

Part II - Portable computing

By Brian S. Friedlander

While users of the Dana by Alphasmart will find many uses for this portable computing device, many of us in the field of assistive technology will, in all likelihood, rely on this device as an alternative to a laptop computer for written work. Many of the students that we work with have poor fine-motor skills or have been more formally classified with "dysgraphia," which literally translates to "difficulty drawing." Children with this disorder often struggle to keep up with their peers when they have to do written assignments. While it often takes students with dysgraphia longer to do their written work, it is also very often very difficult to read what they have turned in to their teachers. In many cases, the students themselves have a hard time reading back what they have written and for many students this is truly very frustrating. Just think back to what is involved in a typical school day and you can see how much written work is required - from taking notes, to writing down assignments, to writing essays. The school day is filled with written work which is often a real barrier for students with writing disorders. If hand writing was the only underlying problem things would not be so bad. Unfortunately, students who often present with dysgraphia and who are receiving special education intervention oftentimes have difficulty with the mechanics of writing, organizing their ideas and spelling.

Many of the tools that we have grown accustomed to on desktop or laptop computers are a real god-send for many of the students that

we work with with written language disorders. Many of us in the field of assistive technology often recommend outlining programs to help students organize their ideas before they begin to write and many special educators have relied on these tools to help structure the writing process for students with learning disabilities. Programs like Inspiration and Kidspiration are commonly recommended programs that are used in the writing process. These venerable programs, however, are currently not available for Palm devices, but fortunately, there are outlining programs like ThoughtManager that can be used on the Dana which can assist students in the writing process. Similarly, many students who we work with who need support in the area of spelling have come to rely on word prediction applications like Co:Writer 4000, to support them with spelling and to help reduce the number of keystrokes needed to type words. While Co:Writer 4000 is not currently available on the Dana, programs like TextPlus that run on the Palm can support students with their spelling skills. In this article, both ThoughtManager and TextPlus will be reviewed to give you a better idea of their feature set and to help you see how they may become a new part of your assistive technology toolkit when using the Dana by Alphasmart.

Outlining on the Dana

When I first received the Dana by Alphasmart, I was eager to find out what applications were available to meet the needs of students with writing disorders. Falling back on the tools that I often recommend,

I began scouring the Internet to see if I could find new software applications that could help students brainstorm ideas before writing, organize their ideas, and provide the structure that they would need in the writing process. The first tool that I found was a program called ThoughtManager by Hands High Software, Inc. (www.handshigh.com). Students using ThoughtManager will be glad to learn that the program takes advantage of the full size LCD screen on the Dana, which gives you ample real estate to manage your outlines. ThoughtManager provides students with a powerful outlining tool for the Dana that can help students in many ways in the classroom. ThoughtManager allows students to create rather complex outlines on the Dana that can be formatted in many different ways. Students have the option to format their outlines using bullets, check boxes, legal, numeric, alphabetic, roman, mixed, as well as applying custom formatting. ThoughtManager allows students to develop complex outlines right on their Danas. ThoughtManager has taken into account that students will most likely use the program with a keyboard and so they have added the capability of indenting and outdenting levels on the outline by using the "tab" key to indent and the "Shift-tab" key to outdent an idea. While ThoughtManager allows students to do some of the work of organizing their outlines with the keyboard, students will need to use the stylus to perform many of the more advanced functions like dragging and moving items on the outline. ThoughtManager has well placed

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icons on the bottom of the Dana screen to let the user create a new item or to indent or outdent an item with the stylus. Outlines can quickly be formatted with check boxes by clicking on the checkboxes icon on the bottom of the screen. Student will also like the capability of being able to attach a note or a picture to any item on the outline. When a picture or note is attached, a small icon of a note or a splash of paint appears on the right part of the Dana screen. Clicking on the icon opens up the note or the picture. This feature is important for students who need to link ideas with pictures.

ThoughtManager is an ideal tool for students to use to capture their ideas during the brainstorming process. Once ThoughtManager is launched and a new outline is opened, students can quickly type their ideas and, by pressing the Enter key, can quickly create a new item. During this process, students are free to capture their ideas without the need to censor them. After the students have captured their ideas, they can then easily reorganize them with ThoughtManager. Using ThoughtManager's drag and drop facility, students will find it very easy to move text on the screen and reorganize the ideas. If students have access to a printer with Infrared built in and have either PalmPrint from Stevens Creek Software or TealPrint from TealPoint Software installed, they will be able to print out their outlines directly from the application. If students do not have either of these two printer drivers, they can export it to a memo pad file and then open it with the Memo Pad application. Once the outline is in the Memo Pad, the text can be copied and then pasted into Alphaword. If the publishers of ThoughtManager are reading this, it would be wonderful if the outline could be exported directly to Alphaword.

One of the key uses of ThoughtManager from my perspective, is in helping students organize their ideas by providing them with structured outlines to complete their paragraph and essay writing. A recent text, *Structured Writing-Using Inspiration Software to Teach Paragraph Development* by Charles Haynes & Kathleen McMurdo (ISTE 2001, www.iste.org) discusses how to use outlining tools to help students develop their paragraph writing skills. Using a highly structured approach, students learn the craft of writing and are provided with the scaffolding that they require to move them through the writing process. One of

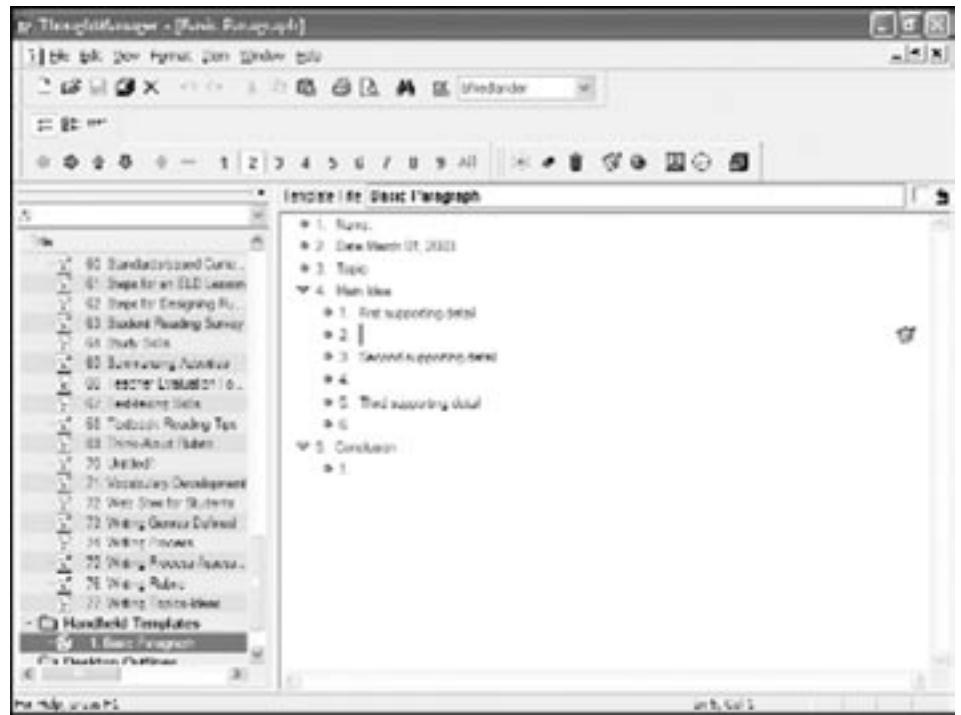


Figure 1. ThoughtManager Desktop for Windows

the powerful features of ThoughtManager is the ability to create various writing templates that can be stored and reused over and over on the Dana. Teachers will be glad to know that templates can be created right on the Dana from an existing outline by going to the Outline menu and selecting Save as Template. For PC users running Windows, ThoughtManager Desktop (Figure 1) is an accompanying application that can be used on your desktop computer to create outlines that synchronize effortlessly with ThoughtManager on your Dana. Teachers who have access to a PC will find the accompanying ThoughtManager Desktop program handy to have and it will enable them to create outlines and templates which can then be synchronized or beamed to students who are using the Dana. ThoughtManager Desktop also has some nice features which will allow students to export their outlines directly to Microsoft Word on the PC.

ThoughtManager really shines when you consider how easy it is to use and how many uses students will find for it. Students who need the organizational support for writing will find it to be an indispensable tool. Once students have completed a structured outline from within ThoughtManager, it is easy to store the outline in the Memo or Doc format so that it can be opened in other word processors or the Memo Pad on

the Dana. Students will enjoy the level of support that can be accomplished on the Dana with ThoughtManager and will find it indispensable for note taking, organizing written work, creating checklists, and for brainstorming. ThoughtManager is a tool that can be used across the curriculum and one that can empower and support students in the writing process.

Word prediction support on the Dana

Many professionals in the assistive technology field have come to rely on word prediction as one of the mainstays in our toolkit. In anticipation of the Dana, many of us were asking ourselves the question, is there anything like Co:Writer 4000 out there that can support students who need word prediction? While we are all hoping that Don Johnston will release a version of Co:Writer for the Dana, many of us see the value of the Dana as a writing tool and need to have an application right now to meet the need. After scouring the Internet, I was able to find a software application for the Palm called TextPlus (Figure 2) from SmartCell Technology ([/www.smartcell.com/](http://www.smartcell.com/)) that adds word prediction to the Dana. SmartCell Technology touts its product as using intelligent dictionary based suggestions of words and phrases to speed up text entry on

the Palm. According to the TextPlus manual, the application suggests words based on a frequency based intelligence search engine, which chooses only frequently used words and phrases for suggestion. The program continually adjusts the frequency of words and phrases as they are used in the document to increase the efficiency of prediction. Over time, TextPlus' ability to predict a word or phrase will improve, thus decreasing the amount of time a student needs to input the words. TextPlus Anywhere technology means that the application can be used with any text based application on the Dana. Once you have turned on the TextPlus Anywhere option, a small window shows up at the point of your insertion and begins to suggest words and phrases as you type on the keyboard.

TextPlus has taken into account that students will want to be able to select the words or phrases from the selection, and have made it easy to select words in the list by using the arrow keys on the Dana. To select a word on the suggested list just use the **up** or **down** arrow keys and once the word that you want is highlighted you can press the Enter key to select it. The program uses a base dictionary of 10,000 words to make its suggestions and it is possible to create your own customized topic dictionary using a small application from SmartCell called TextPlus Toolkit on the PC which you can download free from the Web site. TextPlus has the capability right from Alphaword to add words to the dictionary. To add a word to the dictionary, simply type the word into Alphaword and double click on it, a small dialog box pops up and allows you to select "add word." It is really that easy. If you would like to add more than one word at a time to the dictionary, it can be done as well by first copying the text in the Alphaword application and opening TextPlus from the applications icon. When you open, you will see that all of your text has been pasted into TextPlus. Now simply go to the Word menu in TextPlus and select "Add All Words to Text." TextPlus is highly customizable and allows the student to have the application show anywhere from one to 10 words in the predicted list. Likewise, the student has the opportunity to have TextPlus predict phrases as well. Assistive technology specialists will be glad to know that the list can be placed on the right or bottom of the screen and that one can show the list of predicted words after one to five characters have been typed. TextPlus for the most part

can be used entirely from the keyboard once it has been configured.

TextPlus is a welcome tool that adds significant value to those students that need spelling support on the Dana. While it doesn't have all the bells and whistles of Co:Writer 4000, it is comparable to the Co:Writer Smart applet on the Alphasmart 3000. Putting TextPlus through its paces, I used the sentence, "The rain in Spain falls mainly in the plain," to test out the word prediction efficiency. TextPlus was also configured to automatically place a space after a word was inserted. I tabulated that it took approximately 20 keystrokes to type this sentence which was made up of 35 letters. In other words, it saved me approximately 15 keystrokes and completed 57% of the typing for me. If you have students that can visually identify when words are spelled correctly from a list, then you will definitely want to take a look at TextPlus which runs seamlessly on the Dana.

For assistive technology consultants who are recommending the Dana as a writing platform, you will definitely want to consider TextPlus for word prediction and Thought-Manager for outlining to round out the writing tools on the Dana. Many students that present with written language difficulties will benefit from the the easy-to-use outlining program, ThoughtManager. ThoughtManager can be used in many ways in the classroom to support the writing process across the curriculum. Likewise, with the addition of TextPlus running in the background, it is now possible to assist students who need the support of a word prediction application. As the Palm platform matures, I am sure that more powerful versions of these applications will be developed. However, for the time being, assistive technology practitioners should look closely at these products as a way to complement the power of the Dana by Alphasmart.

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lished by National Professional Resources (www.nprinc.com).

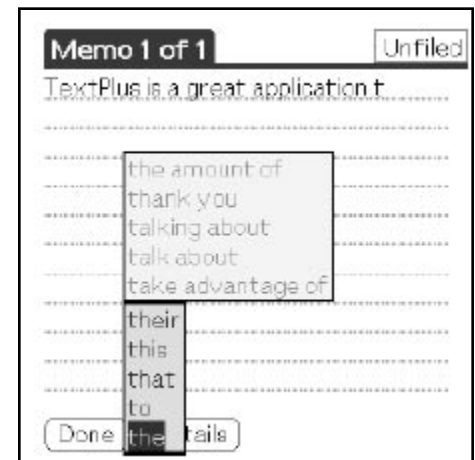


Figure 2. TextPlus Word Prediction