Objective
To observe the types of obstacles users encounter in learning to use software applications.

Documentation

Method
The interface used was the Palm Pilot and the task was to create a note in Memo Pad. The user has never used a PDA prior to this.

- Did the user set the pace of the instruction or defer to you for guidance?
The user set the pace of the instruction and did not defer to me for guidance. I was quite surprised to see how determined he was to understand the interface in a short amount of time. He was able to locate the Memo Pad immediately by pressing the button dedicated to launching this tool.

- Did the user seem willing or reluctant to experiment and learn by trial-and-error?
The user was very willing to experiment and learn by trial-and-error and he gave himself an allotted time before going to the help section. For example, one he was in Memo Pad, he said, 'OK, now I'll begin typing. Hmmm, it's not recognizing my handwriting, why? I'll go to the help section and find how to enter text.'

- What kind of feedback (verbal and non-verbal did the user provide to indicate understanding or confusion?
The user did a great job in thinking aloud which let me know immediately exactly what areas were problematic for him. In addition, his facial reactions added to his verbal communication. For example, in the beginning, he took the stylus, began typing and quickly realized that the screen was not on. He exclaimed with one brow raised, "OH! I should turn this on to begin huh?"

- What specific problems did the user encounter?
The main problem that he had with the interface was entering the text. He thought that he could easily use the stylus and the PDA would recognize his writing. Later, he discovered the Graffiti cheat sheet displayed on the cover informing the user exactly how to enter the letters. Then, faced with the trouble of having to learn it decided to see if there was another way of entering text. He located the
virtual keyboard and used this method to enter the text in Memo Pad.

- **What characteristics of the interface seemed to be problematic for the user?**

1. *Visibility*. By looking, the user can tell the state of the device and the alternatives for action. Initially, the user did not know that the state of the device was off and proceeded to hit any key to turn the Palm on. Immediately, after determining this was not working he began to look around for the power button and realized that the only control on the device with a different color was green. For example, in the beginning, he took the stylus and began typing and immediately realized that the screen was not on. He said, "OH! I should turn this on to begin huh? So, how do I do that, it must be this green button."

2. *A good conceptual model*. The designer provides a good conceptual model for the user, with consistency in the presentation of operations and the results and a coherent, consistent system image. Yes, the designer provides a good conceptual model for the user. For example, the power button is green just like the streetlight to go. All the controls in the interface are few, same size and appropriately located in the device. It’s understood that the PDA has limitations compared to a PC and that any user would need to know where to locate the virtual keyboard or learn Graffiti to be able to enter text.

3. *Good mappings*. It is possible to determine the relationships between actions and results, between the controls and their effects, and between the system state and what is visible. It was possible to determine the relationships between actions and results. In his experience, he knew that the device had to be on to perform his task. As he studied the interface, the green button stood out and he verbally stated that must be the power button since it was the only colored button. "...it must be this green button" he said. Then, he pressed the Memo button to launch the Memo Pad, stating, "You know, I could probably just use this button to get into Memo Pad."

4. *Feedback*. The user receives full and continuous feedback about the results of actions. The feedback that the user saw as a result of his actions was appropriate. When he pressed the green button to turn the PDA on, it turned on as he expected. When the help section was needed for how to enter text, he located that specific section and gathered the information. At no point during the exercise was he surprised or shocked of the results he received after completing an action.
If I were to repeat the observation with another user, would I do anything differently?

First, I would have the Palm turned on and begin at Home. In the beginning, I started the task with the Palm off and in the middle if a previous search under the Address book. After turning the Palm to ON, the user saw an entry for Pat Sanders and her personal information (address, phone number, etc). I would also inform the user that he could use the stylus to enter the information and to refer to the cheat sheet for entering text or he could use the virtual keyboard. Rather, then the user looking for the help section and reading the information about how to enter text.

Results
During my observation, already knowing the concept of the PDA, the user worked hard to understand the controls of the interface during the testing. He was not intimidated by thinking aloud and stating his questions as he tried to solve a problem in his head. During more difficult times his body language stressed a bit of frustration in trying to enter text after learning about how to do it. Using the stylus to enter text must be done using the Graffiti, otherwise others letters may possibly be displayed. It was nice to see that he was willing to go further with this by searching for alternative ways to enter text. Once he located the virtual keyboard he entered a note in the Memo Pad and hit done to save.

Discussion
I intentionally had the user begin his task with the PDA off and in the Address Book to see what steps he would take to complete the task of entering a note in Memo Pad. I was interested in observing any body language during his steps. It was interesting to see that when faced with a 'problem' he would tap his forehead with the stylus. He would also smile or loudly say, 'Alright' when he found an answer to his problem.

Conclusion
Overall, I learned that the PDA was pretty usable. Once the user figured out what to do the task was easy for him to complete. In any new environment, learning the main components and navigation of a system or device in the beginning make completing the tasks more efficient.