TEACHING AND LEARNING STYLES OF ESL STUDENT TEACHERS

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Abstract

Researchers have generally assumed that an individual's teaching and learning styles are closely related. This paper investigates the relationship between certain aspects of the teaching and learning styles of sixty ESL student teachers. The Canfield Learning Styles Inventory and Instructional Style Inventory were the assessment instruments used in the study. The findings imply that the group of student teachers use different behaviors to react to similar teaching and learning situations. Although some similarities did exist, the differences in over half of the assessed preferences for conditions and modes of instruction were significant.

Researchers generally assume that the teaching and learning styles of individuals are closely related, and that an instructor usually teaches the way she or he learns.[1] Recent research has focused on the assessment of cognitive styles and the match of teaching and learning styles. The result of studies by Witkin (1976), Dunn and Dunn (1979), and Laosa (1977) imply that a teacher can and should vary teaching style in order to accommodate the diverse learning styles of the students.

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However, in order to vary teaching style, it is vital to understand the elements that comprise it. Thus, the question of what factors contribute to teaching style deserves close attention. Joyce and Weil (1972) have proposed a model that describes the four principal sources of individual's teaching style: social interaction, information processing (cognitive styles), personality, and behavior modification approaches. However, the question remains -- to what extent is teaching style related to learning style, if at all?

This study examines the relationship that exists between certain parallel aspects of teaching and learning styles.[2] The goals of the research were to answer the following questions:

1) What is the profile of learning styles for a sample group of ESL student teachers?

2) What is the profile of teaching styles for the same group?

3) What, if any, are the significant differences in the group's teaching and learning styles?

In order to assess the ESL student teachers' learning and teaching styles, the author used the Canfield Learning Styles and Instructional Styles Inventories for adults (1980) which are designed to measure identical aspects of teaching and learning styles. Both instruments consist of descriptions of realistic classroom situations and request a rank ordering of preferred reactions to the situations. The Learning Styles Inventory (LSI) contains learning situations and behaviors while the Instructional Styles Inventory (ISI) describes teaching situations and associated behaviors. Both inventories assess the degree of preference for the same conditions, content areas, and modes of teaching and learning.[3] Student responses are scored from 5 to 20 for the ISI and from 6 to 24 for the LSI. A low score indicates a high degree of preference for a particular condition, content area or mode.

Traditionally, the LSI and the ISI have not been used by the same sample population. Typically, teachers take the ISI while the LSI is administered to their students. The results are then compared for the purposes of identifying a "match"

of teaching and learning styles. For the sake of comparison in this study, the ISI and LSI were given to the same sample of sixty ESL student teachers.

Sample and Method

The purpose of this study was to examine the relationship between the teaching and learning styles of a group of ESL student teachers. The sample groups consisted of sixty students from five ESOL teacher training classes – three Curriculum Development in ESOL and two Special Methods of Teaching ESOL classes at Florida International University. The students who participated in the study were either working toward the Masters in TESOL degree or supplemental teacher certification in ESOL. Of the sixty subjects, sixteen were male. Eleven were under 30 years of age; twenty-seven were between 30 and 40 years old; fourteen were between 41 and 50, eight were over 50 years old. The amount of teaching experience among the students varied from 0 to 35 years. Nineteen students had less than four years of teaching experience; eighteen students had taught from four to seven years; ten taught for eight to twelve years; and thirteen claimed more than twelve years of teaching experience. With regard to ethnic backgrounds, participants included seventeen Hispanics, six Haitians, four black Americans and thirty-three Anglo-Americans.

Student scores on the Learning Styles Inventory were converted to conform to the Instructional Styles Inventory scale. The conversion involved a simple transformation of the LSI scores (ranging from 6 to 24) to the ISI scale (with a range of 5 to 20). The data were analyzed for the group mean and standard deviation of each of the sixteen variables on the Learning and Instructional Styles Inventories. Subsequently, the related variables of the two inventories were compared for significant differences through paired t-tests. (See Table 1.)

Assessment Instruments

The limitations of learning styles assessment instruments have been discussed by Gregorc (1979) and Corbett and Smith (1984). Any assessment instrument by necessity must concentrate on the measurement of certain variables, to the inevitable exclusion of others. The breadth and complexity of the field of learning styles makes it impossible to measure all of the known aspects of the styles. Additionally, according to *Student Learning Styles: Diagnosing and Prescribing Programs* (1979), "some of the styles have no generally acceptable testing technique and others are still vague enough that much more investigation is needed" before instruments can be designed to measure them. As Corbett and Smith (1984) illustrated clearly, establishing the validity and reliability of learning styles assessment instruments can be a difficult task. They have stated that ". . .the techniques and quantifiable instruments to ascertain preferential modes of learning are still in the infancy stage." Another problem inherent in self-reporting instruments is the veracity of student response. Students deliberately may not report the truth, or they may misread a statement or question in the testing instrument. Still another possibility for inaccurate responses can be attributed to students not knowing how they would react in a given situation, or which response they actually prefer. A final limitation is the probability of human error in recording answers on the answer sheet, and in interpreting the data. Nevertheless, a standardized instrument whose validity and reliability has been established is a valuable, though far from perfect tool for classroom-based research in teaching and learning styles. As Gaies (1983) notes, "direct external observation and analysis of classroom activity cannot provide accurate insights into learners' conscious thought processes." Allwright (1983) suggests that introspection, that is reflection upon one's own thoughts, feelings, and experiences, may be a more valid research method than direct observation.

The Canfield Learning and Instructional Styles Inventories for adults are relatively easy to administer and score. The results have a practical orientation that provides comprehensible feedback to teachers and students concerning their teaching and learning styles. The results describe eight conditions, four content areas, and four modes of teaching and learning styles.

The eight condition variables are *peer, organization, goal setting, competition, instructor, detail, independence,* and *authority*; each relates to preferred behaviors in teaching and learning situations. For example, the peer variable as a condition of instructional style refers to preference for using student teams and small groups in class and the encouragement of student friendships and good peer relationships. As a condition for learning, the peer variable indicates the degree of student preference for working in teams or small groups, and having strong peer relationships. Table 2 describes the sixteen variables in the study and their implications for teaching and learning styles.

The four content areas of interest to learner and teacher are *numeric, qualitative, inanimate* and *people*. These variables indicate a relative level of interest in the respective areas. The mode variables describe preferences for particular instructional procedures in the areas of lecturing (ISI)/listening (LSI), reading, iconic, and direct experience.

The Learning and Instructional Styles Inventories have a fourth section that was not used in this study, because the two sections measure different things and thus cannot be compared. The fourth section in the ISI measures the degree of responsibility that an instructor accepts for the learning process, while the corresponding section in the LSI assesses the level of performance that a student anticipates to achieve in a class.

Findings

1. Group Profile of Learning Style

The mean response of the group of sixty ESL student teachers was calculated for each variable of the Canfield Learning Styles Inventory. The profile of sample means which is depicted in Figure 1 reflects the average preferences of conditions, content, and mode of learning. Paired t-tests were used to determine the significance of differences between pairs of related variables. Preferences are described as significant at the 95% confidence level (with 59 degrees of freedom). A low score in Figure 1 indicates a strong preference; conversely a high score reflects a lesser degree of preference.

The group of ESL teachers most preferred the variable of instructor as a condition in a learning situation. As learners, they placed great importance on the teacher-student relationship and on having a good rapport with the teacher. The second most favored condition in a learning situation was independence. The ESL student teachers demonstrated a preference for working on their own and determining their own study plan. The next most preferred conditions were *goal setting, peer,* and *organization*. Of the eight conditions measured, *detail, competition* and *authority* were least preferred.

The favorite content areas of interest to the groups were *people* and *qualitative*, as might be expected from ESL teachers. The least preferred areas of interest were *numeric* and *inanimate*.

With regard to mode of learning, listening was the favored instructional approach, while reading was significantly less preferred than the other three approaches.

2. Group Profile of Teaching Styles

As instructors, the group indicated a significant preference

for the condition of *organization* as the most desirable behavior in a teaching stiuation. Figure 2 illustrates the profile of sample means for the Instructional Styles Inventory. After *organization*, the group preferred *detail*. Favored classroom techniques therefore, would emphasize clear and logical organization of lessons, meaningful and specifically stated assignments, and clearly defined rules. The third most preferred condition for teaching was *instructor*. *Independence* and *competition* were the group's least favored conditions.

The number one content area of interest for the ESL student teachers was *people*, followed closely by *qualitative*. The least preferred content areas were *numeric* and *inanimate*.

The sample group reported preferences for two modes of instruction: direct experience and lecturing. *Iconic* and *reading* were the less preferred instructional approaches.

3. Significant Differences in Aggregate Learning and Teaching Styles

The findings do not support the widely held assumption that teaching styles are closely related to learning styles. In fact, preferences in teaching and learning styles differed significantly for five out of eight conditions, one out of four content areas, and three out of four modes of instruction.

Although the group preferred instructor and independence variables as conditions for learning situations, the same variables were significantly less preferred as conditions for instructional situations. Other differences appeared in the level of preference for the conditions of organization and detail. Both were strongly favored as desirable conditions in teaching situations, but were significantly less favored in a learning situation. The degree of preference for goal setting was significantly higher as a condition for learning rather than teaching.

These differences in degree of preference for conditions seem to indicate the group's desire to have more control and structure as teachers; as learners they preferred to have better

student-teacher relations and learner-centered classroom. A clear distinction between preferred behaviors in teaching and learning styles clearly exists in the sample students.

With regard to content area of interest, a significant difference in preferences was found in the qualitative variable. The group indicated a higher preference for working with words and language as learners than as teachers.

Three modes of instruction also reflected different degrees of preference for teaching and learning styles. Direct experience and reading were more favored as modes of teaching than as modes of learning. On the other hand, listening to lectures and speeches is more preferred as an approach to learning than the corresponding modality of giving lectures is preferred for teaching.

Conclusions

Understanding the relationship of teaching and learning styles is a complex undertaking that presents a challenge to researchers. The results of the study suggest that teaching styles are not as closely related to learning styles as is generally assumed. The findings imply that the group of sixty ESL student teachers use different behaviors to react to similar teaching and learning situations. Although some similarities did exist, the differences in over half of the assessed preferences for conditions and modes of instruction were significant.

The need for more research concerning the relationship of teaching and learning styles is evident, so that educators may accommodate their students' diverse learning styles. Such attempts to vary teaching styles to match learning styles will be more likely to succeed with a better understanding of the nature of these styles.

Table 1

Significance Tests on the Difference Between Sample Means

Variable	LSI Group Mean	ISI Group Mean	Z Value
I. Condition			
a. Peer	12.87	13.35	1.41
b. Organization	13.15	8.42	–8.13
c. Goal Setting	12.28	13.35	2.22
d. Competition	14.75	14.78	.07
e. Instructor	8.68	11.80	5.95
f. Detail	15.12	10.48	–10.05
g. Independence	10.62	14.67	5.96
h. Authority	16.22	13.02	–1.07
II. Content			
a. Numeric	15.45	15.63	.55
b. Qualitative	9.73	10.50	2.72
c. Inanimate	15.07	15.13	.27
d. People	9.38	8.97	–1.46
III. Mode			
a. Listenihg/Lecturing	10.28	12.18	5.43
b. Reading	14.38	13.32	–2.34
c. Iconic	12.55	12.72	.46
d. Direct Experience	12.60	11.45	12.36

N = 60

The test value is significant at the 95% confidence level (with 59 degrees of freedom) when it is greater than $\pm$ 1.96.

Table 2

Summary of Condtions, Content Areas, and Modes

Learning Styles Preferences	Instructional Style Preferences
I. Conditions (of the Teaching/Learning Relationship)	
1. Peer — Working in student teams and small groups, having student friends	Using student teams and small groups, encouraging good peer relationship
2. Organization — Receiving clear and logical organization of course work, meaningful assignments and clearly defined sequence of activities	Logically organizing course work, providing meaningful assignments and clearly defining the sequence of activities
3. Goal Setting — One's own objectives, using feedback to modify goals or procedures	Letting students set their own goals, providing feedback to help them modify their objectives
4. Competition — Desire to compare oneself with other students, need to know how one is doing in relation to others	Creating opportunities for students to be compared with each other and to compete with each other
5. Instructor — Knowing the instructor personally, having a mutual understanding and liking	Encouraging the students to know the instructor personally, to develop a mutual understanding and liking
6. Detail — Receiving specific information on assignments and rules	Providing specific information on assignments, requirements, etc.
7. Independence — Working alone and independently, determining own study plan	Encouraging students to work alone and independently, letting them plan for themselves
8. Authority — Desiring classroom discipline and maintenance of order, having informed and knowledgeable instructors	Maintaining classroom discipline and order, setting high standards and demanding student performance
II. Content (Area of Interest)	
1. Numeric — Working with numbers and logic, computing, solving mathematical problems	

2. Qualitative — Working with words or language, writing, editing, talking.
3. Inanimate — Working with things, building, repairing, designing, operating
4. People — Working with people, interviewing, counseling, selling, helping

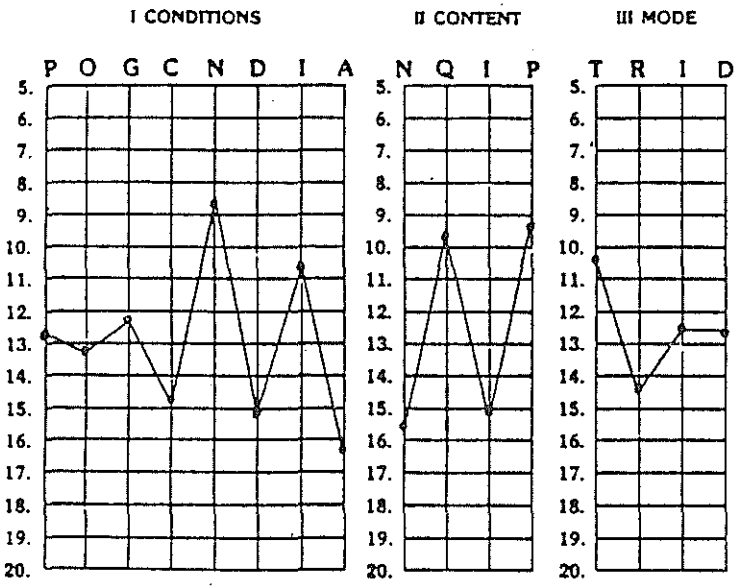
III. Mode (Instructional Procedures)

1. Listening (LSI)/Lecturing (ISI) — Hearing information, lectures, tapes, speeches, etc.	Giving information by lectures, tapes, speeches, etc.
2. Reading — Examining the written, word, reading texts, pamphlets, etc.	Providing reading texts, pamphlets, etc.
3. Iconic — Viewing illustrations, movies, slides, pictures, graphs, etc.	Showing illustrations such as movies, slides, pictures, graphs, etc.
4. Direct Experience — Handling or performing; field trips, role plays, practice exercises	Getting students to handle or perform; field trips, role plays, practice exercises

Adapted from: "Brief description of scales." Canfield Learning Styles Inventory. Plymouth, MI: Humanics, 1979.

Figure 1

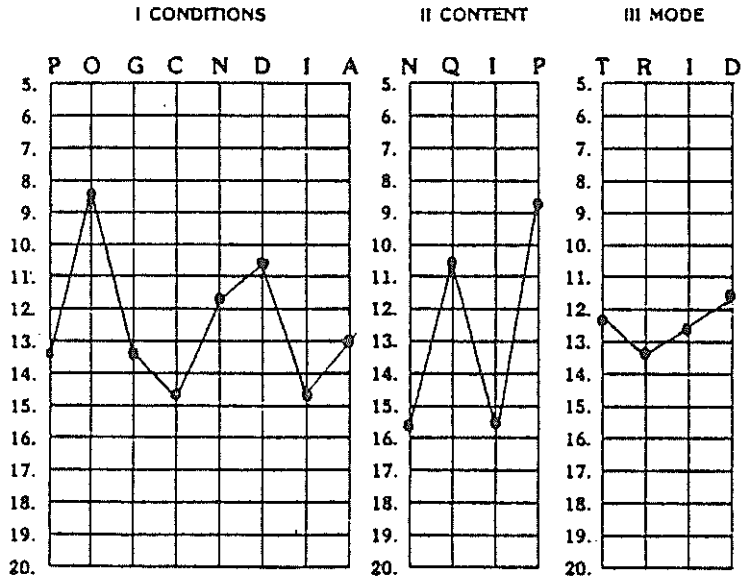
Learning Styles Inventory: Profile of Sample Means*



*N = 60

Figure 2

Instructional Styles Inventory: Profile of Sample Means*



*N = 60

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Notes

[1]A preliminary version of this paper was presented at the TESOL '85 conference in New York City on April 11, 1985.

[2]Dr. Joseph Cook, Ms. Blanca Garcia and Dr. Marisal Reyes Gavilan made invaluable comments on the research design and project. Dr. Albert Canfield kindly provided insight into the application of his Learning and Instructional Styles Inventories.

[3]The instruments are available through: Humanics Media, 5457 Pine Code Road, La Crescenta, California 91214.