Kyle Perkins
Sheila R. Brutten

WRITING: A HOLISTIC OR ATOMISTIC ENTITY?

The marked shift in writing instruction from a focus on writing as a set of separate, sequential tasks to a focus on writing as a holistic gestalt prompted the empirical study reported in this paper. We sought to determine whether any prerequisite relationships existed between five analytical components of ESL composition, namely content, organization, vocabulary, language use, and mechanics. Our rationale was that if we could discover evidence of prerequisite relationships between the analytical components, then the results could be used to support the view that writing is a set of separate tasks to be acquired. If, on the other hand, we could detect no evidence of prerequisite relationships, then those results could support the notion that writing is a holistic entity which can't be meaningfully partitioned into components. Our analyses indicated that (1) only one prerequisite relationship (which could have occurred by chance) existed in the data set and that (2) only one latent structure (construct) underlay the data. We conclude by offering citations from other researchers who argue against teaching writing skills in isolation and by offering three approaches to the teaching of writing which acknowledge the interrelation of composition skills.

As we indicated in the previous paragraph, there has been a

Kyle Perkins is professor of Linguistics and associate dean of the College of Liberal Arts at Southern Illinois University at Carbondale.

Sheila R. Brutten is assistant professor at the Center for English as a Second Language at Southern Illinois University at Carbondale.

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paradigm shift in practice, research, and theory in the first- (native) and second- (non-native) language composition communities. Hairston, Hillocks, and Burhans, among others, noted that in the first-language field the traditional paradigm was characterized by the following attributes: a product orientation; a focus on usage and style; a linear view of the writing process; and a preoccupation with expository writing. On the other hand, the new paradigm includes the following traits: a process orientation; a focus on strategies for discovery and invention; a recursive view of the writing process involving a variety of plans and subprocesses; a discrimination among the aims and modes of discourse including both the expressive and the expository modes.

In the second-language field the traditional paradigm was also characterized by a product orientation; a linear view of the writing process; and a view of writing as a set of sequential, separate tasks. The new paradigm in the second-language field also includes a process orientation; a focus on strategies for discovery and invention; a recursive view of the writing process; the notion that language is learned as a whole rather than by a sequence of separate components; and a focus on meaning, function, and purpose (Horning; Raimes, 1983a; Zamel).

The prevailing view is that writing is a process of creative discovery which involves the dynamic interaction of content and language (Taylor) and further that writing is probably learned holistically, not through the lockstep mastery of a series of separate skills (Falk). The rate at which instructional practice in second-language composition has managed to keep pace with theory has been slow (Raimes, 1986), but second-language composition methodology texts and composition course books are beginning to reflect a general agreement that there is an interdependence or interrelation among, for example, content, organization, vocabulary, language use, and mechanics. Further, different approaches to the teaching of writing in ESL classes now suggest that various writing skills should be taught as a gestalt, and not as separate, but dependent entities.

The purpose of our research was to examine the writing of 110 undergraduate foreign students enrolled in a basic composition course for any evidence of interrelation among the five analytical components. Further, did any prerequisite relationships exist among the various components, suggesting that success or mastery of one component skill was a prerequisite for success or mastery of a different component skill? Our rationale for conducting this research was that there is a paucity of data from second-language composition research illustrating the interrelation of composition

skills. If our data analysis showed evidence of unidimensionality among the different analytical components, then we could offer empirical support for the notion that learning to write in a second language is a holistic enterprise. If, on the other hand, our data showed evidence of multidimensionality among the components and further that prerequisite relationships existed among the components, then we could offer empirical evidence that second-language writing should be taught as the lockstep mastery of a series of separate skills.

Subjects

The subjects for this research were 110 undergraduate foreign students enrolled in Basic Composition for Foreign Students. Native languages represented included Arabic, Portuguese, Japanese, Luganda, Greek, Malay, Chinese, Tamil, French, Igbo, Indonesian, Korean, Urdu, Gujarati, Spanish, Twi, Bengali, and Farsi. These students were placed into the course on the basis of their graduation from an intensive English program (noncredit) or by normal university placement procedures.

Materials and Procedures

During the first two weeks of a fifteen-week semester the subjects wrote descriptive essays in class under test conditions; working time was forty-five minutes.

The Jacobs et al. ESL Composition Profile was used as the scoring rubric for the holistic evaluation of the essays. Jacobs et al. described the Profile as follows:

> The Profile form contains five component scales, each focusing on an important aspect of composition and weighted according to its approximate importance for written communication: content (30 points), organization (20 points), vocabulary (20 points), language use (25 points), and mechanics (5 points). The total weight for each component is further broken down into numerical ranges that correspond to four mastery levels: excellent to very good, good to average, fair to poor, and very poor. These levels are characterized and differentiated by key words or "rubrics" representing specific criteria for excellence in composition.
>
> Unlike some holistic evaluations in which readers base their judgments on a single first impression of the quality of a composition, readers using the Profile in effect do five

> holistic evaluations of the same composition, each from a slightly different perspective on the whole. This is an important difference since, as we have noted, readers sometimes tend to value only one aspect of a composition when using a purely impressionistic approach, yet it is only through a writer's successful production, integration, and synchronization of all these component parts of a composition that an effective whole is created. (31)

The average Profile holistic score for this subject pool was 65.50 with a standard deviation of 10.52 which falls into the fair writing ability proficiency stratum defined by Jacobs et al. (1981) as follows:

> Proficiency Evaluation: Will probably experience great difficulty completing writing requirements in subject matter courses. May be unable to compete fairly with native writers of English. Look at Profile to identify areas of strength and weakness.
>
> Undergraduate Placement Recommendation: Should have at least one preparatory course in composition before taking college-level English courses or subject matter courses that require much writing. (66)

After the papers had been scored by two trained readers, the continuous scores (for example, 0–30) for each paper for each of the five components were converted to dichotomous scores (1 or 0) at three different mastery levels: 90%, 75%, and 50%. Table 1 presents the cut scores for the three different mastery levels. At the 90% mastery level, if a paper received a score of 27 or higher for content, that paper received a dichotomous score of 1 for content. Conversely, at the same mastery level, if a paper received a score of 26 or lower for content, that paper received a dichotomous score of 0 for content. It was necessary to transform the data from continuous scores to dichotomous scores for the analysis which followed.

Table 2 presents an interpretive guide for the three different levels of mastery utilized in these analyses.

Ordering Theory

Ordering theory is an approach to fundamental measurement which seeks to identify both linear and nonlinear prerequisite relationships among test items, tasks, skills, or components (Airasian and Bart; Bart and Krus; Bart, Frey, and Baxter). In the context of this research, Gagne's definition of *prerequisite* is employed: "a capability of prior learning which is incorporated into

Table 1

Cut Scores at Different Mastery Levels

Component	90%	75%	50%
Content	27	23	15
Organization	18	15	10
Vocabulary	18	15	10
Language Use	22	18	12
Mechanics	5	4	3
Total	90	75	50

new learning. The previously learned entity actually enters into the newly learned capability, becomes and remains a part of the behavior which results from the events of learning" (268). The second step in an ordering-theoretic study is to determine whether the identified prerequisite relationships are statistically significant, or whether they occurred by chance alone. Bart and Read's statistical test was developed for this purpose.

Three different sets of dichotomous scores generated from the five analytical components were submitted to the ordering-theoretic analysis (one set from the 90% mastery level; a second set from the 75% mastery level; and a third set from the 50% mastery level). For each of the three analyses a contingency table was constructed for each of the 20 ($5 \times 5 - 5 = 20$) component pairs, and a zero tolerance level was established. In this context, zero tolerance means that if, for any component pair generically labeled AB, a single occurrence of a failed/passed (01) response pattern was found, the prerequisite relationship that success on component A was necessary for success on component B was disconfirmed for that component pair (0 indicating a "fail" by the cut score criterion; 1 indicating a "pass" by the cut score criterion).

Results

The results indicated that only one significant prerequisite

Table 2
Criterion-Referenced Interpretive Guide
Levels of Mastery

Mastery Level	Writing Characteristics/Criteria
90%	Writer communicates effectively. Ideas are expressed clearly and fluently, with an obvious sequence to their development in support of the central theme. Vocabulary, sentences, and mechanics work effectively to convey the intended ideas and shades of meaning.
75%	Writer achieves minimal communication. Main ideas are apparent but may not be carefully organized to develop the central theme; supporting details may be incomplete or minimal. Incomplete mastery of some criteria for vocabulary, language use, and mechanics limits the writer's effectiveness, although the flow of ideas is not seriously impeded.
50%	Writer communicates only partially. On the whole, ideas are barely discernible and there is little of any elaboration in support of the central theme. Lack of mastery in most of the criteria for vocabulary, language use, and mechanics severely restricts the flow of ideas (Jacobs et al. 1981, p. 65).

relationship was found: at the 50% mastery level, success on the organization component was necessary for success on the language use component. To paraphrase the finding, we can say that at the 50% mastery level there was no occurrence of a writer receiving a 0 for organization and a 1 for language use, and this prerequisite relationship was significant at the .05 level.

Because the composition research community has experienced a shift in focus from an emphasis on teaching separate skills to an emphasis on the composing process as a gestalt, we did not posit in

advance any tentative prerequisite relationships. Our study was an exploratory one to determine if any prerequisite relationships existed. As we mentioned previously, from the separate analyses only one significant prerequisite relationship was identified, and therefore, we sought to find an explanation.

A data set can fail to yield various prerequisite relationships for at least two reasons: (1) the measurement scale is unreliable; and (2) only one latent structure underlies the data.

We can immediately discount the first possibility because the internal consistency reliability estimate for the ESL Composition Profile as utilized by the two trained raters was .839. Thus, we found the measurement scale to be internally consistent, and consequently, to show no evidence of multidimensionality in a small data set such as the one utilized in this study. Of the 20 component pairs examined in the three separate analyses, only one significant prerequisite relationship was discovered, and we could reasonably expect this number to occur by chance alone.

To obtain some estimation of the latent structure underlying the data, we submitted the continuous scores to the Pearson product-moment correlation procedure. All the correlation coefficients reported in Table 3 are significant at the .01 level for a one-tailed test. We also submitted the dichotomous scores to a phi correlation analysis and found similar results. An inspection of Table 3 suggests that the five analytical components are all highly interrelated, indicating that one latent structure underlay the data, thereby accounting for the absence of prerequisite relationships.

Implications

The lack of prerequisite relationships and the interrelation of analytical components indicate that for this sample of ESL composition students, writing ability was learned as a whole rather than as a series of separate components. In terms of pedagogy, as Falk has noted, it would be artificial to provide work on isolated facets of composition because the writing student is involved with all facets of language during the composing process. These aspects interact with each other, as the correlation matrix shows. What writing teachers need to do is to provide opportunities for the student writers to use language in actual contexts, where communication is the goal, so that they can internalize the necessary writing patterns and principles. The focus in the new paradigm is on function, meaning, and purpose.

Various studies have shown that instruction on specific components can have a negligible, or worse, a negative effect on

Table 3
Correlation Matrix

	1	2	3	4	5	6
1. Content	1.00	.709	.550	.544	.279	.835
2. Organization		1.00	.439	.507	.325	.762
3. Vocabulary			1.00	.809	.441	.842
4. Language Use				1.00	.537	.882
5. Mechanics					1.00	.536
6. Total						1.00

r = .2540, p .005, df 108, one-tailed test
r = .3211, p .0005, df 108, one-tailed test
Correlation coefficients of .2540 and larger are significant at the .005 level for this sample size; correlation coefficients of .3211 and larger are significant at the .0005 for this sample size.

writing ability. For example, Braddock, Lloyd-Jones, and Schoer found that formal grammar instruction had little effect on writing improvement. Elley et al. noted that grammar study did not produce a significant difference in student writers' control of mechanics. Adams reported a study which showed that an increased emphasis on correctness leads to a decrease in the quality of student writing. Raimes (1983a) claimed that a concentration on grammar, language use, and mechanics can inhibit the flow of writing and can lead students to concentrate on the written product and not on the writing process.

The results of this study and other research indicate the need for an approach to writing which recognizes that so-called "separate skills" are actually highly interrelated and further that writing is more than the sum of its parts. Three such approaches which meet these criteria have been advanced by Raimes (1983b). The Grammar-Syntax-Organization Approach leads "students to pay attention to organization while they also work on the necessary grammar and syntax. This approach links the purpose of a piece of writing to the forms that are necessary to convey the message. . . .

The Communicative Approach stresses the purpose of a piece of writing to the forms that are needed to convey the message" (8). With the Process Approach student writers "explore a topic through writing, showing the teacher and each other their drafts, and using what they write to read over, think about, and move them on to new ideas. . . . The writing process becomes a process of discovery for the students: discovery of new ideas and new language forms to express those ideas" (10–11).

In summary, we have noted a shift in writing instruction for both first- and second-language learning. Instead of focusing on writing as a set of sequential, separate tasks, the new approach stresses writing as a holistic gestalt with a focus on meaning, function, and purpose, with an awareness of the interrelation of composition skills.

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