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STUDENT VARIABLES: ADJUST FOR PRE-SERVICE TEACHER NEEDS*

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Older students are returning to colleges and universities in ever increasing numbers. A recent article in "The Chronicle of Higher Education" (Margarrell, 1981) reported that one third of the college and university population is now twenty-five or older.

College and university courses that were once populated by a relatively homogeneous group of younger students may need modifications. The older students are likely to be more mature learners and bring with them a wider experiential background. Therefore, assignments, instruction and experiences that were included to educate a younger population may need to be re-defined in order to address the educational needs of an older population. Education methods courses should not be exempt from this re-definition.

Students enrolled in elementary methods courses have differing educational needs. These needs are reflected along several dimensions. Methods students differ normatively according to age. While many of these pre-service teachers are typical college students in their early twenties, there are a significant number of older students returning to college. Students differ according to experiential characteristics. A typical methods course includes students with a wide range of prior formal and informal child-related experiences. These experiences may include parenting, teaching Sunday school, and substitute teaching. Methods students also differ according to their ability to think abstractly. Results of past studies indicate that pre-service teachers operate at different conceptual levels (Sanmire, 1979; Hunt, 1966; Van Cleaf & Schroder, 1981). Teaching

*This study examined the attitudes of pre-service teachers toward four methods course components (theory, content, methods, and experiences with children). Student profile information and attitudes were obtained and comparisons were made using ANOVA and t-test procedures.

The results indicate that students perceive the methods and experiential components as being more important than content and theory. Significant differences were present for age, extent of prior informal experience with children, and student conceptual level. Therefore, the study concluded that teacher educators must personalize methods courses to meet the pre-service teacher needs.

is a complex activity requiring a relatively high conceptual level and a broad experiential background (Glassberg & Sprinthall, 1980).

Therefore, as the number of older students increases, the organization of methods courses may need to be restructured. Initial experiences designed to acquaint the education student with school classrooms and children may be inappropriate. The educational needs of the older students may require initial and extended experiences at a more sophisticated level. To require older students to repeat experiences previously encountered is as inappropriate as expecting inexperienced students to assume too much responsibility.

This study examined the attitudes of pre-service teachers toward four social studies methods course components (theory, content, methods and experiences with children). Student attitudes were then compared by age, amount of prior formal and informal experience with children, and student conceptual level. Therefore, the purpose of this study was to determine the relationship between student variables and students' attitudes toward the four methods course components. An understanding of these relationships can help teacher educators restructure pre-service education courses.

Procedures

This study was conducted at a university located in a large metropolitan area. The setting is somewhat unique in that the university has experienced constant, continued growth. The university's population, approximately twenty-thousand, has as many students over thirty-five as there are under twenty-five. These population characteristics are similar in teacher education courses.

Teacher education majors (N = 32) responded to two instruments as they completed an elementary social studies methods course. The first questionnaire obtained personal data and student attitudes toward the four course components. Students provided data about their age and the amount of previous formal and informal experiences with children. Attitudinal information about the four methods course components was obtained using a five point Likert-type scale. Students indicated the relative importance of each course component on a scale ranging from very unimportant to very important.

The second instrument, the Paragraph Completion Method, (a semi-projective technique) was used to determine student conceptual levels. Students responded to five stem sentences. The responses were then scored by two evaluators. The inter-rater reliability was .86.

A one-way analysis of variance method was selected to test differences according to student subgroupings for each of the four methods course components. Student scores were grouped and compared according to three student variables. The first variable, age, consisted of three subgroups: 18-24, 25-34, and 35 or older. The second and third variables, formal and informal experiences, also included three subgroups: no experience, one month to thirty-five months, and thirty six months or more. Additionally, a step wise multiple regression analysis was used to determine relationships between each student variable and student scores for the four methods course components.

Two student conceptual level (CL) groups were identified. The conceptual levels of the first group ranged from 1.0 to 1.4, and the conceptual levels of the second group ranged from 1.6 to 2.2. Responses of both conceptual level groups for each of the four course components were compared using t-tests.

Results

The purpose of this study did not attempt to determine the relative importance of the four methods course components. However, an examination of mean scores indicated certain preferences. Therefore, this serendipitous finding is included. As illustrated in Table 1, pre-service teachers consistently ranked experiences with children and methods as the most important course components. Content, with few exceptions, was ranked third. Similarly, theory was usually ranked as least important.

TABLE 1
Four Methods Course Components Mean Scores
by Student Variables

Student Variables	Experiences With Children			Methods			Content			Theory		
	1	2	3	1	2	3	1	2	3	1	2	3
	Age	4.5	4.6	4.0	4.5	4.9	4.7	4.3	3.8	3.7	3.8	3.9
Formal Experience	4.5	4.4	4.6	4.8	4.4	4.8	4.1	3.4	3.9	4.1	3.4	3.9
Informal Experience	5.0	4.6	4.4	4.0	4.6	4.8	3.0	4.4	3.9	3.5	4.1	3.8
Conceptual Level (2 Groups)	4.6	4.4		4.8	4.5		4.4	3.7		4.0	3.7	

Age. A one-way analysis of variance for each course component produced significant differences in student attitudes toward the methods component ($F = 3.69$; $df = 2,32$; $p \leq .05$). Significant differences between age groups were not demonstrated for the three remaining course components - - experiences with children, content and theory (see Table 2).

TABLE 2
Analysis of Variance of Four
Methods Course Components by Student Variables

Student Variables	Experiences With Children		Methods		Content		Theory	
	F	P	F	P	F	P	F	P
	Age	.70	.50	3.69	.04*	1.68	.20	.12
Formal Experience	.06	.94	1.51	.24	.19	.83	1.69	.20
Informal Experience	.81	.46	3.39	.05*	2.85	.07	.83	.44

*significant at $p \leq .05$.

A regression analysis was selected to determine the relationship between age and student attitudes toward the four methods course components. A significant negative correlation coefficient ($r = -.39$; $p < .05$) was found between age and student attitudes in the course content component (see Table 3). The correlations between age and the remaining student variables (experiences with children, methods and theory) did not reach acceptable levels of statistical significance.

TABLE 3
Correlation Coefficients for Methods
Course Components and Student Variables

Methods Course Components	Age	Formal Experience	Informal Experience
Methods	.24	.10	.51**
Experiences with Children	-.17	.01	-.17
Content	-.39*	-.05	-.03
Theory	.13	-.04	.01

* $p < .05$

** $p < .01$

Formal Experiences with Children. A one-way analysis of variance for each of the course components produced no significant differences in student attitudes (see Table 2). Similarly, a regression analysis produced no significant correlation coefficients between the amount of previous formal experiences with children and student attitudes toward any of the four methods course components.

Informal Experiences with Children. As illustrated in Table 2, a one-way analysis of variance produced significant differences between the informal experience with children variable and student attitudes toward the methods component ($F = 3.39$; $df = 2,32$; $p .05$). A multiple regression analysis produced a significant positive correlation coefficient (see Table 3) between informal experience and student attitudes toward the methods component ($r = .51$; $p .01$).

Conceptual Level. Despite the differences in age and prior formal informal experiences, the conceptual level range was more restricted. Student conceptual levels ranged from 1.0 to 2.2. Two conceptual level groups were identified. A low CL group included conceptual level scores from 1.0 to 1.4. The high CL group included scores from 1.5 to 2.2. A t-test comparison with CL as the independent variable produced significant differences (see Table 4) in pupil attitudes toward two course components: method ($t = 2.02$; $df = 28$; $p .05$) and content ($t = 2.36$; $df = 28$; $p .05$). The correlations between conceptual level and student attitudes toward the four methods course components did not reach acceptable levels of significance.

TABLE 4
CL-I vs CL-II Differences for Four
Methods Course Components

Course Component	t	df	p
Methods	2.02	28	.05*
Experiences with Children	.50	28	.62
Content	2.36	28	.03*
Theory	1.32	28	.20

*Significant at $p .05$

Discussion

Methods students appear to place a high value on experiences with children and instructional methods. Content and theory were rated somewhat less important by the students. Therefore, teacher educators should

exercise caution if the emphasis on experiences with children and instructional methods are to be significantly altered.

Significant differences and significant correlation coefficients were present for two components, methods and content. Student attitudes toward two course components, experiences with children and theory, were not significantly affected by the variables identified in this study. Therefore, teacher educators can expect students to hold relatively similar attitudes toward these two components. Additionally, attempts to personalize methods course instruction might not be critical in these two areas. However, because there were differences in student attitudes for course methods and content, attempts to make instruction more relevant to differing student needs should focus on these two areas.

As professional educators espouse the need for individualization in public school classrooms, so too must teacher educators assess the entry proficiencies and determine how professional program components can better facilitate pre-service teacher growth and development. Student age, prior informal experiences with children, and conceptual level appear to be potential focal points for method course modification. Future research should continue examining the relationships between student profiles, specific methodological approaches and emphasis placed on the four course components (theory, content, methods and experiences with children).

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