Interactive White Boards and Slates

Which is the better education tool for the classroom, an interactive whiteboard or a wireless slate (tablet)?

Both perform a similar function of mouse control or mouse movement to mark or write on a computer generated image. Also, both require a computer monitor image that is displayed to the class by a projector or a large flat panel display such as a LCD or plasma TV / monitor.

The interactive white board (IWB) is a large board typically about 77 inches on the diagonal that has a sensitive surface for either an electronic pen or a touch. Due to its size it must be mounted on the wall like other whiteboards or be attached to a floor stand with rollers. Stands can be fixed height or adjustable height for students of different grades and when it must pass through doorways.

The wireless slate /tablet is a lightweight 9 x 11 inch hand held plate about ½ inch thick that the teacher operates with a electronic pen. It sends the pen commands to a small receiver the size of a thumb drive plugged into the USB port on a computer. The slate has a range that extends over the entire classroom thereby permitting use at any location such as a student desk.

Both are valuable since they each contribute something unique to the room. The interactive board permits activity at the image which results in creation of new images or changes in the teaching programs. In the simplest case the teacher is replacing the dry ink pen or chalk markings with an electronically generated mark. In addition, this change or set of markings can be saved in the computer memory. Furthermore the teacher can use the multitude of classroom programs and internet sites that are available for today's schoolroom. To reinforce or enhance the lesson experience, students may mark on the board.

Lesson and computer interaction is also easy with the slate/tablet which responds to the user motion of the pen on the surface. Once again the interaction with the computer is similar. The only difference is the user looks at the displayed image while moving the pen over the blank slate/tablet. It is also possible to give a student the slate or use multiple slates, to let a student interface with the computer.

As with many classroom tools, both devices contribute to new learning experiences. Also, both devices are used in classrooms today. A good choice would be to employ both in the same room. However the usual cost considerations prevail and the combined package has not yet received substantial support. The slate alone is the most economical with a cost of 1/3 that of the interactive board. This can be a major factor in some districts seeking to get the most value for interactive classroom operation.

The table compares the properties and features of the interactive board and the slates/tablets.

Property / Feature	Interactive White Board	Slate / tablet
Cost	$1100-1700	$300-500
Installation cost	$100	none
Shipping cost	$75-150	$25

Property / Feature	Interactive White Board	Slate / tablet
Portability	Attach to wall or mount on a stand	Easy to carry around,
Stand cost	$200 to $1200 (if height adjustable	Not applicable
Function , accessory	Acts as screen, needs to have diffuse surface or bright viewing spots possible Needs projector or LCD	Need a screen, wall, or whiteboard Needs projector or LCD
Image size for easy viewing	Controlled by the board size	Can be any size
Computer requirements	Need USB port	Need USB port
Connection to the computer USB port	Via a cable or wireless adapter (added cost)	Wireless to adapter in USB port
Support required	EM board has battery in pen	Battery in pen, recharge battery in the tablet
Setup	Run software , calibrate the board	Run software
Special features	Some hot keys	Hot keys , 8 to 12 available
If system is moved in room	Recalibrate	Nothing changes
Movement from the room	Stand needs to lower board for doorway	Nothing required, easy move.
Changing computers	Load software and drivers	same
User location	At the board	Anywhere in room
Interaction for annotation or mouse control	Use pen or finger on the board while looking at board	Use pen on slate while watching the image on screen.
General orientation for user	Facing the board, back to the class	Looking at the board or screen , anywhere in room
Student interaction	Come to the board. Hand motion to use board	Can remain seated. Hand motion on tablet. Teacher can be at student's desk.
General usage trends	May become a teachers tool	Easier to share. Can use multiple slates.
Number of users	1 or 2 (dual pen board)	1 to 30 (Multiple slates)
Storage	Remains on wall or stand in room. Cable to computer can be coiled	Small storage space, no cables.
Ownership by class/ teacher	Natural due to presence in the room	Generally only present during operation
Service	Requires visit to school (expensive)	Can be easily shipped
Power for operation	Powered by the USB port , uses cable to the board Wireless board needs separate 115VAC power supply.	Internal battery with 40 operating hours, recharge like iPad/ iPod using USB port or separate 5VDC.