**Facilitating Personalized Learning in Higher Education: 39 a Questionnaire to Understand Interpersonal Competence and Lesson Related Practices**

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### Facilitating Personalized Learning in Higher Education: a Questionnaire to Understand Interpersonal Competence and Lesson Related Practices

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### Abstract

This research tries to highlights the practices to personalize learning used, by faculty members of the University of Padua, Italy, according to the students' perception. The literature analysis allowed to identify a questionnaire structured on the perceptions of a group of American students on what could be called a personalizing learning experience. This questionnaire has been translated and adapted for the Italian context. From the data obtained administering it at university of Padua is possible to conclude that the items translated and adapted for the Italian context show good reliability if grouped following the original dimensions (Waldeck, 2007) and the exploratory factor analysis confirms two main dimensions related to interpersonal competence of the teacher and to practices in relation to the lesson.

*Keywords:* personalized learning, survey research design

This research, realized through a survey research design, tries to highlights the practices to personalize learning used, by faculty members of the University of Padua, Italy, according to the students' perception. It's important here to mention that several scholars identify strong deficiencies in the scientific literature on the topic of personalized learning. Hartley (2007), in particular, shows that, despite the interest of the governments and the amount of works on the subject, there is a lack of clearness in the definition and application of personalization" (p. 635). The author refers vagueness about the implications of personalization in the pedagogical relationship between teacher and student. Moreover the majority of the works in this field, done by scholars and government organizations, can be attributed to the study and implementation of personalization in primary and secondary schools. Although there are attempts to develop models of personalization in adult education, (i.e. the European project *Leading Elderly and Adult Development Laboratory* in 2009, as a part of the European program on *Life Long Learning*), only few attempts to empirically study the practices of personalization at university have been done (Waldeck, 2006). These lacks, evidenced by the literature, justify the need to initiate a path to provide conceptual clarification and to identify personalization processes.

This empirical work has been developed on the base of the collection and analysis of bibliographic sources available in literature on the topic of personalized learning. This allowed to reach a first theoretical clarification about the elements of the construct of personalization in learning. Going forward with the collection and the analysis of national and international

literature, the studied resources helped to define two specific fields of application in the university context: the practice of personalized learning and the organization of learning support services. The practice of personalized learning, first area identified in the literature, includes conceptual categories such as the personalized relationship between teacher and student (Jenkins & Keefe, 2002; DfES, 2004; Black, 2007; Courcier, 2007; Waldeck, 2006; 2007; LEADLAB project 2009; Bray & McClaskey, 2013), the practices implemented in the classroom (Jenkins & Keefe, 2002; DfES, 2004; Black, 2007; Courcier, 2007; Waldeck, 2006; 2007; LEADLAB project 2009; Powell, & Kusuma-Powell, 2012; Richardson, 2012; Bray & McClaskey, 2013), the social nature of personalized learning (Mancuso, 2001; Jenkins & Keefe, 2002; Black, 2007; Courcier, 2007; Waldeck, 2006; 2007; LEADLAB project, 2009; Bray & McClaskey, 2013), and the role of technology (Mancuso, 2001; Richardson, 2012; Bray & McClaskey, 2013). In the second area, the organization of learning support services, there are concepts such as education for change (Mancuso, 2001; Leadbeater, 2004a, 2004b; Hargreaves, 2006; Mc Lester, 2011), the principle of equity (Mancuso, 2001; DfES, 2004; Courcier, 2007; Mc Lester, 2011), the relationship between institution and community (DFeS, 2004; Leadbeater, 2004a, 2004b; Courcier, 2007; Black, 2007; Mc Lester, 2011), the role of technology for the organization (Mancuso, 2001; Leadbeater, 2004a, 2004b; Software & Information Industry Association, 2010; Mc Lester, 2011) and the learning evaluation (Mancuso, 2001; Software & Information Industry Association, 2010; Powell, & Kusuma-Powell, 2012).

The literature analysis also allowed to identify a questionnaire structured on the perceptions of a group of American students on what could be called a personalizing learning experience. This instrument allowed to collect data that led to the identification of three main dimensions (Waldeck, 2007):

- *Instructor accessibility* that includes the instructors' behaviors and efforts to be accessible to the students in a variety of location, during working hour and private time, and through different communication channels to support their learning.
- *Interpersonal competences* that include the instructors' ability to communicate immediacy, friendliness, warmth, and approachability.
- *Course related practices* that reflect the instructors' ability to organize and manage their courses that could be adapted to students' learning needs.

This questionnaire has been translated and adapted for the Italian university context with the intent to solve the following research question:

- Are the dimensions of the original questionnaire different from those of the translated questionnaire administered to the students at the University of Padua?

This empirical work tries to indicate behaviors and attitudes to be adopted by Italian faculty members in their relationship with students because "the mandate to deliver personalized education poses challenges to faculty" (Waldeck 2007 p.410) and the lack of researches

indicating guidelines to realize personalized learning in class does not help faculty members and students (in understanding) to understand the real value of personalization (Waldeck, 2007). This research is developed using students' perception, but the audience of this dissertation is composed by faculty members and decision makers of the Italian university system. Faculties could receive information for personalized learning both inside and outside the classroom. The decision makers will have a resource for a deeper reflection on how to influence the university organization towards a more attentive sight to students' needs.

## Method

Survey research designs are procedures that differ from experimental designs because they do not involve a specific treatment realized by researchers on participants. In this procedure researchers do not manipulate variables and it is not possible to explain cause-effect relationships as it is in experimental researches (Creswell, 2008). Survey research designs describe trends in data and for this reason it is similar to correlational design, but its principal objective is "learning about a population and less on relating variables or predicting outcomes" (Creswell, 2008 p.388). This survey research adopts a cross-sectional design and it "collects data at one point in the time" (Creswell, 2008 p.389) giving the possibility to understand attitudes, beliefs, opinions, or practices.

The questionnaire consists of 20 items with a 7 points Likert scale (1= completely disagree 7= completely agree) investigating the level of learning personalization perceived by students in their academic courses. It has been translated and adapted from the work of Waldeck (2007), to be used in the specific Italian academic context. The first phase of the research consisted in the selection of the unit of analysis (Corbetta, 1999). The unit of analysis is identified as the didactic relationship between faculty members and students taking place in the classroom. To collect data on this relationship, we decided to choose the student as a survey unit. In the second phase, the original questionnaire has been translated and adapted for the Italian context. The third phase is related to the selection of courses in which to realize the administration of the questionnaire that was carried out, in the fourth phase, from March until July 2014 on a total of 1242 (M = 480 F = 748) students. The sample of students attending 28 courses of 18 different undergraduate and graduate degree programs had a range of age going from 19 to 59 and it can be defined as a convenience sample. In fact, due to the items related to attitudes and behaviors, faculty members gave their availability for the administration of the questionnaire in their own courses. In the fifth phase collected data were coded to be analyzed through statistic softwares such as Excel 2010, PSPP and SPSS 21. Data analysis was conducted using the following statistics:

- Cronbachs'α, to understand the reliability of items in the dimensions of the questionnaire.
- Factor Analysis, to understand the presence of factors equal to or different from those of Waldeck's work (2007).

## Results

Before proceeding with the factorial analysis to determine the dimensions that group the items in the Italian questionnaire, the reliability of Italian items grouped in the dimension of the original questionnaire has been calculated. These dimensions are the instructor accessibility, the interpersonal competences, and the course related practices (Table 1).

Table 1
*Cronbachs' Value for Italians Items Grouped Following Dimensions in the Original Questionnaire*

| Items reliability (Waldeck, 2007) | Items reliability (Italian questionnaire) |
|---|---|
| instructor accessibility (11 items) Cronbachs' α = .91 (M=44; SD=11.7) | instructor accessibility (7 item) Cronbach α = .72 (M=28.08; SD=10.4) |
| interpersonal competences (7 items) Cronbachs' α = .86 (M=24.5; SD = 4.82) | interpersonal competences (5 items) Cronbachs' α = .77 (M = 23.8; SD = 6.98) |
| course related practices (9 items) Cronbachs' α = .89 (M= 20.3; SD = 2.94) | course related practices (8 items) Cronbachs' α = .79 (M = 30.3; SD = 11.46) |

An exploratory factorial analysis identifies four dimensions that explain the 55% of the total variance of the data expressed by students answering the questionnaire. Reading the items grouped in this four dimensions, it is possible to recognize that the same items compose the dimensions of interpersonal competences and practice related to courses in the original questionnaire. The items of the other two less defined dimensions could be interpreted as having a meaning related to a general support realized by the faculty member. Using Cronbachs' alfa, the reliability of predominant dimensions determined by the factorial analysis has been tested again (Table 2).

Table 2
*Cronbachs' Value of Dimensions Identified in the Italian Questionnaire*

| Items reliability (Waldeck, 2007) | Items reliability (Italian questionnaire) |
|---|---|
| interpersonal competences (7 items) Cronbachs' α = .86 (M=24.5; SD = 4.82) | interpersonal competences (7 items) Cronbachs' α = .88 (M=36.4; SD=10.4) |
| course related practices (9 items) Cronbachs' α = .89 (M= 20.3; SD = 2.94) | course related practices (9 items) Cronbachs' α = .78 (M= 32.9; SD = 12.27) |
| | support relation realized by the faculty (5 items) Cronbachs' α = .6 (M= 14.3; SD = 7.84) |

## Conclusions and Discussions

From the results obtained in the questionnaire we can conclude the following:

- The items translated and adapted for the Italian context show good reliability if grouped following the original dimension (Waldeck, 2007).

- The exploratory factor analysis confirms two main dimensions related to "interpersonal competence of the teacher" and to "practices in relation to the lesson".

Through the analysis and the interpretation of the Italian students' perception, it is possible to state that the faculty members' interpersonal competences and the practices in relation to the courses are two dimensions that can be used to understand the level of personalized learning, facilitated by faculty members in their courses.

Starting from the work of Waldeck (2006, 2007) we can argue that, among the strategies helping faculty members to establish interpersonal relationships, there should be behaviors and attitudes as being sociable, friendly, helpful and available when learners deal with personal issues, as well as being cozy, an expert communicator, and promote the participation of students during the lessons. Among the strategies indicating the practices to be adopted during the course, it is possible to detect behaviors and attitudes which help faculty members to think of activities that try to meet the interests of the students, to recognize that the learning needs of individuals or groups of students may be different from the rest of the class, to be available to modify some parts of teaching based on the demands of the students. Still referring to personalizing practices that can be made in the classroom, the faculty member would be flexible in the prerequisites to attend the course, able to recommend specific learning paths and experienced professionals to explore topics of interest, able to propose various activities different from those proposed by other faculty members to help students during the lesson and encourage them to work together. The questionnaire therefore seems to be a good instrument for understanding the occurrence of these two factors in the relationship that exists, during the course, between teacher and student.

Probably the main limit of this empirical work is related to the impossibility to generalize the results due to the nature of the sample, that is, as said before, a convenience sample. In any case it is nevertheless possible to promote the use of this questionnaire considering the amount of students who, answering to the items, have given a contribution to the strength of our data. This limit introduces one of the two future developments in which this questionnaire can be involved. Further administration can be developed, using probabilistic samples, which will contribute to the improvement of the instrument and to its opportunity to generalize results. The second future development that will help to highlight practices for personalized learning is to use the items and the dimension of this questionnaire to realize an instrument that could interview faculty members to understand their points of view on practices suggested to facilitate personalized learning.

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