity, or they live just very close to each other. So, in a moment I am going to release you guys to the computers and you guys are going to use two different maps to fill out your assessment. But first I want to walk us through the maps because for sure I know you guys have not seen one type of map. And the other one is interactive, and I want to make sure you guys understand what all the different layers are, ok? So, first things first, the first map you are going to be seeing is not this one... it's this one. So, this map is interactive, and you can click on the different countries. Someone give me a country to click on.
1. \_\_\_\_\_
- Darrius: Saudi Arabia.
- Joseline: Iran.
- Michael: Iran.
- Teacher: I heard Saudi Arabia and Iran. I will do Iran because I heard it twice. What do you notice? What is this pie chart telling you?
2. \_\_\_\_\_
- Darrius: The ethnicity.
- Teacher: You are close, the ethnic groups. It is the different ethnic groups. So, there are going to be questions about the different ethnic groups. First, does everyone know what majority means?
3. \_\_\_\_\_
- Darrius: The most.
- Teacher: The most, so on this map who has the majority?
4. \_\_\_\_\_
- Darrius: Persians.
- Teacher: Persians. I know that is kind of hard to see because it's far away but once you get on the computer you



	can zoom in on it. Now what is a minority group then?	5. _____
Darrius:	A group that is less.	
Teacher:	A group that has a smaller population. For our sake anything less than 50%. Which is for Iran, basically anything that isn't what?	6. _____
Darrius:	Persia.	
Teacher:	Persia. Awesome. Now there are going to be questions about religion. And the way you find that, you see where is says religion on this map right here?	7. _____
Darrius:	Mhmm.	
Teacher:	You click on that. What do you see about the religion in Iran?	8. _____
Darrius:	I can't see.	
Teacher:	Oh, I am sorry (moves out of way)	9. _____
Joseline:	Muslim.	
Teacher:	Muslim, perfect! Now there is also different tabs on the bottom. Does everyone see these different tabs? They change the map a little bit. One tab that you are going to need to use is the historical, political importance, and these are going to change. So, if you want to see what the Middle East looked like in the 1600s, click on the 1600 and you will see what it looks like. Makes sense?	10. _____
Darrius:	Yeah.	
Teacher:	Feel good? Thumbs up, thumbs down?	11. _____
Darrius:	Thumb sideways.	
Teacher:	Thumbs sideways? I see one thumb up, can anyone else give me some thumbs? Okay perfect. Alright the second map, this is a map I know you guys probably have not seen yet. First impressions of this map?	12. _____
Darrius:	It looks confusing.	
Teacher:	It looks confusing.	13. _____
Darrius:	It looks colorful.	

Teacher:	Its colorful, which is why we are going to go over it. So, you'll see these white boxes, these are different keys. So, let's look at a key. Well first let's look at the title. What does the title tell us about this map? What type of map is it?	14.	_____
Darrius:	Domestic population.		
Joseline:	Different groups.		
Teacher:	Ethnic groups of the Middle East. Are the two maps that we are working with looking at the same thing? Darrius?	15.	_____
Darrius:	Race.		
Teacher:	Yeah, ethnicity and race kind of are synonymous with each other. Or they are synonyms. So, ethnicity, race, it's just their cultural background. So, example for me, I am Irish, German, and Polish. Those are my ethnicities. Cool. So yeah, this is an ethnic map of the Middle East. Let's go over to this key. What do these colors represent?	16.	_____
Darrius:	Lifestyle group in the area.		
Teacher:	Oh you are one step ahead of me, you are one step ahead of me. The amount of people in the area yeah, you are one step ahead of me on that one.	17.	_____
Darrius:	Personal language.		
Joseline:	Ethnic groups.		
Teacher:	Not languages, but ethnic groups I heard from Joseline.	18.	_____
Darrius:	Does it have something to do with language?		
Teacher:	It's talking more about the ethnic groups I know it says the speakers of Turkish languages but the Turks, Turks isn't a language that's a people group. Azores, that's not a language that's a people group they speak a Turkish language so that is just how they are splitting up their key.	19.	_____
Darrius:	Ah.		
Teacher:	So. What do you notice? There are two columns, right? What do you think the two colors mean?	20.	_____

Darrius:	The different groups.	
Teacher:	The different groups. So, let's just look at one group, the Kurd's right here. Do you see how the Kurd's have a dark brown and a light brown?	21. _____
Darrius:	Mhmm.	
Teacher:	What do you think that dark brown means?	22. _____
Darrius:	Population?	
Teacher:	It does have to do with population. Once it gets darker what do you think that means?	23. _____
Darrius:	Stronger language.	
Joseline:	More people live there.	
Teacher:	More people are living in that area. Perfect. More people are living in that area. So, this lighter brown means what?	24. _____
Darrius:	Less people.	
Teacher:	Less people who are Kurds live in that area. Does that make sense?	25. _____
Darrius:	Yeah.	
Joseline:	Makes sense.	

## Social Studies Practice 2 – Middle Eastern Ethnicities KEY

<i>Example</i>	<i>SATIC Coding</i>	<i>Reason</i>
1.	1 & 3b	Teacher presents new information first (T1), then asks students for a simple choice (T3b).
2.	4a	Teacher asks a thought-provoking question requiring students to give a short response.
3.	3a	Teacher asks a yes/no question.
4.	3b	Teacher asks students to look on a map to answer a short-answer question.
5.	3b	Teacher asks a short answer question requiring definition recall.
6.	3b	Teacher asks a short-answer question.
7.	3a	Teacher asks a yes/no question.
8.	4a	Teacher asks a thought-provoking question requiring students to give a short response.
9.	2	Teacher makes short statement.
10.	7, 1, 3a	Depending on what part of this statement you are analyzing, you may get different answers. First, the teacher confirms the student answer (T7). Then, the teacher presents new information to the student (T1). Finally, the teacher asks a yes/no question to make sure the students understand the information (T3a).
11.	3b	Teacher asks a short answer question.
12.	4a	Teacher asks a thought-provoking question requiring students to analyze a map and give a short response.
13.	8	Teacher repeats student's comment.
14.	3b	Teacher asks a short-answer question requiring students to read a map.
15.	3a	Teacher asks a yes/no question. Even though the student did not respond with a yes/no, the question is still formatted as one.
16.	3b	Teacher asks a short-answer question requiring students to read a map.
17.	9	Here the teacher is expanding on what the student said, clarifying it, making this a T9 and not just a statement about the topic (T2).
18.	5 & 7	The teacher both rejects one student's response (T5) and confirms another student's response (T7).
19.	10	Teacher answers a student's question.
20.	4a	Teacher asks a thought-provoking question requiring students to give a short response.
21.	3a	Teacher asks a yes/no question.
22.	4a	Teacher asks a thought-provoking question requiring students to give a short response.
23.	4a	Teacher asks a thought-provoking question requiring students to give a short response.

24.	4a	Teacher asks a thought-provoking question requiring students to give a short response.
25.	3a	Teacher asks a yes/no question.

Teacher: Alright class, today we are going to talk about some more punctuation, and I am going to give you an example of using a colon.

1. \_\_\_\_\_

Teacher: Imagine we are going camping, and I ask, “Did you remember to load up all the important things in your backpack COLON (teacher *pauses*) flying jungle-fish repellent, jungle-cow mace, and jungle-matches?”

Teacher: Where did I place the colon?

2. \_\_\_\_\_

Joey: Well, I wouldn’t put the colon in the backpack: the colon is in my body.

Teacher: When I said colon, I meant the punctuation not the organ.

3. \_\_\_\_\_

Joey: Wait! How do I pack punctuation?

Teacher: I was just saying, “colon,” to let you know that you should use a colon to separate an independent clause when that independent clause sets up a list. “Student, did you remember to load up all the important things in your backpack” is an independent clause because it has a subject and a verb, and it can stand by itself as a complete sentence. This independent clause also suggests that a list will follow it; therefore, you should use a colon to separate it from the items in the list.

4. \_\_\_\_\_

Sam: Not that I care about any of this but let me try my own sentence. I packed COLON the jungle-fish repellent, jungle-cow mace, and the matches. How was that?

Teacher: Not at all correct.

5. \_\_\_\_\_

Sam: What?

Teacher: Yes, you did have a list, but if you look closer at your sentence, you’ll notice that you don’t have an independent clause. “I packed” is not an independent clause. It has a subject and a verb, but it can’t stand alone as a sentence

	because “I packed” doesn’t make much sense on its own. In your example, you would leave the colon out, because you need the items in the list to have the sentence make sense.	6. _____
Teacher:	Someone give an example of a sentence using a colon.	7. _____
Juanita:	Okay. So how about this sentence? During this dumb trip, all sorts of animals have chased me: COLON ( <i>pauses</i> ) jumping jungle-gators, saber-toothed jungle-chickens, and sloths.	
Teacher:	Juanita, please explain how that is an example.	8. _____
Juanita:	Well you have an independent clause that sets up the list of jungle-gators, etc.	
Teacher:	That’s correct.	9. _____
Teacher:	But, I still can’t believe that a sloth chased you. I mean those things never get angry, but you must have really got it mad.	10. _____
Jaunita:	I know. And I have a good imagination!	
Teacher:	Yeah, well... your sentence with the colon was correct.	11. _____
Teacher:	“During this dumb trip, I’ve been chased by all sorts of animals” has a subject, a verb, and can stand on its own as a complete sentence. This independent clause also suggests that a list might follow, and so you correctly placed a colon between the independent clause and the list.	12. _____
Joey:	I’m still stuck on “I didn’t put my colon in the backpack: my colon is in my body.”	
Teacher:	Well, you used a colon correctly again.	13. _____
Andy:	What? When?	
Teacher:	Just a second ago. You said, “I didn’t put my colon in the backpack: COLON ( <i>teacher pauses</i> ) my colon is in my body.”	14. _____
Andy:	I’m confused. How did I use it correctly?	15. _____

Teacher:	Well, you spoke the sentence using a pause. If you wrote that sentence it would have a colon separating “backpack” from “my” therefore you used a colon correctly again.	
Andy:	I’m still confused.	
Teacher:	What are you confused about?	16. _____
Andy:	The colon thingy.	
Teacher:	The colon thing?	17. _____
Andy:	Yes.	
Teacher:	Class, another way you can use a colon is in between an independent clause and an explanation, rule, or example. In your sentence, you said, “I didn’t put my colon in the backpack,” which is an independent clause. The second part of that sentence was EXPLAINING why you didn’t put the colon in your backpack.	18. _____
Terrance:	Let me try. When I went on a cruise and after we docked, I went on a jungle excursion, but I felt angry that I was stuck in the jungle COLON because that dumb cruise ship left me there. How was that?	
Teacher:	Nope!	19. _____
Terrance:	Why? It has an independent clause, and it has an explanation.	
Teacher:	Class, what is the problem with that example?	20. _____
Frank:	Well Terrance included the word “because.”	
Teacher:	By using “because,” you’ve taken away the need for the colon because you have a conjunction instead. You use a colon when you don’t have a conjunction. This is what your sentence should have been: “I feel angry that was stuck in the jungle: COLON I was left here by that dumb cruise ship.”	21. _____
Terrance:	I get it now.	
Teacher:	Good.	22. _____
Jose:	Grammar rules aren’t that bad.	23. _____



Teacher:	Speaking of rules, the survival guide says there is one rule that you must always follow in the jungle: COLON never stare the Costa Rican jungle-rabbits in the eye.	
Andy:	Oh, I see what you did there with the colon.	
Teacher:	You see what I did with the colon thing?	24. _____
Teacher:	Tell me more.	25. _____
Andy:	The colon seems to be a pause button.	
Teacher:	Interesting way to describe it.	26. _____
Teacher:	Tell me more about why it seems to be a pause button.	27. _____
Andy:	Yes, it is like two related thoughts joined by a colon.	
Teacher:	Oh, I think I understand what you are saying.	28. _____
Teacher:	Students. To see if you really understand how to use a colon, everyone please write three sentences using a colon.	29. _____

## English Practice 1 – Sheet 5.40 Using a Colon KEY

<i>Number</i>	<i>SATIC Coding</i>	<i>Reasoning</i>
1.	2	Teacher gives a short statement and directions to the students.
2.	3b	Teacher asks a short-answer question requiring recall of the sentence.
3.	2	Teacher is clarifying their own statement here, making this a T2. It may be confused with a T9, as they are clarifying based on what a student said.
4.	1	Teacher is presenting new information to the students.
5.	5	Teacher rejects student answer.
6.	1	Teacher is presenting new information to the students.
7.	4a	Teacher asks a short answer question requiring thought to put together a correct sentence.
8.	11	Teacher asks student to elaborate on their answer.
9.	7	Teacher confirms student response.
10.	2	Teacher makes a short comment about the response.
11.	7	Teacher confirms the student response again.
12.	1	Teacher presents new information to the students.
13.	7	Teacher confirms student response.
14.	10 or 8	The teacher answers a student question (T10), however, the teacher is repeating the student response (T8).
15.	10	Teacher answers a student question.
16.	3b	Teacher asks a short answer question.
17.	8	Teacher repeats student response.
18.	1	Teacher presents new information to the class.
19.	5	Teacher rejects student answer.
20.	12	Teacher is using an incorrect response as a question for the rest of the class to answer.
21.	9	Teacher is interpreting the student's short response and elaborating on it.
22.	6	Teacher is acknowledging the student's comment that they understand material now.
23.	2	Teacher makes a short statement to the class.
24.	3a	Teacher asks a yes/no question.
25.	11	Teacher asks student to expand on their answer to the question and explain why they think something.
26.	6	Teacher acknowledges student response.
27.	11	Teacher asks student to expand on their answer to the question and explain why they think something.
28.	6	Teacher acknowledges student response without confirming or denying.
29.	2	Teacher gives directions to students.

- Teacher: I pound down on the ground and all around I hear the sound.  
(Repeating) I pound down on the ground and all around I  
hear the sound. 1. \_\_\_\_\_
- Sean: Calm down, Teacher.
- Teacher: Calm down about what? 2. \_\_\_\_\_
- Sean: There's no need to be pounding the ground so hard that it  
makes a sound.
- Teacher: Sean, I wasn't going to actually pound the ground. 3. \_\_\_\_\_
- Susan: Well then what are you talking about?
- Teacher: I was illustrating an example of assonance. 4. \_\_\_\_\_
- Susan: Whose-o-nance?
- Teacher: Assonance. Class, assonance is when the repetition of vowel  
sounds in phrases or sentences creates internal rhyming. 5. \_\_\_\_\_
- Teacher: Would someone give me an example of assonance? 6. \_\_\_\_\_
- Jose: Oh rhyming...like, "Sprat my cat sits on the hat and crushes it  
flat."
- Teacher: No, Jose. 7. \_\_\_\_\_
- Teacher: That rhyme uses consonant sounds, not vowel sounds. 8. \_\_\_\_\_
- Jose: Oh great. Now you're getting all complicated. You lost me.
- Teacher: Class, just listen. Assonance uses vowel sounds. You know, A,  
E, I, O, U and sometimes Y. 9. \_\_\_\_\_
- Emily: Sometimes why what?
- Teacher: No, Y is a vowel only sometimes. 10. \_\_\_\_\_
- Emily: I don't know! Why is a vowel only sometimes?
- Teacher: You know what students, forget what I said that about the  
letter Y. Just listen. 11. \_\_\_\_\_

Teacher:	Assonance repeats vowel sounds within phrases or sentences. The repetition makes a rhyming within the phrase or sentence. The phrase that I said before, you know, about pounding the ground?	12.	_____
Sean:	Yeah?		
Teacher:	Well, the assonant sound in that phrase is the repetition of the “ou” sound. Like the “ou” sound in the word “found.”	13.	_____
Emily:	Hey Teacher, what if I took this flower in the shower, do you think that would give it some power?		
Teacher:	What are you talking about? Pay attention!	14.	_____
Emily:	No, seriously. You know, flowers get power from showers.		
Teacher:	Emily, you’ve got it.	15.	_____
Emily:	What, flower power?		
Teacher:	I am talking about assonance! In the phrase “flowers get power from showers.” The assonance is in the “O” sound, like in the word “cow.”	16.	_____
Sean:	Cow?		
Teacher:	No. Just listen. I gave you two examples!	17.	_____
Sean:	Two, two and still I have no clue.		
Teacher:	That’s right! You just did it again!	18.	_____
Sean:	Did what again?		
Teacher:	Assonance! Examples!	19.	_____
Sean:	Exactly! Two is far too few to learn through!		
Teacher:	You got it right again!	20.	_____
Emily:	Yeah, this assonance stuff isn’t for me. I’m going to go shower with my flower.		
Teacher:	Alright class. Who can come up with more examples?	21.	_____
Jamine:	How about this? “With any luck I can drive the truck through the field.”		

Teacher:	Alright. Let's play with that.	22.	_____
Teacher:	Class, tell me what you think of Jamine's example of assonance and why or why not it is assonance.	23.	_____
Teacher:	Is it an example of assonance?	24.	_____
Joey:	Well sort of?		
Teacher:	Anybody else?		
Vassily:	Yes, I agree that is sort of assonance, but I think it can be improved but substituting one word.		
Teacher:	Right.	25.	_____
Teacher:	If we just substituted the word "muck" for the word "field" it would be "With any luck I can drive the truck through the muck."	26.	_____
Vassily:	That's what I was going to say.		
Teacher:	Ok.	27.	_____
Teacher:	Vassily, what is another word to use in that sentence besides "muck?"	28.	_____
Vassily:	"Buck."		
Teacher:	Buck?	29.	_____
Vassily:	Yea, buck.		
Teacher:	Interesting. Tell me more.	30.	_____
Vassily:	Ok. How about this? "With any luck I can drive my truck through the muck to make a buck."		
Teacher:	Wow! That was really good!	31.	_____
Sean:	Yes, and we could say "With any luck I can drive my truck with a duck through the much to make a buck."		
Teacher:	Ok. Now we are just getting silly. Let's get back on track here.	32.	_____
Sean:	What? I thought that was a great example.		

Teacher: Ok. Take out your pens and paper and see if you can create three examples of assonance.

33. \_\_\_\_\_

## English Practice 2 – Sheet 5.41 Learning About Assonance KEY

<i>Number</i>	<i>SATIC Coding</i>	<i>Reasoning</i>
1.	2	Teacher makes a short statement to the class.
2.	3b	Teacher asks a short-answer question to the class.
3.	2	Teacher makes a comment in response to a student's response.
4.	10	Teacher answers student question.
5.	2	Teacher makes a short statement to the class explaining what they meant in their previous answer.
6.	4a	Teacher asks a short answer question requiring students to answer using a new skill.
7.	5	Teacher rejects student answer.
8.	9	Teacher explains how the student's answer was incorrect.
9.	2	Teacher makes short statement about the topic.
10.	10	Teacher answers a student question.
11.	2	Teacher makes short statement about the topic.
12.	2	While this seems like a yes/no question based on student response, this is actually a question used in a rhetorical sense in order to make a statement about the topic.
13.	2	Teacher makes short statement about the topic.
14.	5	The teacher here is rejecting the students comment/question by scolding them for talking.
15.	7	Teacher confirms student answer.
16.	2	Teacher makes short statement about the topic.
17.	5	The teacher here is rejecting the students comment/question by scolding them for talking.
18.	7	Teacher confirms student answer.
19.	10	Teacher answers student question.
20.	7	Teacher confirms student answer.
21.	4a	Teacher asks a short answer question requiring students to answer using a new skill.
22.	6	Teacher acknowledges student response without confirming or denying it.
23.	12	Teacher uses Jamine's response as an idea for the rest of the class to work off.
24.	3a	Teacher asks a yes/no question.
25.	7	Teacher confirms student answer.
26.	9	The teacher is expanding on the correct answer given to them and explaining it to the rest of the class.
27.	6	Teacher acknowledges student comment.
28.	3b	Teacher asks a short-answer question requiring finding a similar word.
29.	8	Teacher repeats student response.
30.	11	Teacher asks student to elaborate on their answer.

31.	7	Teacher affirms student response.
32.	2	Teacher makes a statement to direct class attention.
33.	2	Teacher gives directions to students.



### English Practice 3 – Learning About Consonance

### Sheet 5.42

Teacher:	Class, now that you are geniuses at assonance, I want to talk about consonance.	1. _____
Sean:	Consonance...the opposite of vowels, right? A, B, C, D, F, G ...	
Teacher:	Class, A, B, C, D, etc are examples of what?	2. _____
Class:	Consonants!	
Teacher:	Right.	3. _____
Teacher:	A, B, C, D, F, G are “consonants.” We are going to talk about consonance!	4. _____
Emily:	OK. So, what is consonance?	
Teacher:	Consonance is the repetition, at close intervals, of the final consonants of accented syllables or important words, usually at the ends of words. It also occurs close together.	5. _____
Susan:	Holy moly teacher! Speak English please, or Greek for all I care – it’s all Greek to me anyway.	
Teacher:	OK. Listen to these phrases... odds and ends... struts and frets... dark and dank...	6. _____
Teacher:	What do those pairs of words have in common?	7. _____
Jose:	Both words have some letters that are the same?	
Teacher:	Yes, they do Jose.	8. _____
Teacher:	But there is something else. Listen to the ends of those words. That’s what you want to pay attention to.	9. _____
Emily:	What? The ends of the words “odds and ends?”	
Teacher:	Yes that is correct!	10. _____
Teacher:	The hard “d” sound is consonant.	11. _____
Frank:	I don’t get it.	
Teacher:	Class, like the term “think tank,” The “nk” is the consonant sound.	12. _____
Frank:	You know what I think?	

Teacher:	What?	13.	_____
Frank:	I think you stink! Just kidding.		
Teacher:	Interesting example.	14.	_____
Teacher:	"Think" and "stink" is an example because the nk in think and the nk in stink makes it consonance.	15.	_____
Frank:	What?		
Teacher:	You did it again!	16.	_____
Frank:	Wait, what?		
Teacher:	You're doing just what you did with assonance. Except now you're doing it with consonance.	17.	_____
Teacher:	Someone give me another example of consonance and explain why it is consonance.	18.	_____
Eli:	I can't learn when you're so stern.		
Teacher:	Interesting example Eli.	19.	_____
Teacher:	"Learn" and "stern."	20.	_____
Eli:	Yes. Was I right?		
Teacher:	Class, how is "learn" and "stern" an example of consonance?	21.	_____
Leonardo:	Hey teacher, calm down. Back track before you have an attack!		
Teacher:	"Ack" "ack."	22.	_____
Leonardo:	Oh, Teacher. You've gone and done it now. You've gotten yourself so worked up that you've gotten sick again.		
Teacher:	You all keep doing it... and you still say you don't get it. Don't you get it?	23.	_____
Emily:	C'mon, Teacher. I'll get you into the bathroom. You can take a power shower and use the bathroom as your own personal think tank.		
Teacher:	Consonance and assonance... in the same sentence!	24.	_____
Teacher:	Oh my. I think I'm going to lose my brain in vain.	25.	_____

### English Practice 3 – Sheet 5.41 Learning About Consonance KEY

Number	SATIC Coding	Reasoning
1.	2	Teacher makes a short statement to the class.
2.	3b	Teacher asks a short answer question requiring recall.
3.	7	Teacher confirms student response.
4.	2	Teacher makes a short statement to the class.
5.	10	Teacher answers student question.
6.	2	Teacher makes a statement to the class about the topic.
7.	4a	Teacher asks a short-answer question requiring thought about a new concept.
8.	7	Teacher confirms student answer.
9.	2	Teacher gives student directions.
10.	7	Teacher confirms student answer.
11.	9	Teacher makes a short statement clarifying what the student answered and why it is correct.
12.	2	Teacher makes a short statement to the class.
13.	10	While it is formatted as a question to the student, this is a response to a student question and can be coded as a T10.
14.	6	Teacher acknowledges student comment.
15.	9	Teacher makes a short statement clarifying what the student answered and why it applies to the topic.
16.	7	Teacher confirms student answer.
17.	9	Teacher makes a short statement clarifying what the student answered and why it is correct.
18.	4b	Teacher asks an extended question requiring students to use their new skill to come up with an example as well as explain why they made it.
19.	6	Teacher acknowledges student comment.
20.	9	Teacher makes a short statement clarifying what the student answered and why it applies to the topic.
21.	4a or 12	Teacher asks a short-answer question about the topic. This could also be coded as a T12 since it uses a previous student's example to frame the question.
22.	9	The teacher is interpreting what they believe the example was that the student was trying to make.
23.	3a	Teacher asks a yes/no question.
24.	2	Teacher makes a short statement about the topic.
25.	2	Teacher makes a short statement about the topic.

**English Practice 4 – Learning About Parallelism****Sheet 5.43**

Sean: I'm tired of work, I'm tired of school...I'm...just...tired.

Teacher: Sean is tired.

1. \_\_\_\_\_

Sean: Yes. I'm tired of people making me do all the work. I'm tired of my teachers giving me homework. I'm tired of my parents making me do chores.

Teacher: What is one symptom of you being tired?

2. \_\_\_\_\_

Sean: I'm tired of you always having some new English concept to teach me.

Teacher: Like parallelism?

3. \_\_\_\_\_

Sean: Oh, no! What -alism?

Teacher: Class, what is your best guess as to what parallelism might be?

4. \_\_\_\_\_

Emily: We have no idea.

Teacher: Can anyone give me an example of parallelism?

5. \_\_\_\_\_

Students: Noooooo!

Teacher: Well, Sean was using it right now. So, there's really no need for me to teach it to the class. Sean, you teach it because I am tired.

6. \_\_\_\_\_

Emily: Oh, great! Now you're tired too.

Teacher: No, Emily. That's the example of parallelism that Sean was using.

7. \_\_\_\_\_

Jose: So, parallelism means two people being tired at once – both you and me. We're like parallel lines. Hot dog! I get it!

Teacher: No, Jose.

8. \_\_\_\_\_

Teacher: Parallelism deals with the construction of the sentences you are saying. Parallelism is a balance of two or more similar words, phrases, or clauses. You created a pattern.

9. \_\_\_\_\_

Jose: What's the pattern?

Teacher: The pattern is that Sean is tired.

10. \_\_\_\_\_

Jose:	Well, but that's just a phrase Sean just keeps repeating.	
Teacher:	Yes, it is.	11. _____
Teacher:	However, his decision to use the same subject, verb, and adjective, saying the phrase "I am tired," created a certain effect, and that effect is used in speech and writing to persuade or to make a point.	12. _____
Emily:	I don't get it.	
Teacher:	Well, in the Declaration of Independence, the founding fathers of America used the phrase "he has..." to blame the king of England for all their miseries. It helped start the American Revolution.	13. _____
Frank:	By saying the phrase "he has?"	
Teacher:	A-hem. Listen here, class. The Declaration of Independence - and I quote, "He has refused his assent to laws...He has called together legislative bodies at places unusual...He has made judges dependent on his will alone...He has erected a multitude of new offices..."	14. _____
Teacher:	Someone tell me if this might be an example of parallelism and why you think so.	15. _____
Frank:	So, this repetition had the effect of making everyone think the king of England was directly responsible for doing all those bad things.	
Teacher:	Exactly.	16. _____
Leonardo:	But the Founding Fathers of America were guys who wore powdered wigs and drank tea. Nobody uses parallelism anymore.	
Teacher:	Have you ever heard of the "I Have a Dream" speech?	17. _____
Juanita:	By Dr. Martin Luther King Jr.?	
Teacher:	Exactly!	18. _____
Teacher:	Martin Luther King Jr.'s "I have a Dream" speech - and I quote, "I have a dream that one day on the red hills of	

	Georgia the sons of former slaves and the sons of former slave owners will be able to sit down together at the table of brotherhood. I have a dream that my four little children will one day live in a nation where they will not be judged by the color of their skin but by the content of their character. I have a dream today."	19.	_____
Teacher:	Someone explain to me how that is an example of parallelism.	20.	_____
Juanita:	Ok. So, the parallelism there is "I have a dream," right? It associated the fight for civil rights in America with a dream of equality for everyone.		
Teacher:	Perfect!	21.	_____
Susan:	Yeah, but that was still forever ago. I mean, nobody talks like that anymore.		
Teacher:	Here is another example, "We will not tire, we will not falter, we will not fail."	22.	_____
Sean:	I don't recognize that one.		
Teacher:	That was said by former President George W. Bush several days after September 11th, 2001.	23.	_____
Pep:	Wow. So, people are still using parallelism today.		
Teacher:	Yes. In fact, many people try to use it constantly in both speech and writing to create the same effects that it has had in the past. It helps to persuade, convince, and get points across.	24.	_____
Sean:	So, have I persuaded you that "I'm tired?"		
Teacher:	No, Sean.	25.	_____

## English Practice 4 – Learning About Parallelism KEY

<i>Number</i>	<i>SATIC Coding</i>	<i>Reasoning</i>
1.	2	Teacher makes short comment about a student.
2.	3b	Teacher asks a short answer question.
3.	3a	Teacher asks a yes/no question.
4.	4a	Teacher asks a short-answer question requiring speculation.
5.	3a	Teacher asks a yes/no question.
6.	12	The teacher is using a student's statement as an idea for the class to learn from.
7.	5	Teacher rejects student comment.
8.	5	Teacher rejects student answer.
9.	2	Teacher makes a brief statement explaining the topic they are discussing.
10.	10	Teacher answers student question.
11.	7	Teacher confirms student comment.
12.	9 or 12	Here the teacher is clarifying what Jose said and explaining how that statement is a pattern (T9). However, it could also be coded as a T12 because it uses the original comment made by Sean to explain an idea.
13.	2	Teacher makes a statement to try to reinforce the ideas being presented.
14.	1	Teacher is reading a section of the Declaration, presenting information to the class.
15.	4b	This is a yes/no question initially but requires students to think critically and explain why they gave the answer they did.
16.	7	Teacher confirms student response.
17.	3a	Teacher asks yes/no question.
18.	7	Teacher confirms student response.
19.	1	Teacher is reading a section of a speech, presenting information to the class.
20.	4b	Teacher asks a question that requires students to think critically and explain their thoughts.
21.	7	Teacher confirms student response.
22.	2	Teacher makes a statement to try to reinforce the ideas being presented.
23.	2	Teacher makes a statement to explain their comment.
24.	7	Teacher confirms student answer, expanding on the idea in a short statement.
25.	5	Teacher rejects student answer.

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