

WINTHROP UNIVERSITY

SENTEO INTERACTIVE RESPONSE SYSTEM

A WHITE PAPER



Prepared by

Hailey K. Hughes

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SENTEO INTERACTIVE RESPONSE SYSTEM: A WHITE PAPER

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DEFINED

The Senteo interactive response system provides a direct wireless connection between the teacher and students. The Senteo system includes a radio frequency (RF) remote for each student in class, a central receiver, [Notebook whiteboarding software](#) and Senteo assessment software, which tallies student responses, records attendance, posts test results and provides individual feedback. The Senteo interactive response system is designed to enhance interactive teaching and learning. With it, you display prepared questions, students anonymously key in answers with their remote, and responses are tallied, then displayed on a projection screen or interactive whiteboard. Tallying and displaying results occurs immediately, in real time.

To assess student understanding, a variety of question types, including true or false, multiple choice, numeric response and more-than-one-right-answer. Decimals, fractions and negative numbers can also be incorporated into questions and answers.

AVAILABILITY

As indicated from an online article, "Senteo Interactive Response System software products are sold through a network of fully trained resellers. The software is widely available throughout the states of South Carolina and North Carolina in general retail environments, such as in Greenville, Charlotte, Columbia, Lexington, West Columbia, Spartanburg, Stone Mountain, North Charleston, Fort Mill, Duncan, Myrtle Beach, and Winston-Salem. Resellers found within the Winthrop University area include Fort Mill, SC, and Charlotte, NC. An interested buyer can also contact the SMART Software Sales Group" (<http://www2.smarttech.com>, 2008). Refer to the contact information below to learn more information about Senteo Interactive Response Systems within your area:

SMART Software Sales Group
Phone: 1.866.284.2769 or 1.403.802.3333
E-mail: software@smarttech.com

Smarter Systems
Fort Mill, SC
Phone: 888.802.7627

Charlotte, NC

8227 Arrowridge Blvd., Suite E
Charlotte, NC 28273
Phone: 704.344.9063

Interested buyers should also view other opportunities of buying this technology from different states by viewing <http://www2.smarttech.com/st/en-US/Where+to+Buy/>.

COST OF SENTEO INTERACTIVE RESPONSE SYSTEM SOFTWARE

The seller is encouraged to the software from an authorized SMART reseller. SMART cautions you to buy only from authorized resellers because they receive manufacturer's support and sales training, and they are equipped to assist you during installation and to thereafter handle any problems that may arise. If you buy SMART products from an unauthorized reseller, the products may be defective, damaged or nonconforming and will not carry SMART's standard warranty.

The average cost for Senteo Interactive Response Systems varies depending on the number of Senteo remotes. A response system 24 pack is \$1,599.00. A response system 32 pack is \$1,999.00. A set of 5 additional remotes is \$399.00. Licensing for Senteo assessment software matches the licensing terms used for SMART Board™ software and Notebook software. *Find License Code* feature lets customers activate their software using only their Senteo interactive response system receivers and an Internet connection.

NETS STANDARDS

The Senteo Interactive Response System does meet the standards from the National Educational Technology Standards for Students. The first standard that is meet includes *Facilitating and Inspiring Student Learning and Creativity*. The Senteo devices meet this standard by using digital tools to solve problems and higher order thinking questions through multiple choice questions. The second NETS standard, *Designing and Developing Digital-Age Learning Experiences and Assessments*, is met as well with the Senteo devices. Students become active participants in managing their own learning and assessing their own progress.

The third NETS standard, *Model Digital-Age Work and Learning*, is addressed through the Senteo devices. Teachers portray an understanding in the Senteo Interactive Response Systems by transferring their current knowledge of multiple choice tests and transforming them into Senteo format. *Promoting and Modeling Digital Citizenship and Responsibility* is another NETS standard addressed with the Senteo device. Teachers are responsible in promoting digital etiquette with the Senteo devices, such as handling them with care and always placing y our

correct identification number when logging in. Responsible social interactions are also reinforced when working with the Senteo devices. Teachers incorporating the Senteo devices within their classroom also *Engage in Professional Growth and Leadership*. Senteo workshops are normally offered within the school district in order to help enhance the understanding of these devices and to make effective use of this tool in support of student learning.

Benefits and Drawbacks of Senteo Interactive Response System

Benefits of Senteo Device	Drawbacks of Senteo Device
More interactive approach with students	Matching questions not an option
Less time grading papers	Short answers not an option
Saves use of paper	Essays not an option
Instant feedback from students	Cheating could result with I.D. #'s
Instant feedback from teachers	Technological difficulties
Handwriting not an issue	Possibility of losing test results if not saved correctly
No scantrons needed	Possibility of overwriting on same file name.
Kinesthetic approach with students	Expense
No writing utensils needed	Fear of losing Senteo hand-held devices

Environmental Factors

There are several environmental factors that a school and teachers must consider when using the Senteo Interactive Response System. It is important to teach the faculty the skills needed to properly use these devices. Senteo workshops should be offered within the district to help teachers learn how to implement these devices without complications. Once teachers fully understand the guidelines of the Senteo devices, they can be helpful within the classroom. Teachers should introduce the Senteo devices to the students during the first few days of class in order to help them to become comfortable with the new technology. Since these devices are primarily used for assessment, it is vital that all students fully understand the skills to properly use the devices.

Problems and challenges that could result from the Senteo Interactive Response systems are that they are an expensive technology. Applying for a grant could be a solution to overcome this challenge. Another problem that a teacher could encounter is ensuring that all students type in their correct identification number. Possibly, asking students to type in their identification number one at a time could solve this problem if trust is an issue within a class. Also, since these devices are extremely expensive, it is imperative that students do not take these devices home. Teachers could develop a “check-in/check-out” system with students to ensure that this incident would never happen.

Overall, the benefits do outweigh the problems with these devices. Technological difficulties are a challenge with any technology. However, if a teacher is willing to implement a new and interactive strategy to learning with their students, then the Senteo Interactive Response Systems should be implemented.

Solutions to Learning Related Problems

As a high school Social Studies teacher, the Senteo Interactive Response System helps me to connect directly to my students. This device gives me instant and personal feedback on the understanding of the lesson. Since I use SmartBoard software in my classroom, I can assess my students with a new dimension by using the Senteo handheld devices. The Senteo devices are also a quick approach to assess my students before, during, and after the lesson to record their progress. For example, in my World Geography class, I give all students a pretest of the seven continents in a true/false format. For example, Australia is the smallest continent...true or false. Then, I test the students during teaching the continent, and also at the end of the class. The Senteo device helps me as teacher to pose questions in a number of ways, such as multiple choice, true and false, and even numeric, which helps me to see how well the class understands the concepts presented.

The response from the students is instant, and it will transfer response breakdown on single questions or an entire lesson into easy-to-understand graphs and charts. It eliminates the hassles of grading papers or running scantrons. The Senteo device saves time, and it produces an effective approach to assess students. Overall, the Senteo Interactive Response System is an interactive approach that is enjoyable for teachers and students.



Figure 1: Senteo Interactive Response System

www.2.smarttech.com



Features

- 1 Power on/off
- 2 Descriptive icons indicate battery power and network status
- 3 Allows pupils to ask questions
- 4 Pupils can scroll through questions
- 5 Yes/no, true/false
- 6 Supports up to ten multiple-choice responses
- 7 Fraction and decimal support for positive and negative numeric questions

Figure 2: Senteo Remote

www.2.smarttech.com

How It Works

In order to get started with the Senteo Interactive Response System, it is important to first understand that an individual must download the SMARTs software on the computer. The Senteo Interactive Response System operates on radio frequencies. The receiver acts as a hub to collect the responses from the clickers. When the receiver is plugged into a USB port on the computer, the *Add New Hardware* wizard appears. The light on the receiver will first turn red to indicate power, and then it will turn green in order to indicate that the receiver is both receiving power and communicating with Senteo assessment software.

Once the receiver is connected, the next step is to name the classes which will be using the Senteo devices. The *Senteo Assessment Software* icon must be selected in the notification area. From the menu, select *Configure your Senteo hardware*. When the *Senteo Classroom Configuration Wizard* appears, type a class name.

Before you start a class session, you must decide in which of two modes you want the system to operate; *Anonymous Mode* or *Sign In Required Mode*. The following table summarizes the characteristics of each mode.

Anonymous Mode	Sign In Required Mode
You can operate the system without a class list.	You must operate the system with a class list that identifies each student by name and a unique ID number
Students can connect their clickers without identifying themselves	Students can connect their clickers but must log on with their assigned ID number
Under the teacher's control, students may see their own scores but can't see any other students' scores	Under the teacher's control, students may see their own scores but can't see any other students' scores.
Teachers can see how many clickers are connected	Teachers can identify individual students as they connect and log on with their clickers.
Teachers can see, export and print the total class score	Teachers can see, export and print the total class score.
Teachers can see, export and print total scores for each question	Teachers can see, export and print total scores for each question.
Teachers cannot identify students' names or their individual scores	Teachers can see, export and print each student's score for each question and their total score.

If you have not created a class list before, create a new class list simply by adding students. If you have already created a class list and wish to create a new one, first select the **New Class List** button. To begin adding students to your class list manually, do the following:

1. Click the **Add Student** button
2. In the *Add Student* dialog box, type a student's name in the *First name* field. The last name is optional.

3. Type a unique ID number of up to 15 digits in the *ID* field
NOTE: This unique ID number is what the students will need to sign in using the clickers. For older students, you could use their school ID numbers. For younger students, you may want to use simpler numbers.
4. If you wish, type the student's e-mail address into the *E-mail address* field, and then click **OK**. The student's names will appear under the *Student* tab.
5. Click the **Save Class List** button when you are finished adding all of the students to your class list.

If you use Microsoft Excel spreadsheet software to compile your class lists, you can automatically import your class list from your Excel spreadsheet into the Senteo Manager. This action allows you to enter all of your students at one time without the need to enter each student's information manually. To import a class list from Excel software, do the following:

1. Select the **Import Class List From** options arrow, and then select **Microsoft Excel** from the menu
2. In the *Open* dialog box, select the Excel spreadsheet you wish to import, and click **OK**. The students' names will appear under the *Student* tab.
NOTE: The students' names will appear in alphabetical order. Depending on how you have set up your class list in Excel software, you may need to adjust the position of columns in your spreadsheet.
3. If you need to adjust the information, select the name of the student whose information you wish to change
4. Click the **Student Information** button
5. In the *Student Information* dialog box, change the information you want to adjust, and select **OK**
6. When you have finished changing the information, click the **Save Class List** button to save your class list
7. To open a class list, click the **Open Class List** button, and select it from your folders or desktop. You can also simply double-click on the saved class list on your desktop or in your folders.

To create questions, they can be imported from Microsoft Word as well as Microsoft PowerPoint. Notebook software features five types of questions that you can ask either individually or grouped as question sets. The teacher, however, must indicate the correct response for each question, regardless if they are imported from Word or PowerPoint. You can also add notes to questions that appear when you print the question results. The table below indicates the types of questions that can be used with the Senteo devices as well as the descriptions:

Question Type	Description
Yes or No	Students must use the Y or N buttons to answer a question. You can also choose the Opinion option allowing any answer.
Multiple Choice	Students must use a single button, A through J , to answer the question. Select from 2 to 10 answers for a question. You can also choose the Opinion option allowing any answer.
Number, fraction or decimal	Ask a question with a numeric answer using whole numbers, fractions or decimals.
True or False	Students must use the T or F buttons to answer a question. You can also choose the Opinion option allowing any answer.
Multiple Answer	Students use the A through J buttons to select the correct combination of answers to the question. Select from 2 to 10 answers for the question. You can also choose the Opinion option allowing any combination of answers.

Once a message appears that Senteo is ready to be used, the clickers can be turned on. To turn on the clickers, complete the following procedures below:

1. Press and hold the **Power** button on the clicker for about one second.
2. A message will appear. You can choose either to join the last class the clicker was connected to or to find a different class.
3. If you want to join the last class, simply press the **Enter** button.
4. To find a different class, press the Down button, and then press Enter.
5. Press the Up and Down buttons to scroll through the list of classes in range, and when you have found the correct one, press Enter.

After students have completed the questions, the teacher can view, print, and export results. If you save the Notebook file after asking questions, or after running a question set, you can reopen the file at any time to view the results. The teacher can print a variety of information, including question results, using Notebook software's *Senteo Print* menu. The teacher can also export the results to a Microsoft Excel spreadsheet, or to an HTML page for viewing on a Web browser.

For further information on the process and steps of using Senteo Interactive Response Systems, please go to the following website:

<http://www.eastchester.k12.ny.us/schools/hs/teachers/blaser/documents/SenteoUsersGuide.pdf>

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