

AN INVESTIGATION OF TIME DISTRIBUTION OF PRE-SERVICE TEACHERS WHILE INTERNING

Robert M. Torres, Associate Professor
Jonathan D. Ulmer, Professional Development Specialist
University of Missouri-Columbia

Abstract

Student teaching is the culminating experience of most teacher preparation programs. Student teaching gives the prospective teacher the opportunity to join the worlds of theory and practice and to develop individual teaching talents. Long hours are regularly spent in several areas. This study sought to investigate how student teachers distribute their time in selected areas (observation, planning, teaching, teaching-related activities, and administrative-related activities). The sample consisted of student teachers who participated in an internship experience in agricultural education during the spring semester for the years 1999 through 2003. Document analyses were used to obtain information guided by the research objectives. The study found that student teachers spent the majority of their time observing, planning, and teaching. Slight differences in how time was distributed over the internship experience were found between males and females, where females spent more time on planning and on teaching-related activities. Student teacher learning styles also exposed differences in how time was distributed over the internship experience. Field-dependent learners spent more time on planning, whereas field-independent learners spent more time on teaching-related activities. Other differences in distribution of time were found by final performance grade for the student teaching internship. While slight differences existed in all the selected areas, the largest differences occurred in administrative-related activities where students who received an A grade spent more time than did the A- and below group.

Introduction – Theoretical Framework

“The experiences obtained during student teaching are probably the most crucial activities involved in the development of prospective vocational agriculture teachers” (Schumann, 1969, p. 156). Although stated 35 years ago, this statement is as applicable today as it was then. The student teaching internship experience is a culminating learning experience that brings together the university experience and the public school classroom. Specifically, the experience provides prospective teachers opportunities to apply pedagogical knowledge and skills of teaching in a real-life setting under the supervision of an experienced teacher. For most, the student teaching internship is the final segment in the professional education sequence in formal teacher education programs.

The student teaching experiences and associated elements have been the focus of some research. For example, Beck and Kosnik (2002) studied the components of a good student teaching placement by interviewing student teachers. They found student teachers valued emotional support and peer relations from their cooperating teacher, a degree of collaboration with their cooperating teacher, a degree of flexibility in teaching content and method, feedback on performance, a sound approach to teaching and learning in the placement classroom, and a heavy but not excessive workload. Student teaching experiences in agricultural education were found to average 9.4 weeks (Borne & Moss, 1990).

Valuing elements of the student teaching experiences can be influenced by where student teachers are placed, thus making placement a critical step in the student teaching process. Edwards and Briers (2001) investigated cooperating teachers’

perception of the important elements of a cooperating center. The elements found to be most important were classroom and laboratory instruction. According to Harlin, Edwards, and Briers (2002), student teachers also felt this element to be most important in the student teaching experience. Other elements perceived to be important by cooperating teachers include cooperating teacher-student teacher relations, school and community relations, student leadership development activities, and school and community relations (Edwards & Briers).

Within each teacher preparation program, there are expectations for student teachers while in student teaching. In a multi-state study, Deeds, Flowers and Arrington (1991) found cooperating teachers generally agreed with expectations for student teachers. Expectations pertained to appropriate dress, participation in selected activities, and having written lesson plans for classroom and laboratory instruction. Less in agreement was the expectation for student teachers to live in the community in which they student teach.

As a theoretical framework for this study, Wentz (2001) identified three phases of student teaching: 1) orientation and observation, 2) assisting, and 3) assuming responsibility in the total school program. According to Wentz, student teachers should spend at least the first week observing their own classroom as well as other classes within and outside their discipline. Wentz noted,

After observing for at least a week, student teachers should begin assisting students on an individual or small-group basis. Some level of assistance should begin the first day so that the student teacher can feel at ease in the classroom. (p. 73)

Assisting in the classroom prior to teaching gives the student teacher a feel for the environment. Greater responsibilities should be assumed after progressing through the first two phases. According to Wentz, student teachers should begin by teaching a subject with which they have experience. Some student teachers may be able to reach

the third phase more quickly if they have previous experience in the classroom. Based on student teacher initiative, enthusiasm, and adequate preparation, Wentz suggested that they may increase their workloads as the cooperating teachers relinquish more and more responsibilities to them. During the latter part of student teaching experience, the student teacher should be in full charge of the classroom.

While Wentz (2001) identified a "phase-in" period, when student teachers initially observe the classes of their cooperating teacher(s), assisting, then are gradually given more responsibility, her three-phase sequence fails to identify a "phase-out" period, where student teaching assignments can again be acclimated to the cooperating teacher. Within the phases of student teaching, the amount of time spent observing and teaching was investigated. Burstein (1987) found, over a twelve-week student teaching session, the transition for student teachers from observing to teaching was similar. However, the amount of time spent observing and teaching varied among individuals, particularly during the first and second measured time periods (of three) during the student teaching experience. Burstein attributed the time of transition from observation to teaching to the guidance of the cooperating teacher. While teaching, Burstein found that student teachers spent their time in individual, small group, and whole group instruction, of which 20% to 80% of the time was spent in whole group instruction.

Documenting and understanding how student teachers allocate and spent their time can assist teacher educators in calibrating or refining expectations for student teachers. Furthermore, revealing how time is being spent can raise discussion as to appropriate levels of time distribution. In agricultural education, however, a void exists in documenting the distribution of time while student teaching.

Purpose and Objectives

The purpose of this study was to describe the distribution of time of pre-service teachers while student teaching. The focus of the study investigated the

distribution of time in five areas: observation, planning, teaching, teaching-related activities, and administrative-related activities. The following research objectives were used to address this purpose:

1. To describe the distribution of time in selected areas (observation, planning, teaching, teaching-related activities, and administrative-related activities) while student teaching.
2. To describe the changes in distribution of time in selected areas by weeks of student teaching.
3. To describe the differences in distribution of time in selected areas by gender, learning style, and performance on a selected academic pre-service course score.

Methods and Procedures

The study was descriptive in nature. The target population was student teaching interns at the University of Missouri-Columbia. The accessible population ($N = 55$) was composed of student interns who participated in a spring semester student teaching experience in agricultural education within a five-year period (1999 - 2003) of time. Descriptive document analysis was used to retrieve information pertaining to the research objectives. According to Scott (1990), written documents may be classified in terms of their authorship and access. Archived student teacher files served as existing written records of the variables of interest. In terms of access to these documents, Scott suggested that documents of this nature are considered to be "closed"; meaning the access is restricted to a limited group of people. Specifically, student journal submissions were analyzed by the researchers for self-reported content. In addition to reflective weekly journal entries, students recorded the number of hours each spent in five selected student teaching areas: 1) observation, 2) planning, 3) teaching, 4) teaching-related activities, and 5) administrative-related activities. In reporting the number of hours spent in these areas, no distinction was made to differentiate students by the variations of class length (e.g., block schedule).

Observation, as a selected area, was intended to capture time spent in class watching and learning from the cooperating teacher as he/she delivered instruction to students. Planning, as a selected area, was intended to capture the time spent by student teachers preparing and organizing instructional materials for the purpose of teaching. Teaching, as an area, was intended to capture the time spent by a student teacher instructing students in a formal class setting. The remaining two areas were teaching-related and administrative-related activities. Teaching-related activities included, for example, assisting the cooperating teacher's instruction, participating in teacher-student conferences, participating in supervised agricultural experience visits, FFA-related meetings, and/or coaching career development event teams. Examples of administrative-related activities included participating in student teacher seminars, attending faculty meetings, school assemblies, meetings with cooperating teachers (i.e., feedback conferences) and administrators, and/or completing departmental forms/reports.

For each of the five years of student teacher data, a consistent protocol of submitting journals by student teachers to the university faculty supervisor was observed. Using an electronic word processing template, students submitted weekly journal entries to their faculty supervisor via e-mail. Electronic journal submission contained student teachers' self-reported allocation of time (in units of hours) in the five selected areas. In addition, a reflective journal entry for each day of the week citing illustrations and examples of how time was spent and what was learned was included with each journal submission. Journal submissions were printed and filed in the student teachers' file folder, then archived at the conclusion of the student teaching internship experience. For each week of the 15-week student teaching experience, the researchers reviewed each journal submission of all students and recorded the number of hours spent in each of the five selected student teaching areas.

Other student records tapped for data included students' final grade for Agricultural Education 399 (Student

Teaching Internship). Data on gender was obtained from existing records available in student academic files. Students' preferred learning style was retrieved from pre-existing Group Embedded Figures Test (GEFT) scores (Witkin, Oltman, Raskin, & Karp, 1971). GEFT scores allowed students to be dichotomized into a field-dependent or field-independent learning style. Students who scored zero to 11 were labeled as field-dependent learners while students who scored from 12 to 18 were labeled field-independent learners. According to Witkin, Moore, Goodenough, and Cox (1977), students with a field-dependent learning style are considered global consumers of information. These students are said to have highly developed social skills and to be influenced by authority figures as well as by peer groups. In addition, field-dependent learners have difficulty in "breaking down" tasks into smaller components. In contrast, Witkin et al. (1977) suggested that students with a field-independent learning style are more analytical in their consumption of information and said to be goal-oriented, view tasks in discrete parts, are more self-directed, and have an impersonal orientation. In terms of motivation, field-dependent learners tend to be extrinsically motivated, whereas field-independent learners tend to be intrinsically motivated.

Data (number of hours) reported in the five selected areas for each student teacher over the 15-week student teaching internship were entered into SPSS 11.5 for analysis. Also entered into SPSS were data pertaining to gender, learning style, and grades received in Agricultural Education 399 (Student Teaching Internship). Data reduction was conducted in two ways. Omnibus hour totals were calculated for each of the five areas of allocated time. From the omnibus totals, an average percentage of time for each category was calculated. The 15-week student teaching internship experience was reduced by

calculating three-week totals for each area of time distribution, creating five time intervals. The time intervals were used to identify changes in average distribution of time over student teaching internship experience.

Three student characteristics (gender, learning style, and performance in Agricultural Education 399) were used to investigate differences in average distribution of time by groups. For the Student Teaching Internship course (Ag Ed 399), students were dichotomized into two performance groups; students scoring A+ or A and students scoring A- or below because of a restriction in range. Descriptive statistics such as percentage, frequency, measure of central tendency, and variability were used to summarize the data.

Findings

For each of the five areas (observation, planning, teaching, teaching-related activities, and administrative-related activities) student teachers' time (expressed in hours) was totaled for all student teachers for the 15-week internship experience. The totaled hours were averaged for all students to illustrate the distribution of time spent in each area. Over the 15-week student teaching period, student teachers spent 8.47% ($M = 61.44$, $SD = 29.31$) of their time observing teachers deliver instruction (Figure 1). The proportion of time spent in planning and teaching were relatively equal and accounted for 26.19% ($M = 189.93$, $SD = 76.01$) and 25.43% ($M = 184.42$, $SD = 38.44$) of time, respectively. Time spent in activities related to teaching occupied the largest proportion (33.51%; $M = 243.04$, $SD = 71.20$) of time, whereas administrative-related activities comprised the smallest proportion (6.40%; $M = 46.40$, $SD = 48.29$) of student teachers' time over the 15-week student teaching experience.

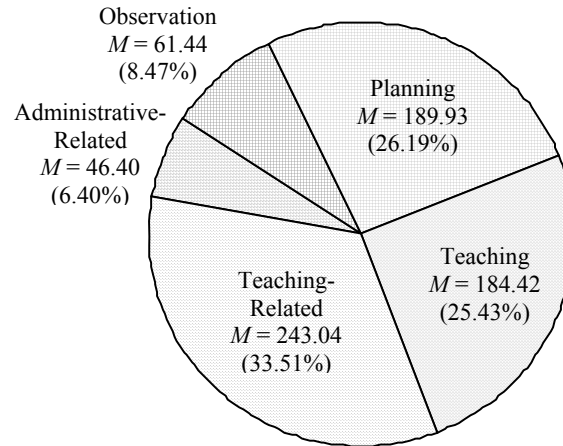


Figure 1. Average percentage of hours allocated to activities while student teaching for 15 weeks ($N = 55$).

The 15 weeks were collapsed into five 3-week time intervals to detect the change in average number of hours spent on selected student teacher activities (observation, planning, teaching, teaching-related activities, and administrative-related activities). Figure 2 graphically represents the change in the average number of hours student teachers spent on selected activities over the 15 weeks of the student teaching internship experience. Two areas with the highest average number of hours during the first interval of time were observation ($M = 11.22$, $SD = 4.75$) and planning ($M = 13.63$, $SD = 5.64$). The average number of hours student teachers spent observing decreased

rapidly from the first interval of time ($M = 11.22$, $SD = 4.75$) to the fifth ($M = 1.02$, $SD = 1.31$). The average number of hours spent on teaching increased from the first time interval ($M = 6.91$, $SD = 3.38$) through the fourth time interval ($M = 15.55$, $SD = 4.12$) before declining at the fifth interval ($M = 10.90$, $SD = 3.76$). Additionally, the average number of hours spent in planning by student teachers increased at the second time interval ($M = 16.09$, $SD = 6.78$) before declining in the third ($M = 13.46$, $SD = 6.77$), fourth ($M = 12.07$, $SD = 5.47$), and fifth ($M = 8.06$, $SD = 4.91$) time intervals of the experience, representing a curvilinear relationship with the five intervals of time.

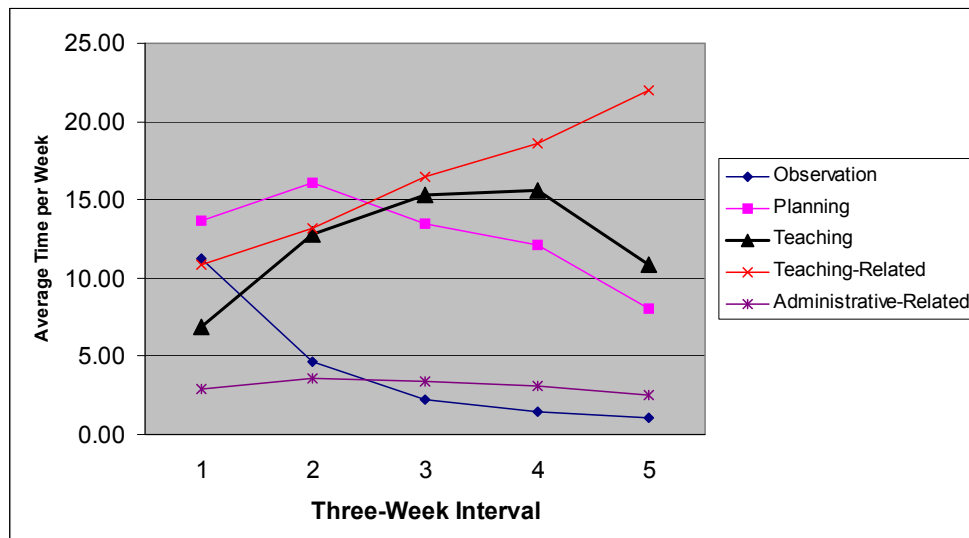


Figure 2. Change in distribution of time among selected student teaching activities during the 15-week internship experience ($N = 55$).

During the 15-week student teaching internship experience, time spent on teaching-related activities increased at a steady rate from the first interval of time ($M = 10.81$, $SD = 5.09$) to the last ($M = 21.95$, $SD = 8.19$). In addition, the average number of hours spent on administrative-related activities remained relatively steady throughout the 15-week period. A change in distribution in the average number of hours student teachers spent teaching, observing, and preparing occurred during the second time interval of the 15-week period. Further, for time spent planning, teaching, and on teaching-related activities, a change in the average number of hours occurred at the fourth interval of time, where the average number of hours spent on teaching-related activities continued to increase, while the other areas decreased.

The change in distribution of time among selected student teaching activities by gender is presented in Table 1. The change in time over the student teaching internship experience for observation and teaching activities was found to be similar for males and females. At any given time interval, the difference was, at maximum, about one hour. In terms of teaching, a noticeable change in distribution of time for both males and females was found at the fourth time interval when the number of

hours spent teaching ceased to increase and dropped significantly. Additionally, at the first interval of time, females spent slightly more time planning ($M = 14.21$, $SD = 6.48$) than did males ($M = 13.06$, $SD = 4.62$). At the second time interval, the average number of hours increased at a higher rate for females than for males by approximately an average of two hours. The second time interval was also a point where the number of hours spent planning peaked for both genders, followed by a steady decline of time spent planning.

Regarding teaching-related activities, males and females began and concluded the student teaching internship experience with similar average number of hours spent, but differed between time intervals. Both genders increased in the average number of hours spent on teaching-related activities at each subsequent time interval. However, females increased the time spent on these activities at higher rate than did males until the fourth time interval, where males exceeded females. While the number of hours spent on teaching-related activities steadily increased throughout the internship experience, the time spent on administrative-related activities remained relatively stable over time for both genders. However, males spent slightly more time on administrative-related activities than did females. Both

males and females began and concluded the internship experience with similar average

number of hours spent on administrative-related activities.

Table 1
Change in Distribution of Time Among Selected Student Teaching Activities by Gender

Activity	Three-Week Interval										
	1 st		2 nd		3 rd		4 th		5 th		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Observation											
Female	11.58	5.01	5.14	2.52	2.53	2.64	1.33	1.60	1.01	1.01	
Male	10.86	4.45	4.09	3.17	1.93	1.98	1.49	2.30	1.04	1.54	
Teaching											
Female	6.90	3.49	12.59	2.69	15.30	4.01	16.19	3.52	10.80	4.23	
Male	6.92	3.27	13.07	3.24	15.26	3.97	14.93	4.53	10.99	3.25	
Planning											
Female	14.21	6.48	17.12	7.42	13.57	6.98	12.89	6.29	7.74	5.22	
Male	13.06	4.62	15.10	5.94	13.35	6.56	11.28	4.40	8.38	4.56	
Teaching-Related											
Female	10.93	5.24	14.22	5.01	17.67	6.61	17.70	6.77	22.02	8.54	
Male	10.69	4.95	12.21	5.53	15.30	5.40	19.44	6.33	21.88	7.83	
Admin.-Related											
Female	2.42	2.14	3.02	4.83	2.69	3.93	3.08	5.22	2.32	2.85	
Male	3.31	3.36	4.07	3.64	4.02	4.02	3.21	3.33	2.72	3.16	

Note. Females ($n = 27$); Males ($n = 28$)

Table 2 displays the change in distribution of time among the selected student teaching activities by learning style. Based on GEFT scores, student teachers were dichotomized into field-dependent ($n = 12$) or field-independent ($n = 34$) learners to compare the distribution of time for each area. Field-dependent learners tend to spend more time observing during the first time interval ($M = 12.75$, $SD = 6.73$) of student teaching than did field-independent learners ($M = 11.33$, $SD = 3.90$). However, both groups of student teachers concluded the internship experience with similar observation times. With regards to planning

as an area of time distribution, field-dependent learners spent approximately four hours more in planning during the first time interval than did field-independent learners. Both groups increased in the average number of hours spent planning at an equal rate at the second time interval before tapering off in time intervals three and four. However, independent learners spent approximately one hour more planning in the fifth time interval.

In reference to time spent teaching, both groups of student teachers spent a similar amount of time during the first time interval (field-dependent, $M = 6.57$, $SD = 2.43$; field-

independent, $M = 6.69$, $SD = 3.22$), then progressively increased at an equal pace to the third interval of time. After the third interval of time, both groups spent a less average number of hours at the fourth and fifth time intervals. However, field-independent learners consistently spent more time teaching than did field-dependent learners through the conclusion of the

internship experience. The average number of hours spent teaching for both groups decreased from the fourth time interval to the fifth. During the fourth and fifth time intervals of the internship experience, field-independent learners averaged approximately one and a half hours more of teaching than did field-dependent learners.

Table 2

Change in Distribution of Time Among Selected Student Teaching Activities by Learning Style

Activity	Three-Week Interval										
	1 st		2 nd		3 rd		4 th		5 th		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Observation											
Dependent	12.75	6.73	5.64	3.63	2.13	2.55	1.39	1.58	1.04	1.32	
Independent	11.33	3.90	4.66	2.65	2.54	2.30	1.58	2.19	1.03	1.30	
Planning											
Dependent	16.53	9.21	19.31	10.53	15.09	7.25	12.44	6.84	7.39	4.65	
Independent	12.37	3.75	15.20	5.05	13.76	6.89	12.16	4.90	8.56	4.59	
Teaching											
Dependent	6.57	2.43	12.96	3.48	14.95	4.36	14.41	3.47	10.14	2.86	
Independent	6.69	3.22	12.59	2.90	15.03	4.06	16.03	3.85	11.37	3.51	
Teaching-Related											
Dependent	8.96	5.24	11.29	3.93	15.80	5.14	18.03	6.67	20.46	8.81	
Independent	11.33	4.87	13.79	5.20	16.50	6.62	18.81	6.44	23.20	8.32	
Admin.-Related											
Dependent	1.94	1.81	3.46	6.11	2.94	5.48	2.57	5.04	2.78	3.60	
Independent	3.07	2.72	3.32	3.15	3.54	3.66	3.48	4.57	2.79	2.96	

Note. Field-dependent ($n = 12$); Field-independent ($n = 34$)

Field-independent learners consistently spent more time on teaching-related activities during the student teaching internship experience than did field-dependent learners. The widest discrepancies in the distribution of time spent on teaching-related activities occurred during the first interval of time and the last.

However, both groups of students steadily increased in the average number of hours spent on teaching-related activities throughout the student teaching internship experience. In the area of administrative-related activities, little difference was noted between the two groups of students in the average number of

hours spent. The widest discrepancy between the two groups of students was a difference of approximately one hour occurring specifically at the first time interval and the fourth.

Table 3 presents the change in distribution of time among selected student

teaching activities by performance in Agricultural Education 399, the student teaching internship course. Students were also dichotomized into students who earn an A ($n = 39$) and students who received an A- or below ($n = 14$) in the student teaching internship course.

Table 3

Change in Distribution of Time Among Selected Activities by Performance During the Student Teaching Internship Course (Ag Ed 399)

Activity	Three-Week Interval									
	1 st		2 nd		3 rd		4 th		5 th	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Observation										
A in 399	11.94	4.90	4.83	3.15	2.28	2.38	1.56	2.19	0.88	1.05
A- or Below	9.20	4.02	3.98	2.30	2.07	2.41	0.99	1.41	1.43	1.85
Planning										
A in 399	13.20	5.62	15.71	6.15	13.30	6.50	11.79	5.52	8.04	4.99
A- or Below	14.83	5.92	17.17	8.60	13.90	7.88	12.85	5.63	8.14	5.03
Teaching										
A in 399	6.57	2.88	12.68	2.97	15.26	3.32	15.46	3.90	11.31	3.22
A- or Below	7.85	4.52	13.25	3.22	15.34	5.64	15.80	4.90	9.74	4.99
Teaching-Related										
A in 399	10.49	4.95	13.64	5.69	16.92	6.38	18.47	7.03	22.42	9.35
A- or Below	11.67	5.72	11.96	4.62	15.20	5.95	18.92	5.79	20.65	4.21
Admin.-Related										
A in 399	3.16	3.16	3.67	4.57	3.65	4.48	3.52	4.93	2.80	3.42
A- or Below	2.08	1.85	3.24	3.77	2.59	2.68	2.09	2.42	1.77	1.68

Note. A in 399 ($n = 39$); A- or Below in 399 ($n = 14$)

Students who earned an A spent two and a half hours more observing other teachers at the first time interval than did students who earned an A- or below (Table 3). During subsequent time intervals, both performance groups spent an equal average number of hours observing. Students who earned A- or below consistently spent more time planning at each of the five time

intervals than did students who earned an A. Regarding the average number of hours spent teaching, students earning an A in the student teaching internship course taught less than students earning an A- or below during the first four time intervals. At the fifth time interval, students earning an A taught approximately one and a half hours more than their counterparts. Overall, time

spent teaching for both performance groups increased until the fourth time interval, at which point both groups decreased in the average number of hours teaching.

Students who earned an A- or below spent a higher average number of hours on teaching-related activities at the first time interval than did A students. During the second, third, and fifth time intervals, A students spent more time on teaching related activities, while A- or below spent slightly more hours on teaching-related activities during the fourth time interval. For both performance groups, the average number of hours spent on teaching-related activities increased at each time interval. Regarding the average number of hours spent on administrative-related activities, A students consistently spent slightly more time on these duties than did A- or below students.

Conclusions and Recommendations

During the internship experience, student teachers spent the majority of their time planning for instruction, teaching, and on teaching-related activities. The large proportion of time spent teaching is consistent with previous research (Edwards & Briers, 2001; Harlin et al., 2002) that found that classroom and laboratory instruction was perceived as the most important part of student teaching. As a single area, student teachers spent the largest proportion of time on teaching-related activities. Conversely, the smallest proportion of time was spent on administrative-related activities. It is recommended that teacher educators review the appropriateness of the distribution of time in the selected internship activities. Dialog should occur to explore whether the distributions of time are within level of expectations. Further, it is recommended that research be conducted to investigate the types of teaching-related activities and administrative-related activities on which student teachers are spending time.

Overall, time spent on observation appears to be consistent with most student teacher internship expectations, where the number of hours spent on observation is high initially, then quickly reduced; with minimal time spent observing at the

conclusion of the student teaching internship experience. This conclusion is consistent with Wentz's (2001) initial phase of student teaching. Regarding the amount of time spent planning, it is concluded that the number of hours are high early in the internship experience, but then rapidly decrease toward the end of the internship experience. While time was spent on planning for instruction by student teachers, the rate at which planning occurs was not consistent over time. This pattern raises questions as to the appropriate levels of planning late in the internship experience. Arguably, planning for instruction should be at a consistent rate throughout the student teaching experience. However, some might argue that student teachers may have become more efficient in their ability to plan, thus spending less time with more practice.

An inverse trend existed between the distribution of time spent observing and time spent teaching. This trend is consistent with Wentz's (2001) three phases of student teaching. As the number of hours spent observing decreased, the number of hours spent teaching increased. However, the distribution of time spent teaching did cease to increase at the 12th week then rapidly decreased during the last three weeks of the student teaching experience. Wentz identified three phases of student teaching: 1) orientation and observation, 2) assisting, and 3) assuming responsibility in the total school program. These phases are consistent with this study with the exception of the end of the 15-week student teaching experience. At the end of the student teaching internship experience, time spent planning and teaching declined. The exception was time spent on teaching-related activities, which continued to increase. This is, perhaps, due to career development events and FFA banquets, which frequently occur during the spring season. It is recommended that a fourth phase be considered in relation to Wentz's framework for student teaching phases to reflect the need for student teachers to relinquish classroom related activities slowly back to the cooperating teacher.

Overall, students' learning style had minimal interaction in how student teachers

distributed their time over the internship experience on the five selected areas. Notable, however, is that field-dependent learners spent more hours planning during the first half of the student teaching experience than did field-independent learners. This could be attributed to Witkin et al.'s (1977) proposition that field-dependent learners have a harder time "breaking down" components into smaller parts thus they need more time in the planning process. Additionally, field-independent learners consistently spent more time on teaching-related activities than did field-dependent learners. Witkin et al. (1977) suggested that field-independent learners are intrinsically motivated and seek less social environments. Field-independent learners' increased time in teaching-related activities may be attributed to smaller social groups and student success. Further research should be conducted to determine the activities both field-dependent and independent learners are involved with that were categorized as teaching-related.

The distribution of time data in the selected areas failed to have much predictability of student teachers' performance grade. Marginal differences in how student teachers distribute their time while student teaching existed by performance grade. However, students who received an A spent consistently more time on observation and administrative-related activities. In contrast, students who received an A- or below spent consistently slightly more hours on planning.

References

Burstein, N. D. (1987). The distribution of student teacher time among activities at the elementary level. *Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C.* (ERIC Document Reproduction Service No. ED285269)

Beck, C., & Kosnik, C. (2002). Components of a good practicum placement: Student teacher perceptions. *Teacher Education Quarterly*, 29(2), 81-92.

Borne, C., & Moss, J. (1990). Satisfaction with agricultural education student teaching. *Journal of Agricultural Education*, 31(2), 29-34.

Deeds, J. P., Flowers, J. & Arrington, L. (1991). Cooperating teacher attitudes and opinions regarding agricultural education student teaching expectations and policies. *Journal of Agricultural Education*, 32(2), 2-9.

Edwards, M. C., & Briers, G. E. (2001). Cooperating teachers' perception of important elements of the student teaching experience: A focus group approach with quantitative follow-up. *Journal of Agricultural Education*, 42(3), 31-42.

Harlin, J. F., Edwards, M. C., & Briers, G. E. (2002). A comparison of student teachers' perception of important elements of student teaching experience before and after an 11-week field experience. *Journal of Agricultural Education*, 43(3), 72-83.

Schumann, H. (1969). The cooperating teacher's role in student teaching. *The Agricultural Education Magazine*, 41, 156.

Scott, J. (1990). *A matter of record: Documentary sources in social science research*. Cambridge, UK: Polity.

Wentz, P. J. (2001). *The student teaching experience: Cases from the classroom* (2nd ed.). Upper Saddle River, NJ: Prentice-Hall.

Witkin, H. A., Moore, C. A., Goodenough, D. R., & Cox, P. W. (1977). Field-dependent and field-independent cognitive styles and their educational implications. *Review of Educational Research*, 47(1), 1-64.

Witkin, H. A., Oltman, P. K., Raskin, E., & Karp, S. A. (1971). *Group-embedded figures test manual*. Palo Alto, CA: Consulting Psychologist Press.

ROBERT M. TORRES is an Associate Professor in the Department of Agricultural Education at the University of Missouri-Columbia, 126 Gentry Hall, Columbia, MO 65211-7040.
E-mail:TorresR@missouri.edu.

JONATHAN D. ULMER is a Professional Development Specialist in the Department of Agricultural Education at the University of Missouri-Columbia, 122 Gentry Hall, Columbia, MO 65211-7040. E-mail:UlmerJ@missouri.edu.