4.1 The National Weather Service Tallahassee Student Mentorship Program

Kelly G. Godsey[1], Jacqueline S. Rubio[1,2], Andrew I. Watson[1]

[1] NOAA/National Weather Service
Tallahassee, Florida
[2] Department of Meteorology, Florida State University
Tallahassee, Florida

1. INTRODUCTION

The National Weather Service (NWS) Weather Forecast Office in Tallahassee (WFO Tallahassee) is currently collocated with the Department of Meteorology at the Florida State University. One of the many reasons to collocate the new WFO with the meteorology department was to create better interactions between NWS meteorologists and faculty and students within the department.

WFO Tallahassee offers a variety of programs for students to gain experience working alongside NWS meteorologists in an operational environment. These opportunities are important to many students, who are still determining their career direction within meteorology. While paid positions, such as the Student Career Experience Program (SCEP), are limited across the NWS, there are a variety of non-paid opportunities for students. Many students engaged in research use the collaborative research room at the WFO to access past meteorological data for their studies. Other students prefer to participate by enrolling in a directed individual study course or working as a student volunteer. These opportunities allow students to become acquainted with the operation of an NWS office.

In order to provide additional opportunities to other students within FSU meteorology department, a new program, known as the NWS Tallahassee Student Mentorship Program, has been developed to provide students with some of the same opportunities offered by the more formal directed individual study course.

Corresponding author address: Kelly G. Godsey, NWS Office, Love Building, 4th Floor, Florida State Univ., Tallahassee, FL 32303; email: Kelly.Godsey@noaa.gov

2. METHODOLOGY

The NWS Tallahassee Student Mentorship program pairs an interested undergraduate student with an NWS meteorologist for the duration of the student's undergraduate education. The students are selected toward the end of their junior year. The student then begins a series of self-paced training modules and mentor-led training that applies lessons learned in the classroom to the operational environment. Many of these self-paced modules are the same ones completed by meteorologists in the NWS meteorologist-intern position. The mentorship program is also designed to allow the student to spend a significant amount of time working alongside the NWS meteorologist in operations.

As with any new program, a trial period was necessary to ensure success. Such a trial period was planned for May through August 2007. A series of interviews were held with interested undergraduate students in late March and April. The interview process was designed to not only gage a student's interest in the program, but to determine which student would work best alongside each prospective mentor. For any mentorship experience to work well, the mentor and student must be able to work effectively together. Mincemoyer et. al. (1998) reported that developing "a friendly, empathetic relationship" can lead to an effective mentoring experience. Furthermore, the mentorship program was designed to allow for frequent contact between student and mentor, as such contact encourages the sharing of information that usually leads to the most successful mentorship experiences.

An outline for the initial summer portion of the mentorship program is provided in Table 1. To allow the student to fully experience life as an operational meteorologist, the student is strongly encouraged to work the same shift rotation schedule as the forecaster for a minimum of 10 to 20 hours a week. Work time, as well as participation in midnight shifts, can be increased or modified based on the mentor and student's discretion. Notice how the program includes alternating periods of self-paced learning and mentor-led training. This design allows the student to learn basic office operations, such as operating the Advanced Weather Information Processing System (AWIPS), at their own pace, while still affording the mentor time to complete other tasks on shift.

Weeks	Subject Material
One through Two	Overview of AWIPS and Display Two Dimensions (D2D)
One through Two	Use of text workstation
One through Two	How to read NWS Text Products
One through Two	Understanding and Using Skew-T/Log P diagrams
Three through Five	Scalar Analysis
Three through Five	Format of NWS Public Products
Three through Five	Interpretation of model data in D2D
Three through Five	Shift Operations Overview
Six through Seven	Understanding Doppler Radar using NWS Distance Learning Course Materials
Six through Seven	Warning Event Simulator Case
Six through Seven	Individualized topic of interest to study
Eight through Twelve	Writing Short Term Forecasts
Eight through Twelve	Writing Terminal Aerodrome Forecasts
Eight through Twelve	Introduction to Graphical Forecast Editor (GFE)
Eight through Twelve	Public/Aviation Forecast Shift Shadowing
Eight through Twelve	Producing forecast products

Table 1. Sample training program plan for summer. Light green rows are self-paced learning topics; light blue rows are mentor-led training.

Lesson plans were developed for each of the self-paced learning objectives. While these self-paced lessons made use of existing NWS training materials -- such as the online AWIPS modules -- they were supplemented with additional information supplied by one of us (K. Godsey). This information was designed to focus the student on specific sections of each training module. The supplementary information became increasingly useful when exposing the student to the Doppler radar training modules. Whenever a student had questions regarding a module, they could easily be answered by their mentor, as nearly all of the self-paced objectives were completed while the student was on shift with their mentor.

Once the student was selected for the mentorship program, initial meetings were held to determine availability of the student. One of us (K. Godsey) served as the mentor and selected the student. The student selected (J. Rubio), was very eager to begin work (Fig. 1). In fact, she requested to work abbreviated midnight shifts during the first few weeks of the summer, to be followed by complete midnight shifts by the end of the summer. This decision closely followed the goal of the program, which is to allow students the opportunity to experience, as much as possible, the work environment of an operational meteorologist.

In operational meteorology, it is important to be flexible, and adapt to the sometimes rapidly changing weather. On days when significant weather was occurring, the lesson plan was suspended so that the student could shadow the forecaster.

3. RESULTS

The goal of the trial period was to judge the usefulness of the program for the student. At the end of the summer, when classes resumed, the student continued in the program as time allowed. The rotational nature of the shifts significantly limited her time available to work with her mentor. Furthermore, the rigors of a full load of classes each semester presented obstacles to being able to work portions of shifts. Therefore, it became very difficult for her to establish any form of work routine, or to work shifts for any significant period of time.

This led to changes in the program. While some time existed for the student to work alongside her mentor during the school year, the program proved most beneficial during the summer, when the demands from undergraduate classes were substantially fewer. This resulted in the mentorship program being modified to only take place during the summer. However, having established an excellent working and professional relationship, communication between the student and mentor has continued during her senior year, providing valuable guidance to the student in her meteorological pursuits.

4. CONCLUSIONS

The initial Tallahassee Student Mentorship Program was very successful. The program is designed to allow students to experience an operational meteorological environment while still in school, and help them make more informed decisions about their future career choices. In this instance, the student decided to pursue a career in the NWS after completing her undergraduate and graduate work. Her experience, gained through the Mentorship Program, ultimately allowed her to be considered, and eventually selected for a SCEP position at WFO Tallahassee.

By providing the student the opportunity to synthesize material learned in undergraduate courses with training completed during the mentorship, the student was able to apply academic information in the operational environment. In addition, forecasting skills developed during the summer program proved helpful in her coursework the following fall semester. One unintended benefit of the program was the opportunity for the mentor to review fundamental meteorological principles and relationships that had been forgotten.

WFO Tallahassee plans to continue the Mentorship Program next summer and offer the opportunity for other forecasters to serve as mentors for interested students. Such a program could be expanded to other NWS offices around the country that are near or collocated with an undergraduate meteorology program.

5. REFERENCES

Mincemoyer, C.C., and Thomson, J.S., 1998. Establishing Effective Mentoring Relationships for Individual and Organizational Success. *Journal of Extension* [on-line], 36(2). Available at: http://www.joe.org/joe/1998april/a2.html

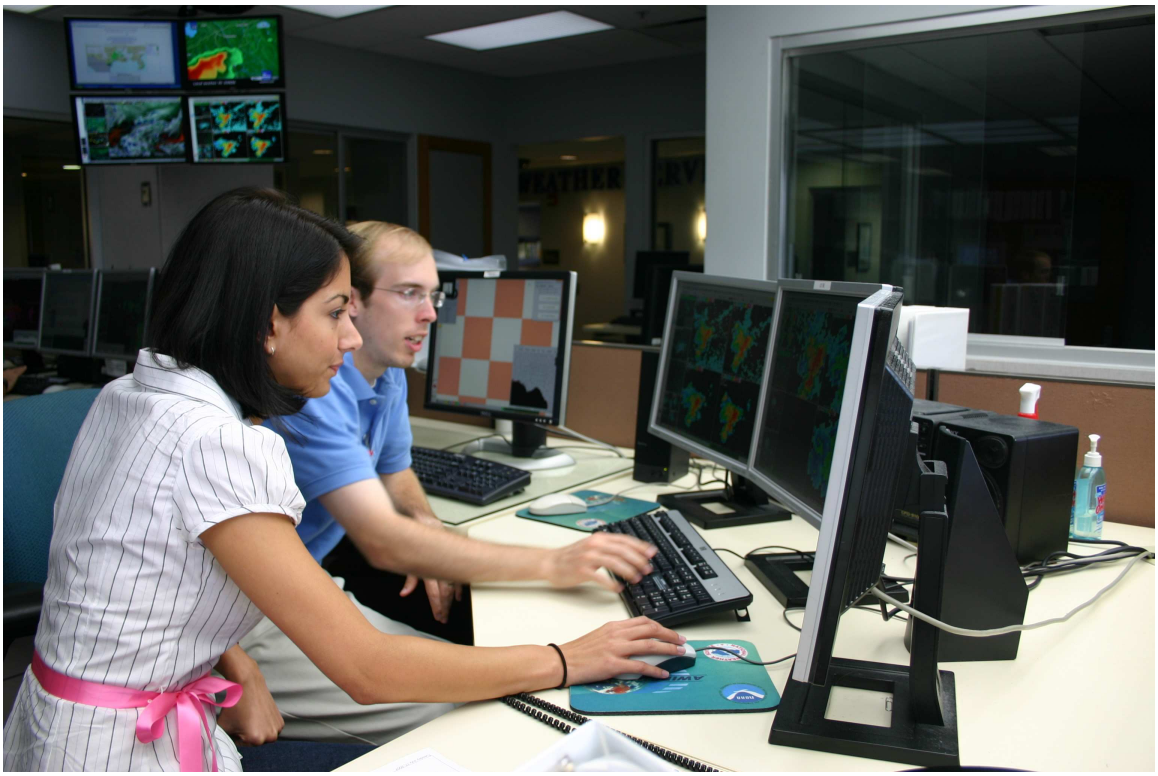

Figure 1. Mentor and student discuss developing convection during a summer evening shift.