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COGNITIVE LEARNING STYLES AS REFLECTED IN THE TEST MAKEUP OF ENGLISH INSTRUCTORS

İNGİLİZ DİLİ OKUTMANLARININ SINAVLARINDA ORTAYA ÇIKAN BİLİŞSEL ÖĞRENME BİÇİMLERİ

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ABSTRACT: The cognitive learning style is an indispensable variable in the composite of the teaching-learning process. Pedagogically, it can be useful if instructors explore what type of learners they are in addition to the mode of learning preference their students depict. This can bridge the gap between training and evaluating procedures. The study addresses the relationship between English instructors' learning styles and assessing the thinking levels suggested in Bloom's Taxonomy. A sample of 67 professors in both language/linguistics and literature was studied and samples of their tests were analyzed. A significant correlation between learning style and the prioritizing of the six learning objectives is found. Another result shows that 70% of literature instructors turn out to be assimilators and accommodators while 67.5% of language/linguistics ones prefer the diverger and converger modes.

Keywords: cognitive, learning, style, test, English , instructor, Kolb

ÖZET: Bilişsel öğrenme stili öğrenme ve öğretmenin önemli bir bileşenidir. Pedagojik olarak, İngilizce öğreticilerinin öğrencilerinin olduğu kadar kendilerinin nasıl öğrendiklerini bilmeleri öğretme ve değerlendirme arasında köprü kurması açısından yararlıdır. Bu çalışma İngilizce okutmanlarının öğrenme stilleriyle düşünme basamaklarını Bloom'un sınıflandırmasına göre değerlendirmektir. Dil ve dil bilimi ile edebiyat öğreticilerinde oluşan 67 kişilik bir grubunun sınav sonuçları incelenmiş ve öğrenme stilleriyle altı öğrenme amacını önceliklemesi arasında önemli bir bağlantı bulunmuştur. Bir diğer bulgu da edebiyat öğreticilerinin %70'inin benzetici ve uzlaştırı olmalarıdır ki edebiyat ve dil bilimi öğreticilerinin % 67.5'in ayırıcı ve birleştirici oldukları saptanmıştır.

Anahtar sözcükler: bilişsel, öğrenme, biçim, sınav, İngilizce, okutman, Kolb

1. INTRODUCTION

Educationists believe that awareness of learning styles on the part of instructors would help develop a common language of teaching and learning in addition to improving the quality of student learning (Gibbs, Fielding, and FEDA, as cited in Lawrence, 1997, p. 160). Hence, it is necessary that teachers try to come to terms with the difficulties in understanding the actual orientations of learners and the relevant, diverse pedagogical implications. Consideration of the learning style component as a decisive input might highly help teachers overcome many pedagogical drawbacks, especially those not paying attention to diversity and, eventually, creativity. In this regard, Hayes and Allinson (1997) emphasize that the nature of an individual's learning style can be influenced by his/her educational experience.

Cognitive learning style has been described by many scholars as an individual's typical or habitual mode of problem solving, thinking, perceiving and remembering. In any learning situation, an individual is bound to be engaged in at least one of these tasks. Subsequent research in this area flowed from deliberate endeavors taking the form of empirical experiments devoted to investigating individual differences in perception. Several studies have been conducted on the relationship between learning style preference and achievement in various academic subjects (Kolb 1984, Honey and Mumford 1992, Hayes and Allinson 1997, Lawrence 1997, Al-Quran 2002). The present work handles university instructors' preferred or typical mode of learning and how this can be reflected in their evaluation of foreign-language learning. Teacher's awareness of the preferred learning style and the possible interaction it can have with the cognitive levels of thinking as proposed by Bloom (1956)

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would inevitably bring into focus the issue as a major pedagogical concern. Therefore, it is likely that having discovered one's consistent mode of learning and acting might help classroom practitioners realize the necessity of reconsidering and varying not only their techniques of teaching but also those of evaluating so that the two processes can be harmonized. By doing so, instructors can invest in the personality-based approach in teaching and learning.

When surveying the related literature, one would find the bulk of it addresses the relationship between learner cognitive style and his/her performance in various academic disciplines. Yet, the teacher is an indispensably integral component of the learning environment, which can have a considerable control over the varied classroom dimensions including that of evaluation. This could inevitably affect students' attitudes towards learning, view of teachers and the reaction to classroom and assessment procedures. Hence, identifying teacher preferred learning style and the interaction effect it can have on evaluation techniques on the one hand, and how this relates to learner achievement on the other, should be viewed essential.

Considering the psychological stimulus of the individual, we find that this comprises being impulsive or reflective and holistic or analytic. The basic question, then, is whether instructors as evaluators project consciously or unconsciously their impulsivity, reflectivity, being holistic or analytic in their tests make-up. Accordingly, exploring such intricate areas of the teaching-learning process may provide adequate answers to basic queries. These include how shared features between learners and instructors or the possible tensions arising from tests and conflicts between different orientations may not only improve the efficiency of teaching methods, but also help in enabling learners overcome the difficulties caused by the difference of learning style. Finally, the need for such type of research in the possible relationship between learning style and evaluation procedures on the part of instructors stems from the fact that the researcher has not encountered any empirical work addressing this issue in neither the Jordanian nor the Omani setup.

2. METHODOLOGY

2.1. Research Questions

It is worth noting that the bulk of work pertaining to the operationalization of cognitive style has been mainly addressing learners in the classroom. Yet, work on instructors addressing their multi-dimensional learning process has been always directed by the ultimate goal of investing its findings and results in improving the classroom learning outcomes. The proposed endeavor will primarily attempt to uncover the cognitive style preferences of faculty members in the Departments of English at four Arab universities as reflected in the structure of the tests they develop to measure students' learning of English. That is, the study will address how language-learning objectives are distributed along the four types of learning style revealed by the teacher model. This will hopefully, reveal their evaluative criteria of successful language learning, and thus will eventually bring up to surface what priorities they deem vital in terms of both the teaching and evaluating practices.

The primary goal of the research is to show how cognitive learning styles demonstrated by instructors can be an asset in English language teaching and evaluation at the university level. More specifically, it seeks answers to the following queries:

1. What learning styles do university English instructors reveal?
2. What learning style/s is/are most shown by linguistics instructors and those most shown by literature ones?
3. What cognitive level/s from Bloom's Taxonomy is/are most emphasized?
4. How do Bloom's cognitive levels reflected in the various English tests correlate with the four learning styles?

2.2. Participants

The population of the study, 67 in sum, includes the English instructors at the departments of English language and literature at four Arab universities, two in Jordan (Hashemite University and Yarmouk University) and another two in the Sultanate of Oman (Sultan Qaboos University and the

University of Nizwa). However, the sample, those who responded to the questionnaire and provided samples of their tests in the various courses they teach, consists of sixty-seven instructors. While those specializing in language/linguistics were thirty-seven, the literature instructors were thirty.

2.3. Instruments

The methodology adopted in this paper includes two major tools, namely Kolb's (1984) Learning Style Inventory (Appendix 1), and Bloom's (Forehand, M. 2005) Taxonomy of thinking levels. Kolb's learning style construct was used and implemented on the instructors to classify them along the four types of learning style: divergers, convergers, assimilators and accommodators. This model consists of two dimensions: perceiving and processing. The first describes concrete and abstract thinking, while the second represents an active or reflective information-processing activity. The two dimensions embodied in Kolb's construct are integrated to form a model displaying the four types of learning style mentioned above. The first type, divergers, is learners who typically perceive information concretely and process it reflectively, and who need to be personally engaged in the learning activity. Convergers, on the other hand are those who perceive information abstractly and process it reflectively, and who feel the need to follow detailed, sequential steps in thinking in a learning activity. The third type, assimilators, is learners who perceive information abstractly, process it actively, and need to be involved in pragmatic problem solving in a learning activity. Accommodators, however, are those who perceive information concretely and process it actively, and who favor risk-taking, making changes experimentation and flexibility in a learning task.

The experiential cycle proposed by Kolb is used to extrapolate four adaptive learning modes: concrete experience (CE), reflective observation (RO), abstract conceptualization (AC) and active experimentation (AE). The Learning Style Inventory is a nine-item self-reporting questionnaire, which makes the respondent rank four words, thereby revealing a specific preference in the identified modes of learning. Two scores are calculated, reflecting positions along each of the learning style dimensions: the first is the AC-CE continuum, which exhibits the degree to which the individual's style is biased toward abstraction or concreteness; the second continuum, RO-AE, shows the degree to which the individual's style is biased towards reflection or activity.

Bloom's Taxonomy is a multi-tiered model of classifying thinking according to six cognitive levels of complexity: knowledge, comprehension, application, analysis, synthesis and evaluation. The lowest three levels are knowledge, comprehension, and application, while the highest three ones are analysis, synthesis and evaluation. The taxonomy is hierarchical since each level is subsumed by the higher levels. This means that a student functioning at the application level is assumed to have also mastered the material at the remembering and understanding levels. Thus, the higher levels are considered more complex and consequently closer to complete mastery of the subject matter.

In the findings below, the various tables provided address the distribution of instructors along Kolb's learning styles in relation to their specialty, i.e. whether he/she is a literature or linguistics/language one. Besides, they depict the relationship between instructor's specialty and prioritization of Bloom's cognitive levels, correlation between application of Bloom's taxonomy and learning style and a cross-tabulation indicating the relation between application of Bloom's taxonomy and learning styles.

3. FINDINGS

One major concern of the study is to reveal what learning styles instructors opt for in relation to their field, namely linguistics/language and literature. This serves to reveal the effect that the subject can have whether consciously or unconsciously on their inclination towards a particular learning style or a combination of them. Table 1 below displays the distribution of the subjects in light of this relation.

Table 1: Distribution of subjects according to learning style and specialty

Learning style	Specialty	Frequency	Percent
Diverger	Linguistics	11	14.41
	Literature	3	4.47
Converger	Linguistics	14	20.89
	Literature	6	8.95
Assimilator	Linguistics	7	10.44
	Literature	12	17.91
Accommodator	Linguistics	5	7.46
	Literature	9	13.43
Total	Linguistics	67	100.0
	Literature		

An analytic reading of the previous table reveals surprising results as 21 out of 30 of literature instructors turned out to be assimilators and accommodators, which constitutes 70% of them while most of language/linguistics instructors are pooled in the diverger and converger styles (25 out of 37) since their percentage is 67.5%. However, the least spread style among literature people was the diverger one as three of them only turned to be so. The accommodator style, on the other hand, seems to be the least favored by linguistics instructors. These results provide answers to the first two queries raised by the study.

Moreover, in order to depict how the six levels of thinking suggested by Bloom are prioritized in light of the differing style preferences, a major aim explicit in the third question of the study, Table 2 below shows the weight given to each thinking level by linguistics and literature instructors independently. The results reveal that the knowledge level receives 35% of the emphasis of tests whereas synthesis is the least stressed. This is quite predictable since knowledge viz., mere remembering, belongs to the lower levels while synthesis to the higher cognitive levels. Yet, what is unexpectedly notable is that analysis, which is cognitively higher, receives almost double the emphasis application does. Besides, a critical reading of the differences in light of specialty can easily indicate that literature instructors significantly focus more on evaluation, the highest cognitive level, than the linguistics ones since the percentage is almost double, too. Conversely enough, the difference is significantly observable at the application level in favor of linguistics.

Table 2: Distribution of subjects according to specialty and application of Bloom's taxonomy

Bloom's Taxonomy	Specialty	Frequency	Percent
Evaluation	Linguistics	3	4.5
	Literature	5	7.5
Synthesis	Linguistics	3	4.5
	Literature	2	3
Analysis	Linguistics	7	10.4
	Literature	6	9
Application	Linguistics	5	7.5
	Literature	3	4.5
Understanding	Linguistics	6	9
	Literature	4	6
Knowledge	Linguistics	13	19.5
	Literature	10	15
Total	Linguistics	37	100.00
	Literature	30	

To uncover if there is a significant correlation between difference in learning style preference and application of Bloom's levels Pearson Chi-Square was used and whose value (27.058 at 0.028 level of significance) is notably significant as is clear in Table 3 below. This, of course, suggests that inclination towards a particular learning style does entail a parallel tendency towards prioritizing certain cognitive thinking levels in evaluating foreign language performance

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Table 3: Chi-Square Tests indicating correlation between applications of Bloom's taxonomy and learning style

Df	Value	Pearson Chi Square
.028	15	*27.058
		Likelihood Ratio
.014	15	29.538
.590	1	.291
		N of valid cases 67

As stated earlier, a highly significant correlation is found between learning style preference on the part of instructors and their utilization of thinking levels in language learning assessment. To give a detailed description of the specific relationships existing in this composite of interacting variables, a cross-tabulation is devised as clearly displayed in Table 4 below.

Table 4: Cross-tabulation indicating the relation between applications of Bloom's taxonomy and learning styles

Kolb Style						**Bloom Tax.**
Total	Diverger	Converger	Acc.	Assimilator		
8	1	2	1	4	Number	Evaluation
100.0%	12.5%	25.0%	12.5%	50.0%	% within Bloom Tax	
11.9%	7.14%	10.0%	7.14%	21.5%	% within Kolb Style	
11.9%	1.5%	3.0%	1.5%	6.0%	% of Total	
5	0	2	2	1	Number	Synthesis
100.0%	.0%	40.0%	40.0%	20.0%	% within Bloom Tax	
7.38%	.0%	10.0%	14.28%	5.26%	% within Kolb Style	
7.5%	.0%	3.0%	3.0%	1.5%	% of Total	
13	1	2	5	5	Number	Analysis
100.0%	7.69%	15.38	38.46	38.46	% within Bloom Tax	
19.79%	7.14%	10.0	35.71	26.31	% within Kolb Style	
19.4%	1.5%	2.98	7.46	7.46	% of Total	
8	3	2	1	2	Number	Application
100.0%	37.5%	25.0%	12.5%	25.0%	% within Bloom Tax	
9.0%	21.42%	10.0%	7.14%	10.52%	% within Kolb Style	
12.0%	4.5%	3.0%	1.5%	3.0%	% of Total	
10	2	2	2	4	Number	Understanding
100.0%	20.0%	20.0%	20.0%	40.0%	% within Bloom Tax	
14.9%	14.28%	10.0%	14.28%	21.05%	% within Kolb Style	
14.97%	3.o%	3.0%	3.0%	5.97%	% of Total	
23	7	6	4	6	Number	Knowledge
100.0%	30.43%	26.8%	17.39%	26.08%	% within Bloom Tax	
35.035%	50.0%	30.0%	28.57%	31.57%	% within Kolb Style	
34.31%	10.44%	8.95%	5.97%	8.95%	% of Total	
67	14	20	14	19	Number	Total
100.0%	18.2%	25.36%	23.47%	33.25%	% within Bloom Tax	

4. DISCUSSION

Looking back at Table 1, the notable difference between language/linguistics instructors and literature ones in terms of style preference could be rationalized in a number of ways. The fact that 70% of literature instructors are either assimilators or accommodators may shed light on why they chose to study literature as former students. For example, accommodator learners are labeled as pragmatists and wholists and together with assimilators as extroverts, Honey & Mumford (1992). Being holistic, they do not emphasize specific details and as extroverts, they stress communication and the general theme under discussion. So, consciously or unconsciously they reflect what they favor as learners in their instructional practices since usually their tests are not mainly after specific details which traditional language achievement tests; they rather address the student's overall strategies of approaching a particular problem or issue. Converger and diverger instructors who constitute 67.5% of language/linguistics ones, however, are analysts and thus show a spontaneous favor towards tasks that generally involve processing information in parts, again something they could have been preferring as well as excelling in formerly as students. The results harmonize with a similar research by Al-Quran (2002, pp. 30-33) where university English majors performing better in language/linguistics courses preferred different learning styles from those opted for by their counterparts in literature ones.

Taking the assumption or the claim that the factor of learning style is a shared concern for both linguistics and literature specialists as valid, the statistically significant correlation, as shown in Table 3 above, between the variable of learning style predilection, on the one hand and the prioritizing of the thinking levels, on the other can be reasonably justified. In light of this result, the learning style congruence on the part of instructors can serve a solid ground and evidence of the interaction effect it can have with the application of Bloom's model. This interaction effect as evidenced by the significant correlation can suggest that the instructor's, as an individual learner, learning style does intervene with teaching as is implicitly reflected in evaluative practices. Of course, when writing tests teachers are likely to focus on things they handled in class regardless of what techniques they employed and whether or not these techniques were appealing to learners. Hence, taking into account the complex context of the teaching and learning environment, learning style can be envisaged to have presence amidst the other variables, the interaction of all cannot or should not be overlooked.

Furthermore, if we consider the figures in Table 4, we can obviously notice that 50% of those involving evaluation, the highest cognitive thinking level, are assimilator learners followed by convergers who constitute 25% of the sample. This result can be explained in light of the shared characteristic by these two types in that they prefer to perceive information abstractly. Likewise, the percentage of converger learners (40%) from those assessing the skill of synthesis, the second highest cognitive level is quite noticeable. Compared with that of divergers (0.0%) who do not include it, the previous interpretation might be well justified since divergers sharply contrast with convergers and assimilators as well in their strong inclination towards concrete experiencing of things. Surprisingly enough, a very clashing result is that, though mainly characterized by concrete perception; accommodators constitute forty percent of instructors who measure this skill of combining parts into wholes. A possible explanation of this harmony-threatening finding is the nature of the subject in question. In fact, 60% of those including synthesis in their tests are language/linguistics instructors. Using question items, as revealed by the data, which require rearranging, combining, substituting, composing etc. and generalizing from given facts might not allow room for the interference of personal factors like that of learning style preference. In addition, it is very unlikely that every result in this piece of work and other related ones must be a product of the interactive effect of learning style. For example, Al-Quran (2003) claims that bright learners not only succeed but also excel in academic achievement regardless of what learning style they adopt or even what instructional strategies they are exposed to. This has also been emphasized by Hayes and Allinson (1997, p. 186) who refer to many studies supporting the idea that high aptitude learners and those with particular learning styles succeed regardless of instructional strategies. As is the case here, the outcome could be influenced by specific characteristics of the learning task and the circumstances under which the teaching and the learning took place.

As far as analysis is concerned, 38% of the instructors assessing this learning objective turned out to be assimilators and accommodators. Given the fact that these two types of learners constitute

70% of the literature instructors, there is no wonder that this outcome is obtained since some items of their tests have asked about the ability of analyzing roles, explaining specifics of a particular behavior and how these relate to a whole context or situation. Yet, 15.5% of convergers double the percentage of divergers, used to assess this thinking level. This matches with what Lawrence (1997) reports according to Honey and Mumford's (1992) learning style model that people with a reflector (converger) style focus on analyzing and synthesizing information. Al-Quran (2002, p. 32) further states that convergers who performed higher in language/linguistics courses are analytic. Considering the nature of the language exams in general and those in the present study in particular, the tasks involved require processing information in parts, a style favored by analytic learners. This could be an answer to why convergers do notably well in language courses (ibid).

The highest percentage of those measuring the application level of thinking was that of divergers (37.5%) while the least (12.5%) was demonstrated by accommodators. This outcome unexpectedly does not harmonize with the general belief reinforced by many learning style models that individuals with a pragmatist (accommodator) learning style need to see the direct application of their learning in helping plan practical solutions to their problems, Al-Quran (ibid). Nevertheless, it does match with the previous finding since assimilators are among those who included application least, who are believed to be opting more for the theorist style focusing on analyzing and synthesizing information. Besides, that convergers and assimilators have shown similar percentages in measuring application skills could be attributed, at least partially, to the shared characteristic of tendency towards abstract thinking, though they differ in information processing as the former process it reflectively while the latter actively.

As for the lowest two thinking levels, understanding and knowledge, more than 50% of instructors representing all learning styles focus on them, i.e., almost half of the question items address themselves to objectives falling within these two thinking areas. What is noticeable here is that three modes of divergers, convergers and accommodators show almost the same percentage (20%) in addressing the level of understanding whereas assimilators used to give 40% of the weight in their tests to the same cognitive objective. Finally, the total weight given to the level of understanding by the four different learning styles was 35.5%, .i.e., more than one third of the evaluative process wherein the diverger and assimilator instructors showed the highest input since their percentages among their peers were 31% and 26% consecutively. The fact that the lowest levels of knowledge and understanding are overemphasized is highly indicative. First, it can mean the de-contextualization of the learning style factor since those instructors display dominance of these two objectives in isolation from their typical mode of learning. Second and regardless of the reason, relying heavily on mere remembrance of information reveals how instructors' views or at least their conscious or unconscious practices can be different from what is needed in real life situations, which require abilities in critical thinking and problem solving. Finally, to ask too much from learning styles can be inadequate since, as in this case, consistent assessment strategies must be the result of similar consistent instructional strategies, which can be determined primarily by the type of content to be taught or the goals of the instruction.

5. CONCLUSION

The present research stems from the basic assumption that teachers' pedagogical practices and preferences , whether at the instructional level or evaluative one are unavoidable factors in the learning environment. Pedagogically, the findings of this study and other related ones can serve to beware instructors of the utility of investing in personal factors like learning style preference whether of learners or instructors to upgrade both teaching and measurement practices in foreign language learning. Exploring what type of learners they are in addition to what mode of learning preference their students demonstrate might be consciously attended to while developing assessment tools. It can further assist in, as expressed elsewhere, bridging the gap between training and evaluating procedures as well as catering for the inevitable individual differences, which may lead to underachievement in students, and stress and frustration in teachers. The findings unfortunately reveal that fifty percent of the evaluative effort is addressed to the lower cognitive levels of knowledge and understanding. Although there is a significant correlation between learning style and the weight given to each learning

objectives, some findings still go unclearly explained, apart from the intervention of the consistent instructional strategies, type of content to be taught and the goals of the instruction. Higher awareness of the importance of the issue may lead to a better consideration of skills encouraging critical thinking and problem solving in addition to enhancing meaningful communication between student and teacher.

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Appendix 1- Kolb's Learning Style Inventory

This survey is designed to explore the way you prefer to learn. There are nine sets of statements -one set in each row. Look at the statements and decide how they refer to you. Give 4 marks for the statement most important to you, 3 marks for the second, 2 for the third and 1 mark for least important to you. There is no right or wrong answers.

	CE	RO	AC	AE
1.	I like to get involved.	I like to take my time before acting.	I am particular about what I like.	I like things to be useful.
2.	I am open to new experiences.	I like to look at all sides of issues.	I like to analyze things and break them down into their parts.	I like to try things out.
3.	I like to follow my feelings.	I like to watch.	I like to think about things	I like to be doing things.
4.	I accept people and situations the way they are.	I like to be aware of what is around me.	I like to evaluate.	I like to take risks.
5.	I have gut feelings and hunches.	I have a lot of questions.	I am logical.	I am hard working and I get things done.
6.	I like concrete things, things I can see, feel, or smell.	I like to observe.	I like ideas and theories.	I like to be active
7.	I prefer learning in here and now.	I like to consider things and reflect about them.	I tend to think about the future.	I like to see results from my work.
8.	I rely on my feelings.	I rely on my own observations.	I rely on my own ideas.	I have to try things out for myself.
9.	I am energetic and enthusiastic.	I am quiet and reserved.	I tend to reason things out.	I am responsible about things.

Extended Abstract

The present endeavor primarily attempts to uncover the cognitive style preferences of faculty members in the Departments of English language and literature as reflected in the structure of the tests they develop to measure students' learning of English. That is, it addresses how language-learning objectives are distributed along the four types of learning style depicted by the teacher model. This on its turn reveals their evaluative criteria of successful language learning, and eventually brings up to surface what priorities instructors view vital in terms of both the teaching and evaluating practices.

The paper consists of an introduction, methodology, results, discussion and conclusions. In the introduction, awareness in the educational circles of the importance of including personal factors like learning style is reviewed as expressed by educational psychologists. Light is also shed on the main concern of the work, viz. how an instructor's learning style preference affects his/her evaluative techniques as displayed in the test structure he/she writes. The methodology section embodies the purpose and main queries the study seeks answers for, population and the tools employed to realize the sought objectives. In its attempt to show how cognitive learning styles demonstrated by instructors can be an asset in English language teaching and evaluation at the university level, the study seeks answers to the following major questions:

1. What learning styles do university English instructors reveal?
2. What learning style/s is/are most shown by linguistics instructors and those most shown by literature ones?
3. What cognitive level/s from Bloom's Taxonomy is/are most emphasized?
4. How do Bloom's cognitive levels reflected in the various English tests correlate with the four learning styles?

Moreover, the population of the study comprises all English instructors at the departments of English language and literature at four Arab universities, two in Jordan (Hashemite University and Yarmouk University) and another two in the Sultanate of Oman (Sultan Qaboos University and the University of Nizwa). However, the sample, those who responded to the questionnaire and provided samples of their tests in the various courses they teach, consists of sixty-seven instructors. While those specializing in language/linguistics were thirty-seven, the literature instructors were thirty. As for the tools utilized, it adopts two major tools, viz. Kolb's (1984) Learning Style Inventory, and Bloom's (Forehand, M. 2005) Taxonomy of thinking levels. Kolb's learning style construct was used and implemented on the instructors to classify them along the four types of learning style: divergers, convergers, assimilators and accommodators. This model consists of two dimensions: perceiving and processing. The first describes concrete and abstract thinking, while the second represents an active or reflective information-processing activity.

The two dimensions embodied in Kolb's construct are integrated to form a model displaying the four types of learning style mentioned above. The first type, divergers, is learners who typically perceive information concretely and process it reflectively, and who need to be personally engaged in the learning activity. Convergers, on the other hand are those who perceive information abstractly and process it reflectively, and who feel the need to follow detailed, sequential steps in thinking in a learning activity. The third type, assimilators, is learners who perceive information abstractly, process it actively, and need to be involved in pragmatic problem solving in a learning activity. Accommodators, however, are those who perceive information concretely and process it actively, and who favor risk-taking, making changes experimentation and flexibility in a learning task. Bloom's Taxonomy, on the other hand is a multi-tiered model of classifying thinking according to six cognitive levels of complexity: knowledge, comprehension, application, analysis, synthesis and evaluation. The lowest three levels are knowledge, comprehension, and application, while the highest three ones are analysis, synthesis and evaluation. The taxonomy is hierarchical since each level is subsumed by the higher levels, which are considered more complex and consequently closer to complete mastery of the subject matter.

As far as the main results are concerned, a statistically significant correlation is revealed between learning style and the prioritizing of the six learning objectives. Another result shows that 70% of literature instructors turn out to be assimilators and accommodators while 67.5% of language/linguistics ones fall within the diverger and converger modes. The third notable finding is that the two lower cognitive levels of understanding and knowledge received more than half of the weight given to all learning objectives.

The discussion ensued in light of the main results claims that the reason why assimilator and converger learners constitute 50% of those including evaluation skills in tests could possibly be due to the shared characteristic of preferring to perceive information abstractly. Likewise, the percentage of converger learners (40%) from those assessing the skill of synthesis, the second highest cognitive level is quite noticeable. Compared with that of divergers (0.0%) who do not include it, the previous interpretation might be well justified since divergers sharply contrast with convergers and assimilators as well in their strong inclination towards concrete experiencing of things. However, the very clashing result that, though mainly characterized by concrete perception, accommodators constitute forty percent of instructors who measure synthesis is explained in light of the nature of the subject in question. That is, in fact, 60% of those including synthesis in their tests are language/linguistics instructors. Using question items, as revealed by the data, which require rearranging, combining, substituting, composing etc. and generalizing from given facts might not allow room for the interference of personal factors like that of learning style preference. In addition, it is very unlikely that every result in this piece of work and other related ones must be a product of the interactive effect of learning style. This has been emphasized by Hayes and Allinson (1997: 186) who refer to many studies supporting the idea that high aptitude learners and those with particular learning styles succeed regardless of instructional strategies. As is the case here, the outcome could be influenced by specific characteristics of the learning task itself and the circumstances under which the teaching and the learning took place.