



Available online at www.sciencedirect.com

SCIENCE @ DIRECT®

International Journal of Intercultural Relations
28 (2004) 577–594

International Journal of
INTERCULTURAL
RELATIONS

www.elsevier.com/locate/ijintrel

Learning styles and their impact on cross-cultural training: An international comparison in France, Germany and Quebec

Christoph I. Barmeyer*

IECS—Ecole de Management de Strasbourg/Université R. Schuman, CESAG (Centre d'Etude des Sciences Appliquées à la Gestion), 61, Ave de la Forêt Noire, F 67085 Strasbourg, France

Abstract

Every person has his or her own individual way to learn and to solve problems in day-to-day situations. These personal cognitive strategies, acquired in a long socialization process are called “learning styles” and may differ depending on gender, age or culture.

In this study, the learning styles of over 300 students in business administration in France, Germany and Quebec are examined with the *Learning Style Inventory (LSI)*. Representative and significant learning differences were found. This is why the LSI can be used in a first step for the illustration and comparison of typical patterns of learning. In a second step the results may be of use to international trainers in making decisions about course design and methods of cross-cultural training in relation to the learning profiles of the participants.

© 2005 Elsevier Ltd. All rights reserved.

Keywords: Learning styles; LSI; Culture; Cross-cultural management; Socialization; Intercultural training; Cultural differences; Training methods

*Fax: +33 3 90 41 42 70.

E-mail address: christoph.barmeyer@iecs.edu.

1. Introduction

On account of increasing globalization, cross-cultural training has become more and more important. The diversity of people coming from different countries and working together in multicultural groups may lead to cultural synergy as well as misunderstandings. Most of the previous literature on cross-cultural differences in behavior has so far focused on values and attitudes (Barmeyer & Mayrhofer, 2002; Dupriez & Simons, 2000; Hampden-Turner & Trompenaars, 2000; Hofstede, 1980, 2001). One of the problems of these studies, in terms of concrete application, is that it has been difficult to show that the differences in values or attitudes are directly linked to behavioral outcomes such as managerial performance.

Another problem is the relationship between culture and personality, meaning the group and the individual. This is also particularly important in the process of cross-cultural training because even if the contents of the training are of high quality and interest, what about the learning process and the transmission of knowledge according to the participants' personalities and cultures? Only a few international studies of learning styles and their influence on cross-cultural interaction and training exist (Jackson, 1995; Oxford, 1995), but there is a growing interest (Abramson, Keating, & Lane, 1996; Holman, Pavlica, & Thrope, 1997; Nishida, Hammer, & Wiseman, 1998).

This is why in the present article, cultural differences in learning styles of business students—future managers—in France, Germany and Quebec will be examined. The results should give some essential orientation for nationally bound attitudes and explanations for the use of this knowledge in relation to the design of cross-cultural trainings.

2. Culture and learning

Every person has his or her own *individual way* of gathering and processing information, which means ways of learning and solving problems in day-to-day situations. These personal cognitive abilities, acquired in the course of a long socialization process are called “learning styles” (Reynolds, 1997). A learning style can be defined as the individual, natural and preferred way of a person to treat informations and feelings in a certain (learning-)situation which will influence his decisions and behaviors. Each culture trains and molds those within its system for what it considers the most appropriate methods of problem solving, as Geert Hofstede explains:

[...] our cognitive development is determined by the demands of the environment in which we grew up: a person will be good at doing things that are important to him/her and that (s)he has occasion to do often. Cognitive abilities are rooted in the total patterns of a society. (Hofstede, 1986, p. 305)

Culture, defined by Hofstede as “the collective programming of the mind which distinguishes the members of one human group from another” (Hofstede, 1980,

p. 25), is thus determined by national socialization through institutions such as family, school, universities and work (Dubar, 1991). All of those influence the development of learning styles—the way to acquire, order and use concepts. Consequently, culture may be related to the development of learning styles.

International research is usually interested in discussing the clash which may appear when teachers and students from different cultures interact because their teaching and learning styles are divergent (Hofstede, 1986; Oxford, 1995). When teachers fail to recognize the cultural differences, students react in negative ways to the instruction and may show bad results. For optimal learning progress, instructors need to understand their students' learning styles... and their culture. This is the same for cross-cultural training (Bennett, 1986).

In the following, a typology of learning styles in France, Germany and Quebec will be shown and some generalizations worked out since cultural groups will have to be compared. Categorizations of people as “types” can easily become stereotypes that tend to trivialize human complexity and end up denying human individuality rather than characterizing it. For this reason, every person, in spite of his “mental programming”, has his or her own individual style:

The reason that one can proceed in most situations to act sensibly without having to make hundreds of conscious choices is that one develops organized ways of automatically processing most of the kinds of information encountered. In computer terms, one does what one is “programmed” to do. Much of the programming is the same for all or most of the human race; much is imposed by the structure of particular culture and subcultures. But in addition there are programs unique to individuals, and these are fundamental to psychological individuality. (Tyler, 1978, p. 106)

Human individuality results from the pattern or program created by personal choices and their consequences. In the following comparison, this must be kept in mind.

3. The Learning Style Inventory (LSI)

Building on the work of Dewey (1938), Lewin (1951) and Piaget (1970), David A. Kolb developed a theory of experiential learning (Kolb, 1984), which still plays an influential role in management education (Holman et al., 1997; Kayes, 2002; Kolb & Kolb, 2003; Vince, 1998). People do learn from their experience. According to the theory of experiential learning, Kolb (1984, p. 38) defines learning as “the process whereby knowledge is created through the transformation of experience.”. Another definition, very similar to that one, is focused on the *process*:

Learning is defined broadly as that set of processes by which new elements of action-orientation are acquired by the actor, new cognitive orientations, new values, new objects, new expressive interests. Learning is *not* confined to the early stages of the life circle, but continues throughout life. What is ordinarily called a

“normal” adaptation to a change in the situation or the “unfolding” of an established dynamic pattern is a learning process. (Parsons, 1952, p. 203)

Learning is thus a holistic *process* and not a *product*. It is a process of human adaptation, in general, and not one limited to the classroom. Experimental learning combines *experience, perception, cognition* and *behavior*. In the heart of all learning, lies the way in which experience is processed, in particular, the critical reflection of experience. Learning is like a cycle that begins with experience, continues with reflection and later leads to action, which itself becomes a concrete experience (CE) for reflection. It is, therefore, highly interesting for cross-cultural management training. As many of the major contributors to the field point out, experience has once again become a crucial topic of discussion in the intercultural field. A central theme of Kolb’s theory states that the learning process is not the same for everybody: As a result of heredity, past life experiences and demands linked to environmental circumstances, everybody develops an individual learning style, which has both strong and weak points (Jonassen & Grabowski, 1993).

Learning styles help to resolve problems and conflicts in day-to-day situations. Some people tend to be more abstract, others more concrete. A mathematician may come to place great emphasis on abstract concepts, whereas a poet may value CE more highly. A manager may be primarily concerned with the active application of ideas, whereas a naturalist may develop his observational skills more strongly. While teaching at universities in different countries, one may notice the diverging cognitive abilities of students. Some of them learn best during formal lectures, while others prefer exercises or discussions. This is why Kolb built his model on the following assumptions:

Learning is conceived as a four-stage cycle. Immediate concrete experience is the basis for observation and reflection. An individual uses these observations to build an idea, generalization, or “theory” from which new implications for action can be deduced. These implications or hypotheses then serve as guides in acting to create new experience. The learners, if they are to be effective, need four different kinds of abilities: *Concrete Experience* abilities (CE), *Reflective Observation* abilities (RO), *Abstract Conceptualization* abilities (AC) and *Active Experimentation* (AE) abilities. (Kolb, 1981, p. 111)

In the process of learning, and especially in particular situations, every human being moves in varying degrees from being an actor to an observer, and from specific involvement to general analytic detachment. Different learners may start at different phases of the cycle. Some individuals integrate and use all four learning modes; for others, some learning modes will come to predominate. For this reason, every human being develops a specific learning style (Fig. 1).

The Experiential Learning Theory (ELT) represents an integration of research on learning styles and conceptualizes the learning process. To assess individual orientations toward learning, Kolb developed a simple self-description test, called LSI. The LSI has found broad acceptance and is frequently used in management and education (Kays, 2002). It is a short questionnaire, which evaluates the way people

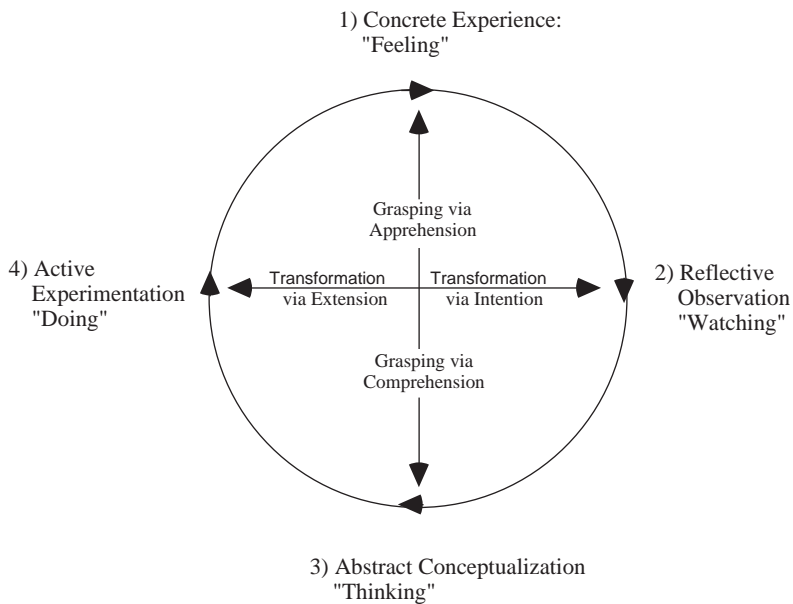


Fig. 1. The experiential learning cycle.

deal with new ideas and day-to-day situations. It is designed to measure the strengths and weaknesses of a learner by asking him to rank in a series of four sentences the different abilities shown in the figure above. The totals are summed for each column, and these represent the respondent's relative emphasis on the different learning phases (Kolb, 1984; Hay/McBer, 1999; McBer & Company, 1985):

- A high score on CE represents a receptive, experience-based approach to learning. These individuals rely heavily on feeling-based judgments. High CE individuals tend to be "people oriented." They learn best from specific examples in which they can become involved, such as discussions.
- A high score on RO indicates a tentative and reflective approach to learning. Such individuals rely heavily on careful observation and prefer learning situations such as lectures.
- A high score on AC indicates an analytical and conceptual approach to learning. These individuals rely on logical thinking and rational evaluation. These individuals tend to be more oriented towards things and symbols and less toward other people. They learn best from impersonal learning situations.
- A high score on AE indicates an active orientation that relies on experimentation. These individuals learn best from projects and dislike passive learning situations.

The structural model of experiential learning showed two fundamental dimensions of the learning process, standing in dialectical opposition: CE versus AC and RO versus AE. As a result of intercorrelations in his studies, Kolb suggests the

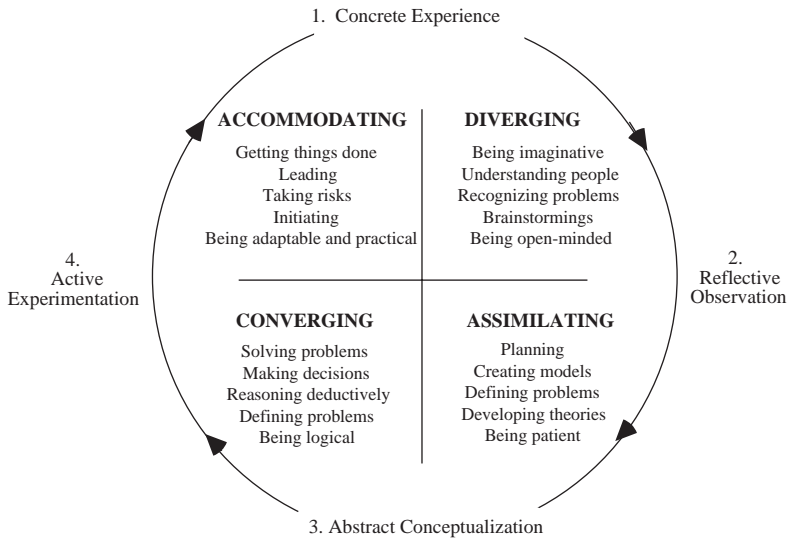


Fig. 2. Basic characteristics of learning style types.

combination of the two scores in order to create a two-dimensional map of learning space of four elementary forms of knowing: converging, diverging, assimilating, accommodating (Kolb, 1984, pp. 76–78; Hay/McBer, 1999, p. 8), shown in Fig. 2.

The four phases of the learning cycle (CE, RO, AC, AE) and the four learning style types (converging, diverging, assimilating, accommodating) offer a practical tool for comparing not only individual, but also collective cultural learning styles, which will be illustrated in the following part.

4. Empirical study

4.1. Sample/respondents

A total of 353 French, German and French–Canadian (Quebec) students in International Management or Human Resource Management from two business schools and one university participated in this study (Barmeyer, 2000).

The three cultural areas France, Germany and Quebec were chosen in order to have other—non-anglophones—samples, because most of the empirical studies of the LSI were done till now in the USA. The idea was to use the LSI for the first time in Germany and France. The political, economical, scientific and managerial cooperation of these three cultural areas is quite important, especially between France and Germany. But also Quebec in North America, as “an island of 7 million Francophones in an ocean of 300 millions Anglophones” (Barmeyer, 1998, p. 92) has special relationships to France and Germany with its own diplomatic missions

Table 1
Sample: students from France, Germany and Quebec

	Ecole de Management, Lyon	Universität des Saarlandes, Saarbrücken	Ecole des Hautes Etudes Commerciales, Montréal
Period	October 1996–June 1997	June 1996	September 1995
Number	132	98	123
Culture	French	German	Quebecois
Mean age	22.3	24.4	—
Gender	f: 61, m: 71	f: 34, m: 64	f: 50, m: 73
Discipline	Gestion/Management	Betriebswirtschaftslehre	Gestion/Management

besides the state of Canada. Quebec is considered in the Canadian constitution as a “distinctive society”, which has a specific management system relative to demography, language, laws, religion and economy (Colongue, 1996; Kolboom & Lieber, 1998). Thus, Quebec represents with its European tradition and his location in North America some kind of a cross between both cultures. The three management institutions EM Lyon (France), Universität des Saarlandes (Germany) and HEC Montréal (Quebec) are highly ranked and are to some extent, representative for the business education of each site. There was also a pragmatic reason that motivated the choice: the three management institutions have a students-exchange program that facilitates the empirical research.

The students from France, Germany and Quebec were used as a proxy for actual managers. The use of students rather than managers has been favored in studies (Abramson, Keating, & Lane, 1996; Jackson, 1995) because it results in a more homogeneous, balanced and matched sampling with regard to age, socio-economic background and education (given the differences in educational traditions and formal education). It has to be stressed that even if students of management are in some way similar to real managers because they aspire to become managers themselves upon graduating, they don't have yet the practical managerial experience (Table 1).

4.2. Method and procedure

All respondents were administered the LSI questionnaire (McBer, 1985) developed by David A. Kolb. The LSI has been found to possess adequate validity and reliability (Atkinson, 1988; Certo et al., 1980; Vince, 1998). The questionnaire contains 12 sentences with four statements each, which evaluate a person's relative learning preference. All responses were made on a 4-point scale with '1' describing the 'least' way the respondent learns and '4' describing how she/he learns 'best'. A '3' is given to that word in the remaining pair that is most like them and a '2' to the word that is left over. In class, respondents were asked to complete the questionnaire either on their own or with the assistance of the researcher. All respondents

participated voluntarily. At the end of the questionnaire, the respondents had to sum up the score of each of the four endings. After having responded to the questionnaire, the ELT was explained to the students and the results were discussed in detail.

4.3. Findings and interpretation

For the analysis, the items of each questionnaire were inspected based on variables such as education, age, gender and culture. The data was analyzed with the software program *Statistical Package for the Social Sciences* (SPSS 6.0). A total of 16,944 pieces of data were used (4 rows \times 12 items \times 353 students). One-way analysis of variance (ANOVA) was used to determine the significance. The categorically independent variables were named ‘gender’, ‘age’, ‘education’ and ‘culture’. The dependent variables were the four dimensions of Kolb’s learning cycle. Due to limitations on the length of an article, only the collective profiles concerning the variables gender and culture will be presented (Barmeyer, 2000).

4.3.1. Gender differences

One important variable of differences in learning styles is gender. A number of studies confirm the hypotheses about divergences in the gender-specific styles of learning, thinking and working (Belenky, Clinchy, & Goldberger, 1986; Belle, 1990; Philbin & Meier & Huffmann, 1995). Due to gender-related differences in society and specific value orientations, women tend to emphasize interpersonal abilities such as sensitivity, patience, tolerance, friendly atmosphere, and empathy more than men. These traits were labeled by Hofstede (1998) as ‘femininity’. Gender roles themselves and the behavior of men and women in society are widely a product of culture because the underlying values and norms are learned (unconsciously) during the process of socialization (Game, 1994, Sternberg, 1997; Tata, 2000). In this study, central research questions arise: Do similarities or differences exist between the learning styles of female and male students? How do the differences manifest themselves? Do the female students, for example, tend to have a more emotional learning style? In this study, the LSI-questionnaire was answered by 145 female (41,1%) and 208 male (58,9%) students. The following table shows the results of the four dimensions in relation to gender. The over all sum of the four dimensions is 120 points (Table 2).

The results of the four LSI-dimensions show some gender divergences, which are significant. The dimension CE (feeling) between female students and male students was found significant ($p = 0.0113$). Female students scored higher than male students in this dimension, which reflects social or emotional competences (Kolb, 1984) or Hofstede’s (1980, 1998) femininity dimension. The results also show significant differences concerning the dimensions RO (watching, $p = 0.0299$) and AC (thinking, $p = 0.0239$). Here the male students show a higher average score than the female students. There was no significant difference concerning the fourth dimension, AE (doing). The results confirm the research question of a more affective orientation of the female learning style.

Table 2
Learning styles and gender

Dimension	Female students <i>n</i> = 145	Male students <i>n</i> = 208	Significance
1. Concrete experience: feeling	27.5310	25.3702	0.0113***
2. Reflective observation: watching	28.3931	29.9471	0.0299**
3. Abstract conceptualization: thinking	31.9724	33.8654	0.0239*
4. Active experimentation: doing	32.1034	30.8173	0.0830 n.s.

*: $p \leq 0.05$; **: $p \leq 0.01$; ***: $p \leq 0.001$; n.s.: $p \geq 0.05$.

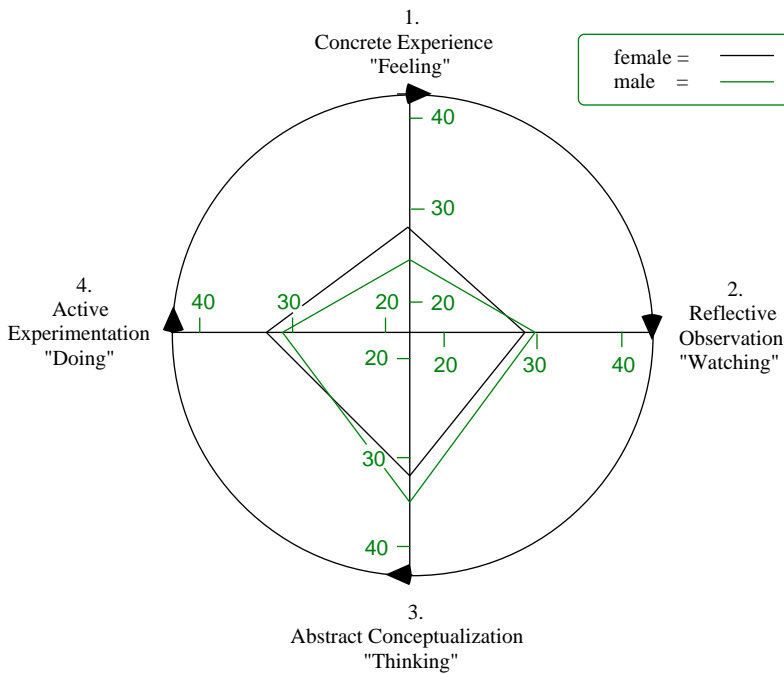


Fig. 3. Learning cycle and gender profile.

The following figures show a profile of the statistical results within the learning cycle (Fig. 3) and gender differences according to the four learning style types by reporting percentages of gender in each quadrant (Fig. 4).

The quantitative distribution reveals that more male students (41.8%) represent the assimilating learning style type than the female students (32.4%). On the other hand, female students are slightly more represented in diverging learning style type with 24.1%. More than 22.8% of the female students are in the converging field but only 18.8% revealed of the male students. 20.7% of the female students use the accommodating learning style but only 17.8% seen of the male students.

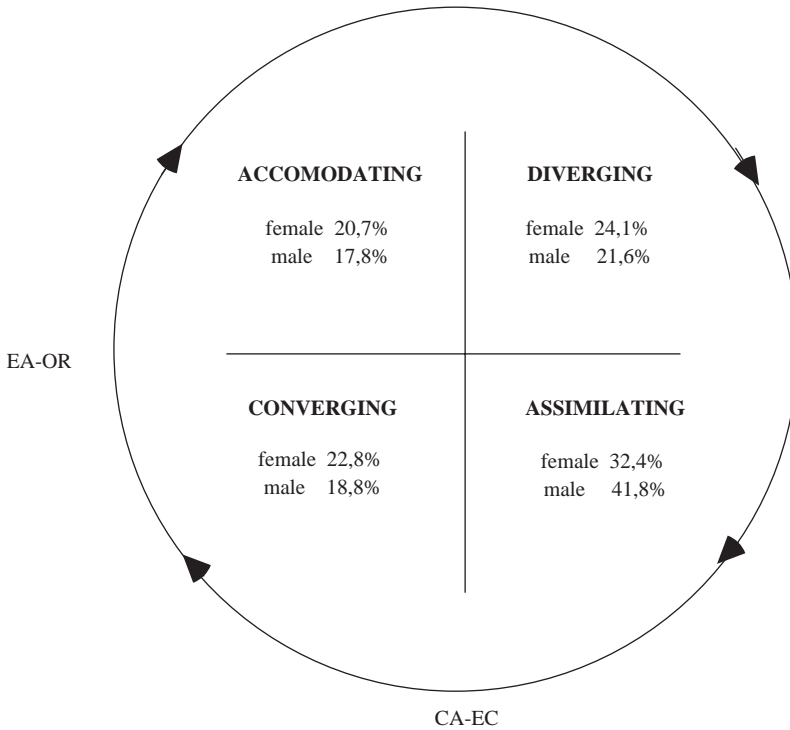


Fig. 4. Learning style types and gender profile.

4.3.2. Cultural differences

Culture is determined by socialization through institutions such as family, friends, school, universities and work. All of these factors influence the development of learning styles, help to create a system of shared values, assumptions and knowledge (Geertz, 1973; Hofstede, 1980), determine people’s perception, interpretation and problem-solving methods. These cognitive capacities are learned during a socialization process and influence the individuals’ specific methods. Consequently, culture can be related to the development of learning styles. In this study, other research questions arise: Are there similarities or differences in the learning styles of German, French and Quebecois students? How do the differences manifest themselves? (Table 3)

The results of the sample show that differences where found in the CE (feeling) scores: The scores of French and Quebecois students were higher than of the German and these differences are highly significant ($p = 0.000$). This could indicate a preference for personal involvement with people and a more intuitive approach to problems and situations. The RO (watching, $p = 0.3496$) scores do not show significant differences, but the AC (thinking, $p = 0.007$) scores do. The German students scored higher than the French and the Quebecois. This result shows a definite preference for theoretical stimuli and an emphasis on logic orientation rather

Table 3
Learning styles and cultural group

Dimension	French students <i>n</i> = 132	German students <i>n</i> = 98	Quebecois students <i>n</i> = 123	Significance
1. Concrete experience: feeling	28.1667	22.4898	27.2114	0.0000***
2. Reflective observation: watching	28.6667	29.5918	29.7724	0.3496 n.s.
3. Abstract conceptualization: thinking	32.2424	35.0918	32.3984	0.0103**
4. Active experimentation: doing	30.9242	32.8265	30.6179	0.0392*

*: $p \leq 0.05$; **: $p \leq 0.01$; ***: $p \leq 0.001$; n.s.: $p \geq 0.05$.

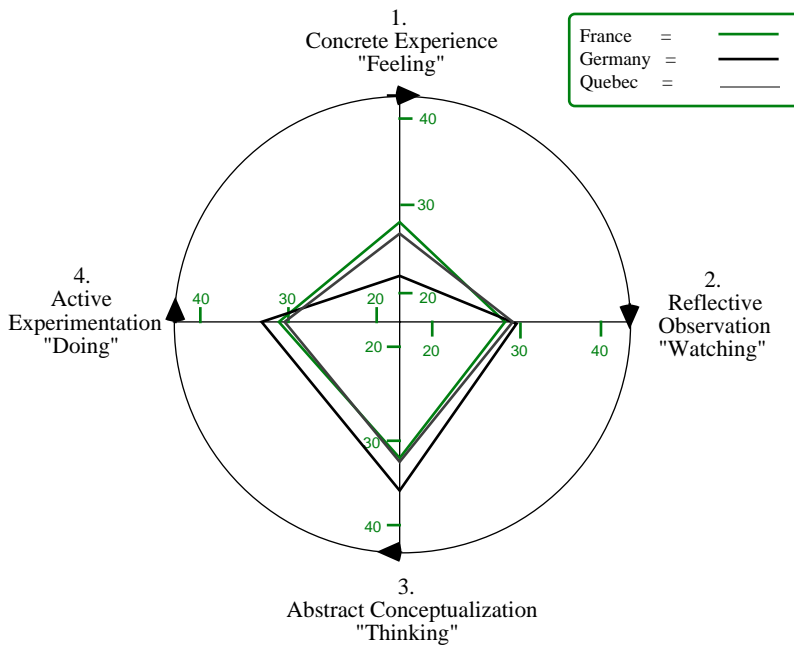


Fig. 5. Learning cycle and cultural profile.

than subjective–cognitive orientation. Finally, the higher AE (doing, $p = 0.0392$) score of German students indicates the importance that seems to be attributed to activity, and the value of “getting things done.” In general, the results of the French and Quebecois students are very close.

The following Fig. 5 shows a profile of the statistical results within the learning cycle.

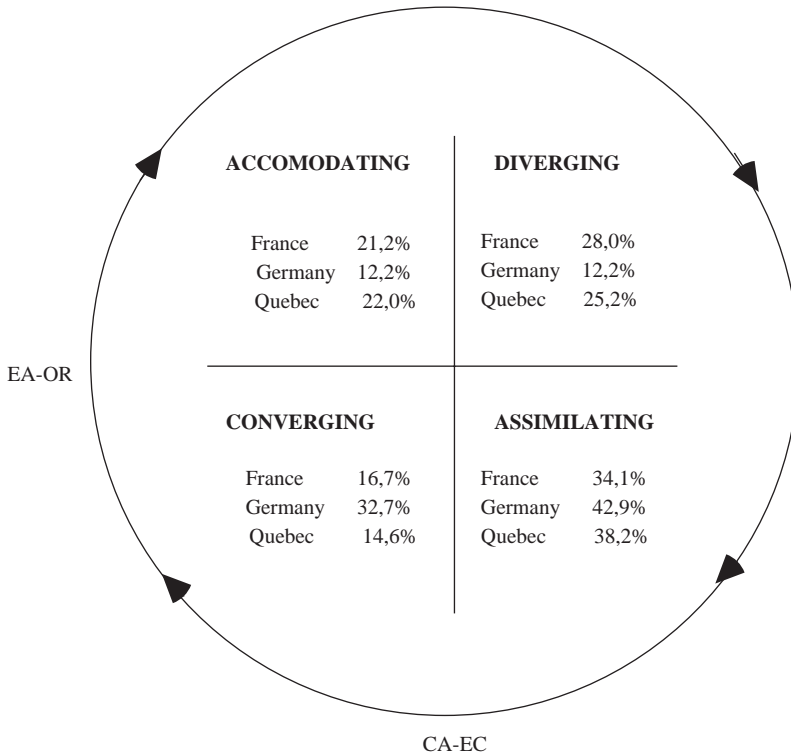


Fig. 6. Learning style types and cultural group.

Fig. 6 shows the four learning style types by reporting percentages of each culture in each quadrant. A majority of the German students, 42.9%, is found in the assimilating quadrant but only 38.2% of the Quebecois students and 34.1% of the French students. A majority of German students is also in the converging quadrant with 32.7% but only 16.7% of French and 14.6% of Quebecois students. Assimilating and converging learning style types have a strong cognitive orientation. The French and the Quebecois students are more to be found in the opposite quadrants with a more emotional orientation: converging and accommodating. 28% of the French and 25% of the Quebecois students represent a diverging learning style type and 22% of Quebecois and 21.2% of French students represent an accommodating learning style type. In all quadrants, the students from France and Quebec are more close together than their German counterparts.

4.4. Limitations

Some critical perspectives in general concerning learning theories and instruments such as the LSI are treated by Hayes & Allinson (1988), Reynolds (1997), Jonassen & Grabowski (1993) and Kayes (2002). With regard to this study, some limitations of

the results and the use of the LSI as a tool for demonstrating cultural differences have to be mentioned:

- The LSI is a *self-evaluation test*. Thus it gives only a general idea of how a person views him—or herself as a learner (self-concept). It does not rate learning style preferences through standards of behavior; it only gives relative strengths within the individual learner, not in relation to others. Other information sources should be gathered from friends, instructors and co-workers.
- The LSI uses an *ipsative measure* for cross-subject comparison. This means that a high score on one dimension results in a correspondingly low score on another dimension, which leads to a self-referential nature.
- The data of the sample is acquired only from a *questionnaire* (not from observed behavior) and the results were analyzed only on a collective/group level (age, education, gender and nationality).
- The instrument LSI has a *cultural and linguistic bias* concerning the content. This makes the translation or the comprehension difficult for persons from another culture and for those who speak a language other than English. Wording in the questions may be vague on account of semantic problems.
- The LSI *decontextualizes the learning process* and provides only some factors that influence learning. Especially, in comparative and intercultural research, it would be interesting to describe a specific international learning situation and then to analyze the specific attitude of the respondents.
- Important *cultural dimensions*, such as power distance, uncertainty avoidance (Hofstede, 2001) or information flow, are not directly measured by the LSI, nor are stereotypes, which can seriously influence cross-cultural interactions. This may explain the measured “cultural proximity” between French and Quebecois students, which does not necessarily seem to be true in real interactions.
- This point leads to another critical subject: this study has a *comparative* and not an *intercultural* orientation. Thus, it may give some indications for problems in *intercultural* interactions, but does not directly measure these interactions.

In general, based on the research design, the findings are not generalizable to the French, German and Quebecois culture, but they pertain only to business students of these areas. However, from these results, it was possible to infer some cross-cultural differences in learning preferences. Culture appears to exert a measurable influence on the process, which an individual uses to organize and make sense of his environment. In this case, Kolb’s model provides a possible tool for looking into how differences might be categorized.

5. Implications for cross-cultural training

The main goal of cross-cultural training is to develop cross-cultural effectiveness and competence (Bennett, 1986; Dinges & Baldwin, 1996; Gudykunst, 1984) by moving from ethno-centric to ethno-relative stages (Bennett, 1993; Hammer 1998).

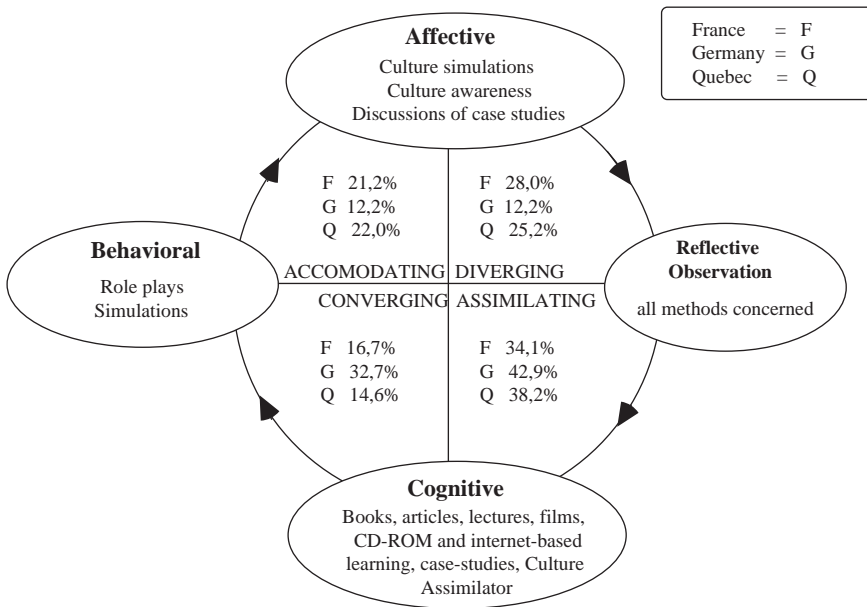


Fig. 7. Training methods and learning style types

Cross-cultural training can never be a “cure-all” but it can make important contributions to people’s adjustment (Bolten, 1999; Brislin & Yoshida, 1994; Hannigan, 1990; Landis & Bhagat, 1996; Müller-Jacquier, 2000).

Studies on cross-cultural competences use often the three-factor model with *cognitive*, *affective* and *behavioral* elements, once introduced by Gudykunst, Wiseman and Hammer (1977). In this respect, training should provide knowledge and information—“cognitive”—increase awareness and understanding—“affective”—and develop skills—“behavior” (Bennett, 1986). A lot of training methods already exist. Some well-known training methods include “Culture Awareness”, the “University Model”, or the “Culture Assimilator”. However, in training practice, no clear distinction between these methods is made, because normally a trainer does not stick to one method but applies a variety of approaches depending on the participant’s profile. Even if there is a lot of interpenetration, known training methods often have a strong relation to one of the three elements, which also correlate with the four learning styles.

To be effective, trainers have to be aware of their own teaching styles and the learning style of the participants. Depending on the dynamics of cross-cultural training situations and the participants, the trainer may change or adopt his methods and may rarely stick to one method. Good intentions are not enough—trainers need a structure. For this reason, Fig 7 shows a combination of Kolb’s learning styles types, known training methods, and the result of this study.

Based on the empirical results of this study, it can be assumed that participants with a high CE score—as in the sample of French and Quebecois and female students—may

prefer culture affective oriented methods, such as culture awareness exercises or discussions. Participants with a high AC score—as in the sample of German or male students—may prefer cognitive information transfer by lectures or articles. Finally, participants with a high score of AE may prefer a behavioral approach of interactions, simulation games and role-plays. But, due to the diversity of learning styles within a group, “an effective intercultural training pedagogy will use learning activities that address all of Kolb’s basic four learning styles” (Paige, 1996, p. 151).

6. Conclusion and perspectives

In conclusion, due to cultural socialization and mental programming, learning styles are culture-bound cognitive schemes. When managers from different cultures communicate and work together in multinational teams or training situations, different learning styles meet, influencing both learning and working.

Persons from different cultural backgrounds, such as the French, the German and the Quebecois, may differ in the way they think and act. The LSI findings above show that German students have significantly different learning style preferences when compared to French and French–Canadian students. Significant cultural distance therefore really seemed to exist between these cultures, which may indicate that Germans might have some difficulties in interacting with French and Quebecois (Barmeyer, 1998; Segal, 1990). The close LSI findings of students from France and Quebec may be explained by the French heritage of Quebec (Barmeyer 1998; Dupuis, 1995; Kolboom, 2001).

Despite cross-cultural irritations and problems, the diversity of learning styles and working styles is also a precious source of cultural synergy because various ways of problem solving lead to a greater variety of solutions. Cross-cultural training could be more efficient if the culturally bound learning styles were taken into consideration. Understanding one’s preferred learning style and that of others helps to understand areas of weakness, and gives people the opportunity to work on becoming more proficient in other modes or it helps to realize strengths, which are useful in cross-cultural training and management situations.

Knowing more about learning styles, trainers may orient their training methods according to the aspirations and learning preferences of the participants, who can differ, for example, in gender or culture, as was shown in this article. An analysis of the participants’ learning styles at the beginning of a training session may be very useful and can make a real improvement in the outcome of the training. Nevertheless, as the literature and practice show, the exploration of learning styles and their use in cross-cultural trainings has just begun.

References

- Abramson, N. R., Keating, R. J., & Lane, H. W. (1996). Cross-national cognitive process differences: A comparison of Canadian, American and Japanese managers. *Management International Review*, 2, 123–147.

- Atkinson, G. (1988). Reliability of the learning style inventor. *Psychological Reports*, 62, 755–758.
- Barmeyer, C. I. (1998). Le Québec et l'Allemagne. Aspects interculturels du management. In I. Kolboom, & I. Lieber (Eds.), *Le Québec Société et Cultures. Les enjeux d'une francophonie lointaine* (pp. 91–105). Dresden: University Press.
- Barmeyer, C. I. (2000). *Interkulturelles Management und Lernstile. Studierende und Führungskräfte in Frankreich, Deutschland und Quebec*. Frankfurt/New York: Campus.
- Barmeyer, C., & Mayrhofer, U. (2002). Le management interculturel: Facteur de réussite des fusions-acquisitions internationaux. *Gérer et Comprendre. Annales des Mines*, 70, 24–33.
- Belenky, M., Clinchy, B., & Goldberger, N. (1986). *Womens ways of knowing*. New York: Basic Books.
- Belle, F. (1990). Les femmes cadres. Quelles différences dans la différence? In J.-F. Chanlat (Ed.), *L'individu dans l'Organisation* (pp. 431–465). Québec: Les Presses de l'Université de Laval.
- Bennett, J. M. (1986). Modes of cross-cultural training. *International Journal of Intercultural Relations*, 10, 117–134.
- Bennett, M. J. (1993). Towards ethnorelativism: A developmental model of intercultural sensitivity. In M. R. Paige (Ed.), *Education for the intercultural experience* (pp. 21–71). Yarmouth: Intercultural Press.
- Bolten, J. (1999). Interkultureller Trainingsbedarf aus der Perspektive der Problemerkennung entsandter Führungskräfte. In K. Götz (Ed.), *Interkulturelles Lernen/Interkulturelles Training* (pp. 61–80). München: Rainer Hampp.
- Brislin, R. W., & Yoshida, T. (1994). The content of cross-cultural training: An introduction. In R. W. Brislin, & T. Yoshida (Eds.), *Improving intercultural interactions* (pp. 1–14). London: Sage Publications.
- Certo, S. C., & Lamb, S. W. (1980). An investigation of bias within the learning style inventory through factor analysis. *Journal of Experiential Learning and Simulation*, 2, 1–7.
- Colongue, Ray. (1996). *The impossible nation. The longing for homeland in Canada and Quebec*. Stratford: Mercury Press.
- Dewey, J. (1938). *Experience and education*. New York: Dover Publications.
- Dinges, N., & Baldwin, K. (1996). Intercultural competence. A research perspective. In D. Landis, & R. Bhagat (Eds.), *Handbook of intercultural training* (pp. 106–123). London: Sage.
- Dupriez, P., & Simons S. (Ed) (2000). *La résistance culturelle. Fondements, applications et implications du management interculturel*. Bruxelles: De Boeck Université.
- Dubar, C. (1991). *La Socialisation. Construction des identités sociales et professionnelles*. Paris: Armand Colin.
- Dupuis, J.-P. (1995). *Le modèle québécois de développement économique*. Québec: Presses Inter Universitaires.
- Game, E. M. (1994). Masculin/féminin. In H. Riffault (Ed.), *Les Valeurs des Français* (pp. 227–249). Paris: Presses Universitaires de France.
- Geertz, C. (1973). *The interpretation of cultures*. London: Hutchinson.
- Gudykunst, W. B. (1984). Dimensions of intercultural effectiveness: Culture specific or culture general? *International Journal of Intercultural Relations*, 8, 1–10.
- Gudykunst, W. B., Wiseman, R., & Hammer, M. (1977). An analysis of an integrated approach to cross-cultural training. *International Journal of Intercultural Relations*, 1, 99–110.
- Hammer, M. R. (1998). A measure of intercultural sensitivity: The intercultural development inventory. In S. Fowler, & M. Fowler (Eds.), *The intercultural sourcebook*. Yarmouth: Intercultural Press.
- Hampden-Turner, C., & Trompenaars, A. (2000). *Building cross-cultural competence*. London: Yale University Press.
- Hannigan, T. (1990). Traits, attitudes, and skills that are related to intercultural effectiveness and their implications for cross-cultural training: A review of the literature. *International Journal of Intercultural Relations*, 14, 89–111.
- Hay/McBer (1999). *Learning style inventory*. Version 3, Boston.
- Hayes, J., & Allinson, C. W. (1988). Cultural differences in the learning styles of managers. *Management International Review*, 28, 75–80.

- Hofstede, G. (1980). *Culture's consequences. International differences in work-related values*. Beverly Hills: Sage.
- Hofstede, G. (1986). Cultural differences in teaching and learning. *International Journal of Intercultural Relations*, 10, 301–320.
- Hofstede, G. (Ed.). (1998). *Masculinity and femininity. The taboo dimension of national cultures*. London: Sage.
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. London: Sage.
- Holman, D., Pavlica, K., & Thrope, R. (1997). Rethinking Kolb's theory of experiential learning in management education. *Management Learning*, 28, 135–148.
- Jackson, T. (1995). European management learning. A cross-cultural interpretation of Kolb's learning cycle. *Journal of Management Development*, 6, 42–50.
- Jonassen, D. H., & Grabowski, B. L. (1993). *Handbook of individual differences, learning, and instruction*. New Jersey: Lawrence Erlbaum.
- Kayes, C. D. (2002). Experiential learning and its critics: Preserving the role of experience in management learning and education. *Academy of Management Learning and Education*, 2, 137–149.
- Kolb, D. A. (1981). Learning styles and disciplinary differences. In A. W. Chickering (Ed.), *The Modern American College* (pp. 232–255). San Francisco: Jossey-Bass.
- Kolb, D. A. (1984). *Experiential learning. Experience as the source of learning and development*. New York: Prentice Hall.
- Kolb, A., Kolb D.A. (2003). *Bibliography on experiential learning theory*. www.learningfromexperience.com/research, 30.3.2004.
- Kolboom, I., Lieber, I. (1998). (Ed). *Le Québec. Société et Cultures. Les enjeux d'une francophonie lointaine*. Dresden: University Press.
- Kolboom (2001). Québec—Deutschland: Parallelen, Analogien, Vergleiche—ein Versuch. *Zeitschrift für Kanada-Studien*, 39, pp. 109–124.
- Landis, D., & Bhagat, R. (1996). A model of intercultural behavior and training. In D. Landis, & R. S. Bhagat (Eds.), *Handbook of intercultural training* (pp. 1–13). London: Sage.
- Lewin, K. (1951). *Field theory in social sciences*. New York: Harper & Row.
- McBer & Company (1985). *LSI—learning style inventory*. Boston: Self-Scoring Inventory and Interpretation Booklet.
- Müller-Jacquier, B. (2000). Linguistic awareness of cultures: Grundlagen eines Trainingsmoduls. In J. Bolten (Ed.), *Studien zur internationalen Unternehmenskommunikation* (pp. 18–48). Leipzig: H. Popp.
- Nishida, H., Hammer, M. R., & Wiseman, R. L. (1998). Cognitive differences between Japanese and Americans in their perceptions of difficult social situations. *Journal of Cross-Cultural Psychology*, 4, 499–524.
- Oxford, L.R., Anderson, N.J. (1995). A crosscultural view of learning styles. In: *Language teaching* (Vol. 10, pp. 201–215). Cambridge: Cambridge University Press.
- Paige, R. M. (1996). Intercultural trainer competencies. In D. Landis, & R. S. Bhagat (Eds.), *Handbook of intercultural training* (pp. 148–164). London: Sage.
- Parsons, T. (1952). *The social system*. New York: Free Press.
- Philbin, M., Meier, E., & Huffmann, S. (1995). A survey of gender and learning styles. *Sex Roles*, 7/8, 491.
- Piaget, J. (1970). *The place of the sciences of man in the system of science*. New York: Harper Touchbooks.
- Reynolds, M. (1997). Learning styles: A critique. *Management Learning*, 28, 115–133.
- Segal, J.-P. (1990). Les pièges du management interculturel. Une aventure franco-québécoise. *Gérer et Comprendre*, 21, 47–58.
- Sternberg, R. J. (1997). *Thinking styles*. Cambridge: Cambridge University Press.
- Tata, J. (2000). Implicit theories of account-giving: Influence of culture and gender. *International Journal of Intercultural Relations*, 24, 437–454.
- Tyler, L. (1978). *Individuality*. San Francisco: Jossey-Bass.
- Vince, R. (1998). Behind and beyond Kolb's learning cycle. *Journal of Management Education*, 22, 304–319.

Further reading

- Dinges, N. (1983). Intercultural competence. R.W. dans Brislin, & H.C. Triandis (dir.), *Handbook of Intercultural Training* (pp. 176–202). New York: Pergamon.
- Highhouse, S., & Doverspike, D. (1987). The validity of the learning style inventory 1985 as a predictor of cognitive style and occupational preference. *Educational and Psychological Measurement*, 47, 749–753.
- Lieberman, D. A. (1991). Ethnocognitivism and problem solving. In L. A. Samovar, & R. E. Porter (Eds.), *Intercultural communication* (pp. 229–234). Belmont: Wadsworth.
- Pateau, J. (1998). *Une étrange alchimie. La dimension interculturelle dans la coopération franco-allemande*. Paris: CIRAC.