A Comparative Study of Teaching Style and Infrastructure of Learning of Higher Education in Austria and Kazakhstan

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Abstract

The purpose of this paper is a comparative study of teaching styles and infrastructure of learning in higher education. Understanding about teaching style and infrastructure of learning leads to increase students’ motivation that influence subsequent achievements and higher quality of education. Overall, the findings highlight the importance of teaching style and infrastructure of learning and suggest that instructors can provide students with more successful learning experiences to ensure more confidence in their learning abilities. Methodology. A survey conducted on the basis of Adapted Principles of Adult Learning Styles (PALS by Conti, 2004), the present study investigates the teaching style of instructors at two business schools in Austria (Graz) and Kazakhstan (Almaty). Two questionnaires – Learning-Style Analysis and Teaching-Style Analysis were used to collect data. In the light of this analysis, the recommendations for teachers, educational administrators and policy makers will be considered for improvement in teaching and learning environment.

1. Introduction

Previous studies have revealed conflicting results on the relations between variables such as gender, degree obtained, and course type, with the perceived teaching styles. The purpose of this paper is a comparative study of
teaching style and infrastructure of learning on the examples of majors: economics, finance and management. The present study investigates the teaching style of instructors in Austria and Kazakhstan. Seven factors in Adapted Principles of Adult Learning Styles (APALS) are designed to assess participants’ teaching styles: learner-centered activities, personalizing instruction, relating to experience, assessing student needs, climate building, participation in the learning process, and flexibility for personal development.

It is important to discuss what is generally understood as the main teaching styles in educational pedagogy - direct instruction and inquiry-based learning. Through these two teaching methods, teachers can gain a better understanding of how to govern their classroom, implement instruction and connect with their students. Within each of these two main teaching styles are teaching roles or “models.” Theorist Grasha explains the five main teaching models in her publication Teaching with Style (1996): Expert, Formal Authority, Personal Model, Facilitator and Delegator. To gain a better understanding of the fundamentals of each teaching style, we will consider two of them - direct instruction and inquiry-based learning.

Direct instruction is the general term that refers to the traditional teaching strategy that relies on explicit teaching through lectures and teacher-led demonstrations. Direct instruction is the primary teaching strategy under the teacher-centered approach, in that teachers and professors are the sole supplier of knowledge and information. Direct instruction is effective in teaching basic and fundamental skills across all content areas. Inquiry-based learning is a teaching method that focuses on student investigation and hands-on learning. In this method, the teacher’s primary role is that of a facilitator, providing guidance and support for students through the learning process. Inquiry-based learning falls under the student-centered approach, in that students play an active and participatory role in their own learning process (Teaching Methods). The idea of focusing on the learner rather than the teacher requires that teachers’ and learners’ roles be reexamined in the learning process. Teachers need to consider a paradigm shift from a teacher-centered teaching style to a learner-centered one.

2. Literature review

Classically, teachers tend to teach as they have been taught, basing classroom lessons and instructional methods on the styles and strategies they have experienced in their own schooling, or observed in the schools where they are teaching (Lortie, 1975; McCann, Johannessen, Kahn, & Flanagan, 2006; Smagorinsky & Whiting, 1995). Even when college or university teacher education courses present alternative instructional approaches, the familiar outweighs the new (Britzman, 2003). But, we encourage teachers to use student-centered teaching strategies that nurture students’ literacy and critical thinking skills within a respectful classroom climate.

To assess teachers’ teaching style, Conti (1979) developed in his doctoral dissertation the Principles of Adult Learning Scale (PALS). Since 1979, PALS has been revised several times (Conti, 1983, 1985, 2004). Tests on its construct validity, content validity and reliability proved PALS is a highly reliable and valid rating scale to examine instructors’ teaching style (Conti 1979, 1982, 1983; Premont, 1989; Parisot, 1997).

PALS is a 44-item questionnaire requiring respondents to indicate the frequency with which they practice the behaviors described (0=Never, 5=Always). A higher score on PALS indicates a learner-centered approach, while a lower score indicates a teacher-centered one. Seven factors constitute the structure of the PALS assessment. They are as follows (Conti, 1985, p.11):

1. Learner-Centered Activities: Reflects the extent to which an instructor supports a more collaborative mode by practicing behaviors that encourage students to take responsibility for their own learning; those who support a teacher-centered mode of instruction favor formal testing over informal evaluation techniques.
2. Personalizing Instruction: Reflects the extent to which instructors employ a number of techniques that personalize learning to meet the unique needs of each student, emphasizing cooperation rather than competition.
3. Relating to Experience: Reflects the extent to which an instructor emphasizes learning activities that consider prior experience and encourages students to make learning relevant to current experiences.
4. Assessing Student Needs: Assesses instructor orientation toward finding out what each student wants and needs to know, a task often accomplished through individual conferences and informal counseling.
5. Climate Building: Measures whether teachers set a friendly and favorable climate in the classroom, where dialogue and interaction with other students are encouraged. Taking risks is also favored, and errors are seen as part of the learning process.
6. Participation in the Learning Process: Reflects the extent to which an instructor relies on students to identify the problems they wish to solve and allows students to participate in making decisions about the topics that will be covered in class.

7. Flexibility for Personal Development: Reflects an instructor's self-conception as a facilitator rather than a provider of knowledge. Flexibility is maintained by adjusting the classroom environment and curricular content to meet the changing needs of the students.

Very few studies have been conducted to assess teaching style with students and instructors from different countries using PALS with the purpose to compare and analyze the differences in teaching styles of two countries. Students and instructors are from different cultural backgrounds, their teaching styles may vary. It is reasonable to assume that teachers modify their teaching style based on the courses they teach, for example courses on specialty: management, economics and finance.

The present study is a pilot study that investigates the teaching styles of instructors in Kazakhstan and Austria from both sides – students and instructors and the correlation between instructors’ and students’ point of views. The study addressed the following research questions:

1. Do teaching styles differ in two countries or do we have a lot in common?
2. Among the seven factors indicated in PALS, which are easiest for instructors to achieve in Kazakhstan and Austria?

3. Methodology

Two types of questionnaires (Learning-Style Analysis and Teaching-Style Analysis) were used to collect data among the groups of 3rd-4th course students on economics, finance and management majors and their instructors on major courses in two research-based universities in Kazakhstan and Austria. All participants in this study answered the questions on one of their main major courses. Since it was a pilot study, two types of questionnaires were used to compare opinions from two perspectives, firstly how students evaluate the teaching style of their instructors and secondly how instructors evaluate their teaching styles to receive more objective results. Fifty-one learning-style analysis questionnaires were returned from students and six teaching-style analysis questionnaires were returned from the 60 and 10 questionnaires distributed respectively. Of those surveys returned, 13 were discarded due to missing data. Thus 38 learning-style analysis and 6 teaching-style analysis usable questionnaire responses were analyzed.

The questionnaire was a two-part survey including a personal information survey and the Adapted Principle of Adult Learning Scale (APALS) (See Appendix). In the APALS, the PALS was reduced to 26 items because a 44-item questionnaire is rather lengthy and it is necessary to exclude some items that are not proper in higher education settings for college students. For example, “I allow older students more time to complete assignments when they need it”, “I encourage students to adopt middle class values”.

Descriptive statistics were used to analyze the personal information characteristics (gender, age, nationality) of the participants. The overall teaching styles in both countries were determined by a composite score calculated from each individual item results.

4. Results

Among the students from Kazakhstan (N=12) participating in this study, 80 percent (n=10) were female and approximately one-fifth (n=2) were male. Seventy-five percent (n=9) of them were 20 years old. Seventeen percent (n=2) were 21 years old and eight percent (n=1) was 19 years old. Ninety-two percent (n=11) reported that their nationality are Kazakh and eight percent (n=1) German.

Among the students from Austria (N=26) participating in this study, 70 percent (n=18) were female and 30 percent (n=8) were male. Thirty-five percent (n=9) of them were 20 years old, thirty percent (n=8) were 21, fifty percent (n=4) were 19, about eleven percent (n=3) were 22, four and half percent (n=1) was 23 and four and half percent (n=1) was 27. Ninety-two percent (n=24) reported that they are Austrian, four percent (n=1) is Japanese and four percent (n=1) is German.
The instructors from Kazakhstan (N=3) participating in this study, approximately two-third (n=2) were male and approximately one-third (n=1) was female. The ages of instructors (n=3) are 33, 38 and 40 years old respectively. Out of three, two instructors (n=2) are from Kazakhstan and one (n=1) is Uzbek. A hundred percent (n=3) reported that their highest level of completed education was a doctorate.

The instructors from Austria (N=3) participating in this study, approximately two-third (n=2) were female and approximately one-third (n=1) were male. The ages of instructors (n=3) are 28, 33 and 35 years old respectively. Out of three, two instructors (n=2) are from Austria and one (n=1) is Brazilian. Approximately one-third (n=1) reported that her highest level of completed education was a doctorate and approximately two-third (n=2) a master’s degree.

The teaching styles were determined by the composite score on the PALS calculated from each individual item results. For the 26 items, the highest possible score was 130. The norms of these 26 items were established by Conti, who compared the 26 items in the original data set with 1130 cases, and recommended “using 83 as the norm with a standard deviation of 13” (personal communication, February 5, 2005). Although this norming value was derived through Conti’s estimates of norm scores for the participants in the present study, the reliability of this modified APALS instrument cannot be directly equated to that of Conti’s own instrument. Nonetheless, this estimated norm was based upon careful consideration of participant variables found within the canonical APALS instrument and provides a powerful mean of comparison in the present study.

The number of standard deviations in which a score fell above or below the established mean of 83 was used to interpret the strength of commitment to a particular style: (a) extreme --- 3 standard deviations away from the mean; (b) very strong --- 2 standard deviations away from the mean, and (c) increased --- 1 standard deviation away from the mean (Conti, 2004). The mean APALS composite rating for the instructors in Kazakhstan evaluated by students (n=12) in this study was 70.3. Thirty-three percent of the instructors (n = 4) had composite scores in the range of zero to 68 (two standard deviations below the norm). Sixty-six percent (n = 8) scored within one standard deviation below the established mean, and there are no instructors (n = 0) scored above the established mean (see Table 1).

### Table 1. Frequency distribution of Kazakhstani Instructors’ APALS scores.

| Degree of commitment                  | Interval | Frequency | %  |
|---------------------------------------|----------|-----------|----|
| Teacher-centered --- very strong      | 56 --- 68| 4         | 33.5|
| Teacher-centered --- increased        | 69 --- 82| 8         | 66.5|
| Learner-centered --- increased        | 83 --- 95| 0         | 0   |

Totally, according to each factor the instructors from Kazakhstan have the next scores:

1. Learner-Centered Activities 5.08 out of 20max.
2. Personalizing Instruction 11.08 out of 20-25max.
3. Relating to Experience 12.83 out of 15max.
4. Assessing Student Needs 11.5 out of 15max.
5. Climate Building 9.08 out of 10max.
6. Participation in the Learning Process 14.91 out of 20max.
7. Flexibility for Personal development 5.83 out of 25max.

To answer the second research question, “Among the seven factors in PALS, which are easiest for instructors to achieve in the classroom?” the percentage of the mean score by each factor in its own total was calculated to determine the ease of achievement. The higher percentage the mean score is, the more easily it is for instructors to practice those classroom behaviors. Results indicated that Factor 5 (climate building) was the easiest (90%), and Factor 7 (flexibility for personal development) was the hardest (23%).

The mean APALS composite rating for the instructors in Austria evaluated by students (n=26) in this study was 57.1. Eighty percent of the instructors (n = 21) had composite scores in the range of zero to 68 (two standard deviations below the norm). Twenty percent (n = 5) scored within one standard deviation below the established mean, and similar with the result with the instructors from Kazakhstan there are no instructors (n = 0) scored above the established mean (see Table 2).
Table 2. Frequency distribution of Austrian Instructors’ APALS scores.

| Degree of commitment          | Interval   | Frequency | %  |
|------------------------------|------------|-----------|----|
| Teacher-centered --- very strong | 56 --- 68 | 21        | 80 |
| Teacher-centered --- increased | 69 --- 82 | 5         | 20 |
| Learner-centered --- increased | 83 --- 95 | 0         | 0  |

In sum, according to each factor the instructors from Austria have the next scores:

1. Learner-Centered Activities                    9,7 out of 20max.
2. Personalizing Instruction                         9,1 out of 20-25max.
3. Relating to Experience                            8,5 out of 15max.
4. Assessing Student Needs                        5,5 out of 15max.
5. Climate Building                                     6,4 out of 10max.
6. Participation in the Learning Process     7,2 out of 20max.
7. Flexibility for Personal development     10,7 out of 25max.

To answer the second research question, “Among the seven factors in PALS, which are easiest for Austrian instructors to achieve in the classroom?” The highest percentage - the factor 5 (climate building) was the easiest (64%), and Factor 2 (assessing student needs) was the hardest (36%).

5. Discussion

The findings allow us to address the two questions in the study. The first research question was “Do teaching styles differ in two countries or do we have a lot in common?” The results indicated that the dominant teaching style of universities’ instructors in Kazakhstan and Austria is teacher-centered. This finding concurs with many previous studies that reported instructors resort to traditional, teacher-centered styles in different teaching settings. For example, in distance teaching, Dupin-Bryant (2004) reported 79.8 percent of 203 interactive television instructors displayed inclinations towards a teacher-centered approach, in which 12.8 percent showed extreme preference, 34 percent showed very strong preference and 33 percent showed increased preference. In adult education, Spoon and Schell (1998) also reported a moderate preference for a teacher-centered approach by both teachers and learners. More recently, Conti (2004) concluded that teacher-centered style is “currently the dominant approach throughout all levels of education in North America” (p.77). This study provides further support to the identification of teacher-centered styles in practice in university settings.

In general, the learner-centered style is recognized as an effective and democratic way of improving students’ motivation, participation and final achievements in all kinds of learning processes. However, the descriptive results in this study along with previous research studies indicate that instructors employed teacher-centered approaches in actual practice. This discrepancy between theory and practice suggests that on one hand, more training and support programs are necessary in higher education to facilitate the instructional change. On the other hand, more detailed discussions are necessary to further specify what are genuine learner-centered actions and what are true teacher-centered ones.

With regard to the second research question “among the seven factors in PALS, which are easiest for the instructors to achieve in Kazakhstan and Austria?” results in this study indicated that “climate building” is easiest for instructors in Kazakhstan and Austria. And the hardest factor is different, in Kazakhstan - factor 7 (flexibility for personal development), in Austria - factor 4 (assessing student needs).

These findings provide useful information for training programs for instructors. By taking concrete actions the instructors can improve their performance on “flexibility of personal development” and “assessing student needs”, the lowest two factors in the present study, teachers should give students more freedom to work on their own rate (“flexibility of personal development”); they might not need to stick to the course objectives in the syllabus they wrote at the beginning of a semester (“assessing student needs”); and lecturing may not always be the best method for presenting subject materials (“personalizing instructions”).

6. Conclusion
The learner-centered approach is recommended teaching style in research and practice to address individual learners’ needs. However, the findings of this study along with previous research studies indicate that instructors still use traditional, teacher-centered styles in university settings. Therefore, a discrepancy between theory and practice has been identified. This indicates that the learner-centered approach is not widely practiced in universities. Awareness of this discrepancy may encourage universities to promote more training in the learner-centered approach.

One implication of this study for universities’ instructors is to develop seven factors of APALS. Educational administrators and policy makers can organize workshops, seminars to raise teachers’ awareness of their teaching style and help teachers move towards a learner-centered approach. Some factors are easier to achieve so that teachers could start with these practices. For example, teachers could accept errors as a natural part of the language learning process (“climate building”), and plan learning activities to take into account students’ prior experiences (“relating to experience”). The least practiced factors “assessing student needs” and “flexibility for personal development” should be incorporated in the curriculum of teacher training. Specific materials and activities should be designed to tap this difficulty.

Appendix

Learning-Style Analysis Questionnaire

Disclaimer: The following questionnaire is designed for research on your learning. Please answer each question according to your own opinion and learning experience of the course you indicate below. All the data collected will be highly confidential and will be used for the research only. First, please fill in some personal information and then answer questions of the questionnaire. Thanks for your cooperation.

Personal information:
Gender: Female/ Male
Age: ____________
Language(s) of learning: ______________
Nationality: ___________________
Major: ________________
Course: 3rd, 4th
Course name (one only please): _______________ (your major course)

How often do you have the following?

| Whole Activities | Always | Almost Always | Often | Seldom | Almost Never | Never | Notes |
|------------------|--------|---------------|-------|--------|-------------|-------|-------|
| 1. You participate in developing the criteria for evaluating performance in class. |
| 2. You receive help to find out the gaps between your goals and your present level of performance. |
| 3. Your teacher provides knowledge rather than serve as a resource person. |
| 4. During the course the teacher sticks to the syllabus objectives that he/she declared at the beginning of a semester. |
| 5. Lecturing is the best method for presenting subject material to students. |
| 6. The classroom arranges so that it is easy for students to interact the teacher. |
| 7. During the group discussions your teacher motivates you by confronting in the presence of classmates. |
| 8. The course learning activities take into account your prior experiences. |
| 9. You participate in making decisions about the topics that will be covered in class. |
| 10. There is one basic teaching method |
because your teacher thinks that most
students have a similar style of learning.
11. Discussions are encouraged among
students.
12. Errors are natural part of the learning
process.
13. You have individual conferences with
teacher helping you to identify your needs.
14. Your teacher allows you to work at your
own rate regardless of the amount of time it
takes to learn a new concept.
15. Your teacher helps you to develop short-
term as well as long-term objectives.
16. In your classroom maintains a well-
discipline to reduce interferences to learning.
17. Your teacher avoids discussion of
devotional subjects that involve value
judgments.
18. The methods that foster quiet,
productive, deskwork are used in your class.
19. The tests are chief methods of evaluating
students in your class.
20. During your course you have activities
that encourage each student's growth to
greater independence from dependence on
others.
21. The instructional objectives of the
teacher match the individual abilities and
needs of the students.
22. Your teacher avoids issues that relate to
the student's concept of himself/herself.
23. Students are encouraged to ask
questions.
24. Students can identify their own problems
that need to be solved.
25. All students in the class are given the
same assignment on a definite topic.
26. Competition among the students is
encouraged.

(Adapted from PALS, Conti, 2004)

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