EXPLORING FACULTY PERCEPTIONS TOWARD UDL AND NON-TRADITIONAL STUDENTS IN HIGHER EDUCATION. THE D.A.N.T.E.-U. PROJECT

ESPLORANDO LE PERCEZIONI DEI DOCENTI NEI CONFRONTI DELL'UDL E DEGLI STUDENTI NON TRADIZIONALI NELLE UNIVERSITÀ. IL PROGETTO D.A.N.T.E.-U.

Andrea Fiorucci
Università del Salento
andrea.fiorucci@unisalento.it

Alessia Bevilacqua
Università degli Studi di Macerata
a.bevilacqua11@unimc.it

Elena Abbate
Università del Salento
elena.abbate@unisalento.it

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ABSTRACT
The study, presenting the results emerging from a survey conducted at four Italian universities partner of the D.A.N.T.E.-U. network, explores the perceptions of faculty members in the Primary Education Sciences degree program with respect to non-traditional student population needs and to the degree of adherence to or divergence from UDL principles in their university teaching practices. The results show that universities struggle to meet the increasingly diverse educational needs of students and faculty members rarely adopt UDL-based teaching strategies.

Lo studio, che presenta i risultati di un'indagine condotta in quattro università italiane partner della rete D.A.N.T.E.-U., esplora le percezioni dei docenti del corso di laurea in Scienze della Formazione Primaria rispetto ai bisogni della popolazione studentesca *non traditional* e al grado di adesione o divergenza dai principi dell'approccio UDL nelle loro pratiche didattiche universitarie. I risultati mostrano che le università faticano a soddisfare i bisogni formativi sempre più diversificati degli studenti e che i docenti raramente adottano strategie didattiche basate sull'UDL.

KEYWORDS
UDL, Higher education, Non-traditional students
UDL, Università, studenti non tradizionali

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1. UDL in Universities: A (Possible) Response to the Needs of Non-Traditional Students

University represents a crucial environment for the education of future citizens and professionals and, as such, bears the responsibility of ensuring accessible and inclusive learning opportunities. This commitment extends beyond the provision of support services for students with specific educational needs (such as university centers for inclusion); it necessitates a comprehensive reorganization of teaching practices for the curriculum studiorum to be designed to respond effectively and flexibly to the diverse needs of the students. An inclusive approach, in fact, does not merely seek to compensate for individual difficulties, but rather aims to recognize and enhance each student's unique characteristics and potential, promoting equal and participatory learning experiences.

In this context, UDL emerges as a fundamental instructional design framework for overcoming barriers that limit access to university-level knowledge and for providing all students with genuine opportunities for academic success, regardless of their individual characteristics or starting conditions.

The implementation of complex inclusion processes has led to the adoption of UDL in schools; however, within higher education, its application remains limited to a few disciplinary areas. It is precisely in academic contexts that a gap in the implementation of inclusive teaching practices can be observed. This is largely due to backward, elitist and exclusive dynamics that have traditionally characterized university education, resulting over time in the delivery of instruction primarily designed for a homogeneous student population from socially and culturally privileged backgrounds.

The socio-economic transformations of recent decades have profoundly impacted the social composition of the university student population, marking an irreversible shift from elite institutions to mass and globalized educational settings (Schuetze & Slowey, 2002), where “mass” refers to those student groups historically excluded or underrepresented. A diverse cohort of non-traditional students (Chung et al., 2014), with heterogeneous social and cultural backgrounds, which translate to complex individual experiences and multifaceted life demands, (such as parenting, employment, caregiving, disability etc.). Consequently, the university, once conceived as an “unassailable and hostile fortress of knowledge” (Fiorucci et al., 2024), or, as described in literature, “an instrument of social inequality and reproduction” (Stentiford & Koutsouris, 2022, p. 1), can no longer evade its

educational responsibility about these changes. It must reconsider the rules, content, methods, and structure of its academic programs in order to better align with the specific life circumstances, disadvantages, or vulnerabilities of its students. No longer being a *turris eburnea* detached from its surrounding context (Bombardelli, 2016), the entire academic community should learn how to adapt to this variability. UNESCO (1998) with its *World Declaration on Higher Education for the Twenty-First Century* emphasized the crucial role of university communities in shaping pathways for change and development through the diversification of educational models and the adoption of organizational, administrative, and pedagogical flexibility. Such flexibility is to ensure, on the basis of equal opportunity, access to university education, continuity in academic pursuits, and active participation in academic life for all students (Coyne et al., 2012). On the other hand, standardized, rigid, and conventional educational programs, designed around an idealized average student, fail to ensure either educational quality or engagement in the learning process. Instead, they represent risk factors that can contribute to academic failure, dropout, and exclusion.

Universities must not only commit to promote the development of pedagogical, methodological, and digital competencies among faculty members, but also develop the implementation of evaluation processes and systems aimed at assessing teaching performance. To navigate these changes, the contribution of pedagogical and methodological expertise is fundamental (Serbati & Felisatti, 2022). This movement of transformation and critical rethinking has found its epistemological and normative foundation in the practices commonly referred to as *faculty development*, and its organizational locus in *Teaching and Learning Centers* (TLCs).

Confirming its role as an effective catalyst for change (Murawski & Scott, 2021), UDL fits seamlessly within a proactive and flexible pedagogical framework, where the universality of the methodological approaches at the core of instructional design serves as a means of valuing diversity and ensuring genuine accessibility to the learning process. UDL "enables effective progress towards inclusivity" (Savia, 2016, p. 22) by pre-emptively designing interventions that are valid for all students, both traditional and non-traditional, thus eliminating the need for subsequent modifications or specialized planning. This marks a paradigmatic shift in which learning environments are conceived and developed around universal parameters—such as multiple means of engagement, representation, and expression—guiding teaching practices toward the formation of expert learners:

determined, motivated, and capable of strategically managing resources to achieve their learning goals.

Although many educators recognize the value of inclusive teaching strategies, the literature highlights a significant gap between theoretical awareness and the practical application of UDL methodologies (Gawronski et al., 2016; LaRocco & Wilken, 2013; Lombardi et al., 2015; West et al., 2016). The limited implementation of the model can be attributed to several challenges, including a lack of UDL knowledge among professors, insufficient knowledge, and a shortage of resources to integrate inclusive strategies into university teaching (Dallas et al., 2016). In addition to individual knowledge of the professors, structural and institutional factors also impact the adoption of UDL. The absence of support from the university, the lack of adequate teaching materials, and the difficulty in finding sufficient time to redesign curricula with an inclusive approach represent significant barriers to the effective implementation of the model (Lombardi et al., 2011; Lombardi & Murray, 2011; Raue & Lewis, 2011).

2. Needs of Non-Traditional Students and UDL-Based Teaching Practices: A Study on University Faculty Perceptions

2.1. Research Objectives

This contribution analyzes the preliminary data collected as part of a broader investigation carried out within the framework of the PRIN project D.A.N.T.E.-U. The primary objective of the study is to identify and map the educational needs of students enrolled in the single-cycle Master's degree in Primary Education (LM-85bis), specifically those in their fourth and fifth years, at the universities involved in the project (University of Salento, University of Padova, University of Roma Tre, University of Perugia).

The study aims to explore, from the perspective of university faculty: (1) their perceptions regarding the presence and needs of non-traditional students encountered in their professional experience; (2) the extent to which they perceive their teaching practices as aligned, or misaligned, with the principles of the Universal Design for Learning (UDL) framework. The LM-85bis degree program was selected due to its interdisciplinary structure, which includes a wide range of courses across various disciplinary fields. This makes it a meaningful context for

analyzing instructional dynamics and identifying potential challenges experienced by students.

2.2. Research Instruments and Analytical Procedures

To achieve the outlined objectives, the research unit at the University of Salento developed an anonymous questionnaire, structured into three sections and administered via the Microsoft Forms platform.

The first section, consisting of seven items, aims to collect socio-demographic and professional information about the professors (e.g., gender, age, academic affiliation, years of teaching experience, disciplinary sector, and courses taught).

The second and third sections consist of two questionnaires specifically developed by the UniSalento research team.

The first questionnaire, comprising 32 items, investigates university faculty perceptions regarding the presence and needs of non-traditional students. The items encourage reflection on a range of personal and social variables that characterize this student population, as identified in the literature (Chung et al., 2014) and further detailed in Table 1. The dimensions explored include demographic characteristics, employment status, prior experiences within the university system, specific educational needs, and socio-cultural factors. Together, these provide a comprehensive profile of the non-traditional student population.

Categories	Description Items
Age	Identify students over 25 years old at the time of enrollment.
Parenting	Investigate the presence of children and the age of the youngest.
Work	Examine employment during studies (type of contract, working hours).
Socio-Linguistic and Cultural Disadvantage	Analyze educational background, financial support, citizenship, and language needs..
Special educational Needs	Identify disabilities, specific learning disorders, use of assistive technologies, and impairments.

Dual enrollment	Identify simultaneous enrollment in multiple university programs
Student-athletes	Explore the dual student-athlete career and associated challenges
Caregiving	Identify family caregiving responsibilities and their impact on studies
Out-of-town students/commuter	Investigate housing conditions and challenges associated with living and studying away from home.

Table 1. Variables Related to the Construct of Non-Traditional Student

The second questionnaire, consisting of 30 items, invites faculty members to reflect on the degree of alignment or misalignment between their teaching practices and the principles of UDL. The items were developed in accordance with the objectives and the UDL Guidelines 3.0, with the aim of assessing the implementation of flexibility, accessibility and variability in teaching practices within university courses. In both questionnaires, faculty members described their experiences by rating each item using an ordinal scale commonly employed to measure event frequency. Each response option represents a progressively higher level of frequency, allowing responses to be classified by intensity: Never – Occasionally – Fairly often – Almost always – Always.

The analyses presented in the following sections first concern the descriptive elaboration of the sample's sociodemographic variables, collected through the demographic and professional information form provided to faculty members. Secondly, an analysis is presented of the data collected through the two ad hoc questionnaires, which were respectively designed to investigate faculty perceptions regarding the attendance and needs of non-traditional students, and the alignment of teaching practices with the principles of Universal Design for Learning (UDL). To complement the descriptive phase, a statistical analysis is also conducted to assess the psychometric properties of the two instruments used, with a specific focus on their internal reliability and the coherence of the emerging factorial structure.

2.3. Study Participants

The sample involved in this study consists of 66 university lecturers affiliated with the master's degree in Primary Education from four different Italian universities. The most represented institution is the University of Salento, with 24 participants, accounting for 36.4% of the total, followed by the University of Perugia with 17 participants (25.8%), the University of Padova with 15 participants (22.7%), and, finally, the University of Rom Tre with 10 participants (15.2%).

About gender distribution, there is a slight female predominance (51.5% female). As for age, the sample spans a broad range, from 33 to 68 years (standard deviation = 9.37), with a significant concentration of experienced and senior faculty members. This finding is also supported by the analysis of the variable "teaching experience in university education", which shows a clear predominance of faculty members with over 20 years of teaching experience (19 faculty members, accounting for 28.8%). However, the group of newly hired faculty or those with limited experience (from 0 to 5 years) is also substantial, represented by 16 participants (24.2%) (Table 2). The intermediate categories show a balanced distribution.

Variable	Category	n	%
Academic affiliation	University of Salento	24	36,4
	University of Perugia	17	25,8
	University of Padova	15	22,7
	University of Roma Tre	10	15,2
Genre	Female	34	51,5
	Male	31	47,0
	Unspecified	1	1,5
Teaching Experience	Over 20 years	19	28,8
	0-5 years	16	24,2
	6-10 years/11-15 years/16-20 years	31	47
Academic rank	Non-permanent faculty members (i.e. contract faculty)	26	39,4
	Associate Professor	21	31,8
	Researcher	12	16,7
	Full Professor	7	10,6

Table 2. Sociodemographic and Professional Variables

The analysis of the data regarding the courses taught by the faculty members of the Cdl *Scienze della Formazione Primaria* (LM-85 bis) highlights a clear predominance of certain disciplinary areas (Table 3). First and foremost, the area of pedagogical disciplines (SSD M-PED) represents the largest share of the sample, with 20% of the faculty involved. Following are Linguistics and Italian Literature (SSD L-FIL-LET), with a presence of 16.9%. Special attention is also given to media education, visual and sound arts, and cinema (SSD L-ART), as well as the study of contemporary, modern, and medieval history (SSD M-STO) and the fundamentals of ancient history (SSD L-ANT), collectively representing approximately 11% of the sample. Scientific disciplines hold a prominent position, with the inclusion of biology, natural science education, and ecology (SSD BIO), collectively representing approximately 7.7% of the faculty. This is complemented by physical education (SSD M-EDF). To a smaller extent, but still significant, there are representations in the fields of geography (SSD M-GGR), developmental psychology (SSD M-PSI), and physics education (SSD FIS), each accounting for approximately 4.6%. The area of mathematics education (SSD MAT) is represented by approximately 3.1% of the faculty, while the teaching of English (SSD L-LIN-12), anthropology (SSD M-DEA), educational sociology (SSD SPS), computer science (SSD INF), and science education (SSD CHIM) each account for a lower percentage. However, these fields contribute significantly to further enriching the educational landscape.

Overall, the distribution of disciplines among the responding faculty confirms the highly integrated and multidisciplinary nature of the curriculum in the CdL *Scienze della Formazione Primaria* (LM-85 bis).

Macro SSD	**Disciplinary Area**	**Number of Courses**	**(%)**
M-PED	General and Social Pedagogy, Special Pedagogy, General Didactics, Children's Literature	13	20,00
L-FIL-LET	Italian Linguistics and Literature	11	16,92
L-ART	Media Education, Fundamentals of the Arts, Cinema, Sound Education	6	9,23

M-STO	Contemporary, Modern, and Medieval History	6	9,23
BIO/07	General Biology,Teaching of Natural and Environmental Sciences, Ecology	5	7,69
M-EDF	Methods and Techniques of Physical Activity	4	6,15
L-ANT	Fundamentals of Ancient History	4	6,15
M-GGR	Geography	3	4,62
M-PSI	Developmental psychology	3	4,62
FIS	Fundamentals and Teaching of Physics	3	4,62
MAT	Mathematics Teaching with Laboratory, Fundamentals of Mathematics	2	3,08
L-LIN-12	English Language	1	1,54
M-DEA	Anthropology	1	1,54
SPS	Sociology of Education	1	1,54
INF	Computer Sciences	1	1,54
CHIM	Chemistry Teaching	1	1,54

Table 3. Distribution of Academic Disciplines

3. Analysis of University Faculty Members' Perceptions

3.1. Attendance and Needs of Non-Traditional Students in Higher Education

The analysis of responses provided by university faculty members has enabled a comprehensive understanding of the attendance of non-traditional students within academic contexts, as well as the teaching strategies implemented to address their needs. By examining the characteristics associated with this category of students, the data highlight several significant factors (Table 4). Approximately 9.09% of the

faculty report having never encountered working students, while 39.39% state they encounter them "fairly" frequently, and 16.67% report meeting them "almost always." Parent students were "occasionally" encountered by 33.33% of the faculty and "fairly" frequently by 27.27%, while 21.21% indicate that they have never had them among their students. The female students who are pregnant and encountered during their studies are more commonly reported: "occasionally" by 43.94% of the faculty, while 27.27% claim to have never encountered them. The presence of students with double enrollment, on the other hand, appears to be quite rare: 68.18% of the faculty state that they have never had students enrolled simultaneously in multiple university programs. Similarly, regarding student-athletes, 59.09% report having never encountered them. As for students with disabilities or special educational needs (SEN), approximately 30% of the faculty indicate that they have encountered such students "occasionally" or "fairly often" during their teaching experience. Foreign students are more frequently encountered: 30.30% of the faculty report meeting them "fairly often," and 21.21% state "almost always." A similar trend is observed for students with language needs, with 31.82% of the faculty reporting encounters "occasionally" and 25.76% "fairly often." Finally, students in socio-economic disadvantage are recognized "occasionally" by 37.88% of the faculty, indicating a significant presence within university programs.

Category	**Never (%)**	**Occasionally (%)**	**Fairly Often(%)**	**Almost Always (%)**	**Always (%)**
Working Students	9.09	30.30	39.39	16.67	4.55
Parent Students	21.21	33.33	27.27	12.12	6.06
Pregnant Students	27.27	43.94	18.18	7.58	3.03
Students with dual enrollment	68.18	18.18	7.58	4.55	1.52
Student-athletes	59.09	27.27	10.61	3.03	0.00
Students with disabilities	12.12	33.33	30.30	16.67	7.58
International students	10.61	28.79	30.30	21.21	9.09

Category	Never (%)	Occasionally (%)	Fairly Often(%)	Almost Always (%)	Always (%)
Students with language needs	15.15	31.82	25.76	18.18	9.09
Socio-economic disadvantaged students	28.79	37.88	22.73	9.09	1.52
Students with special educational needs (SEN)	21.21	34.85	24.24	13.64	6.06

Table 4. Frequency of Attendance of Non-Traditional Students (%)

With regard to teaching adaptations, the prevailing trend shows a moderate level of implementation. The data analysis reveals that, although such interventions are present, they have not yet been systematically adopted (Table 5). Regarding working students, 36.36% of faculty members report adjusting their teaching methods “occasionally”, while 24.24% state that they do so “fairly often”. Furthermore, 19.70% of faculty members adapt their teaching practices “almost always", and only 6.06% report making such adjustments “always”. In contrast, 13.64% of faculty members indicate that they do not implement any modifications. Similar patterns are observed for student parents: 39.39% of faculty members report adjusting “occasionally”, 25.76% do so “fairly often”, and 12.12% “almost always”. However, only 4.55% adapt their teaching “always”. In this case, a noteworthy proportion, 18.18%, reports not implementing any adjustments. For less represented categories, such as dual-enrolled students and student-athletes, the percentages of teaching adaptations are much lower. For dual-enrolled students, 63.64% of faculty members report never adapting their teaching, while for student-athletes, the proportion of those who make no adjustments is 59.09%. Similarly, adaptations for students with socio-economic disadvantages are also infrequent: 25.76% of faculty members state they do not make any changes, and only 19.70% make “fairly” frequent adjustments to their teaching methods. Greater attention, however, is observed with respect to students with disabilities and special educational needs. For these groups 31.82% of faculty members report making “fairly often” adjustments to their teaching, 19.70% state that they

intervene “almost always”, and 12.12% claim to adjust “always”, highlighting a more consistent awareness of the specific educational needs of these students.
A similar approach is observed with international students and those with language needs: 36.36% of faculty members say they adjust "occasionally" for international students and 34.85% for students with language needs, while 25.76% and 24.24% of faculty members, respectively, make changes "fairly often". Overall, the data suggest that the presence of non-traditional students is widely recognized by university faculty members. However, the related teaching interventions remain fragmented and inconsistent. The prevailing trend is to adapt teaching methods "occasionally," with a still limited number of faculty members reporting that they "always” intervene using a structured and intentional approach.

Category	**Never (%)**	**Occasionally (%)**	**Fairly Often (%)**	**Almost Always (%)**	**Always (%)**
Working Students	13.64	36.36	24.24	19.70	6.06
Parent Students	18.18	39.39	25.76	12.12	4.55
Pregnant Students	22.73	42.42	19.70	12.12	3.03
Students with dual enrollment	63.64	21.21	9.09	4.55	1.52
Student-athletes	59.09	25.76	9.09	4.55	1.52
Students with disabilities	7.58	28.79	31.82	19.70	12.12
International students	13.64	36.36	25.76	18.18	6.06
Students with language need	18.18	34.85	24.24	15.15	7.58
Socio-economic disadvantaged students	25.76	40.91	19.70	10.61	3.03
Students with special educational needs (SEN)	21.21	34.85	25.76	13.64	4.55

Table 5. Frequency of Teaching Adaptations for Non-Traditional Students (%)

The statistical analysis of the questionnaire's reliability and validity indicates favorable psychometric properties. The Cronbach's alpha coefficient calculated across the 30 items was 0.897, reflecting excellent internal consistency and confirming that the items reliably measure a common underlying theoretical construct (Table 6). The assessment of the latent structure through principal component analysis revealed a complex configuration (Table 7). The first factor accounts for 28.5% of the total variance, followed by a second factor contributing 9.2% and a third factor explaining 8.2%. Together, the first three factors account for approximately 46% of the variance, with additional smaller dimensions contributing to a complex yet interpretable representation of the data. Overall, the questionnaire demonstrates reliability as a tool for assessing university faculty members' perceptions of non-traditional students. Its strong psychometric properties support its use in educational research and the development of inclusive practices.

Index	Value
Cronbach's Alpha	0.897

Table 6. Internal Reliability - Cronbach's Alpha

Factor	Explained Variance (%)	Interpretation
Factor 1	28.54	Predominant area of differentiation
Factor 2	9.2	Second relevant dimension
Factor 3	8.18	Third minor dimension
Factor 4	6.55	Fourth residual dimension
Factor 5	5.69	Fifth residual dimension

Table 7. Factor Structure - Variance Explained by Principal Components

3.2. Adherence of University Teaching to the Universal Design for Learning (UDL) Framework

An analysis of the data reveals that the implementation of teaching practices aligned with the principles of Universal Design for Learning (UDL) is present but varies among the university faculty members involved in the study (Table 8). Overall, there is evident awareness of the importance of clarity in instruction, active student engagement, and the use of multiple means of communication. The most widely adopted practices include allocating time at the end of lectures for student questions and clarifications, reported as "always" by 89.39% of faculty members. Similarly, 77.27% of faculty members report that they "always" explain the relevance of the provided materials. Furthermore, 60.61% indicate that they offer regular feedback through multiple communication channels. These results indicate a strong emphasis on making instructional content accessible and demonstrate faculty members' responsiveness to students' needs.

Good levels of implementation are also observed about active student engagement: 50% of faculty members "always" seek student feedback on course organization, and 45.45% "always" promote peer collaboration. These practices are essential for fostering a collaborative and inclusive learning environment. However, some areas remain less developed.

The use of tools to support student autonomy (for example: time management guides) is "always" adopted by only 19.70% of faculty members, while 43.94% report never using them. The use of tools to support student autonomy (such as time management guides and reference models) is "always" employed by only 19.70% of faculty members, while 43.94% report never using them. Similarly, support for independent study planning is "always" promoted by only 15.15% of respondents, which indicates a significant gap in this key area for fostering students' autonomous learning skills. Access to alternative digital tools is 'always' guaranteed by only 24.24% of faculty members, while 13.64% report not promoting this practice at all. This highlights the need to improve technological competencies for inclusion. Regarding self-regulation (personal management strategies and reflection), only 19.70% of faculty members report promoting it "always". Additionally, practices for offering reflective activities and self-assessment are adopted at moderate levels, confirming the need to invest in teaching strategies that develop students' metacognitive skills. Overall, the variety of communication modes used (visual, auditory, kinesthetic) is well represented: 45.45% of faculty

members report using them "always," and 18.18% say they do so "almost always," indicating a strong focus on diversifying channels for accessing information.

The overall data suggest that, although the UDL approach is progressively being adopted in university contexts, there remain areas for improvement, particularly in practices aimed at fostering autonomy, emotional regulation, and the personalization of learning pathways.

Overall, these results highlight that the adoption of UDL practices is growing but still inconsistent: while practices related to accessible communication and feedback are well established, other areas such as supporting autonomy, accessibility, and promoting self-regulation require further development.

Item		Never (%)	Occasionally (%)	Fairly Often(%)	Almost Always (%)	Always (%)
1.	*Clarifications at the end of the lesson*	-	-	4.55	6.06	89.39
2.	*Explanation of the importance of materials*	-	3.03	7.58	12.12	77.27
3.	*Multichannel feedback*	1.52	4.55	19.70	13.64	60.61
4.	*Feedback on course organization*	3.03	7.58	22.73	16.67	50.00
5.	*Promotion of peer collaboration*	6.06	10.61	21.21	16.67	45.45
6.	*Use of different communication modes*	4.55	13.64	18.18	18.18	45.45
7.	*Concrete examples in explanations*	1.52	9.09	28.79	24.24	36.36
8.	*Access to alternative materials*	13.64	18.18	24.24	19.70	24.24
9.	*Tools for supporting autonomy*	43.94	21.21	12.12	3.03	19.70
10.	*Study planning guidance*	27.27	25.76	21.21	10.61	15.15

Item		Never (%)	Occasionally (%)	Fairly Often(%)	Almost Always (%)	Always (%)
11.	*Self-regulation activities*	15.15	27.27	24.24	19.70	19.70
12.	*Diversification of assessment methods*	10.61	15.15	25.76	18.18	30.30
13.	*Presentation of course objectives*	-	1.52	12.12	15.15	71.21
14.	*Clarity of assessment standards*	1.52	4.55	13.64	19.70	60.61
15.	*Strategies to stimulate motivation*	3.03	10.61	25.76	21.21	39.39
16.	*Use of positive feedback*	-	3.03	21.21	16.67	59.09
17.	*Strategies for managing difficulties*	6.06	15.15	31.82	24.24	22.73
18.	*Proposals for alternatives in assignments*	12.12	18.18	30.30	24.24	15.15
19.	*Personalized support*	9.09	22.73	34.85	22.73	10.61
20.	*Use of accessible technologies*	15.15	20.00	24.24	24.24	16.67
21.	*Structured group activities*	6.06	15.15	30.30	28.79	19.70
22.	*Facilitation of open discussions*	4.55	12.12	33.33	27.27	22.73
23.	*Offering multimedia materials*	7.58	13.64	31.82	25.76	21.21
24.	*Use of concrete examples and experiences*	1.52	10.61	31.82	25.76	30.30
25.	*Proposals for self-assessment*	10.61	25.76	31.82	21.21	10.61
26.	*Support for the development of strategies*	9.09	22.73	34.85	22.73	10.61

Item		Never (%)	Occasionally (%)	Fairly Often(%)	Almost Always (%)	Always (%)
27.	*Reflective activities*	12.12	25.76	28.79	21.21	12.12
28.	*Promotion of self-monitoring*	13.64	27.27	27.27	18.18	13.64
29.	*Encouragement of active participation*	6.06	16.67	31.82	25.76	19.70
30.	*Promotion of student choice and control*	10.61	22.73	30.30	21.21	15.15

Table 8. - Frequencies of UDL practices adopted by university faculty (%)

The analysis of the internal reliability of the questionnaire focused on UDL practices provided extremely positive results. The Cronbach's alpha calculated across the entire set of 30 items was 0.947, a very high value indicating excellent internal consistency among the items. This result suggests that the items reliably measure aspects related to the same theoretical construct, namely the adoption of practices aligned with UDL principles.

To assess the suitability of the data for exploratory factor analysis, the Kaiser-Meyer-Olkin (KMO) index and the Bartlett's test were computed. The KMO index was found to be 0.899, an excellent value indicating sufficient correlation among the variables to proceed with factor analysis. The Bartlett's test was also highly significant ($\chi^2 = 2701.45$, $p < 0.001$), confirming that the correlation matrix is not an identity matrix and that adequate correlations exist among the items (Table 9).

The exploratory analysis of the latent structure using principal component analysis (PCA) revealed that the first three factors account for a significant portion of the overall variance (Table 10). Specifically, the first component explains 47.2% of the total variance, the second 8.5%, and the third approximately 6.3%. Together, the first three factors account for over 60% of the observed variance, a considerable value suggesting a well-defined underlying structure, although slightly complex. In the absence of detailed factor rotation, the preliminary examination of factor loadings suggests that the items group into distinct conceptual areas: one focusing on practices aimed at clarity in communication and exposition, another on those promoting active engagement and diversifying expression methods, and a third, weaker area related to support for autonomy and self-regulation.

Overall, the data confirm that the questionnaire exhibits excellent psychometric properties, demonstrating high internal reliability, suitability for factor analysis, and a latent structure that aligns with the theoretical principles of UDL.

Index	Value
Cronbach's Alpha	0.947
Kaiser-Meyer-Olkin (KMO)	0.899
Barlett's Test (χ^2, p-valore)	2701.45, $p < 0.001$

Table 9. Internal Reliability

Factor	Variance Explained
Factor 1	47.2
Factor2	8.5
Factor 3	6.3
Total Variance Explained	62.0

Table 10. Factor Structure - Variance Explained by Principal Components

Conclusions: The Need for Flexible and Plural Teaching

The UDL approach has the potential to radically transform academic teaching. It shifts away from what Freire referred to as the "banking model" of education, moving toward a more critical and affective pedagogy. This approach places students, with their unique (specific) and plural (diverse) existential characteristics, at the centre of the educational process (Curneen, 2024). Within the framework of Universal Design, the pedagogical reflection guiding this study highlights the challenge posed by non-traditional students to academic communities. It emphasizes the need for greater attention to supporting individuals throughout their personal and professional development.

A process that can be achieved through full awareness of differences and understanding of students' needs by educators, who are called upon to translate this variability into a universally designed teaching approach, inspired by a variety

of engagement, representation, and expression methods. It is also important to acknowledge that today's university students are fundamentally different from those of twenty years ago. For the past generation, university was a singular path that accompanied a specific phase of life. It was a privilege and a meaningful choice. Today, access to higher education is just one of many opportunities often balanced with other responsibilities. It is a moment that intertwines with other equally significant aspects of an individual's life. This comes after a highly structured educational path, such as secondary school, and leads to engagement with a system that is much more discretionary. The universal recognition of diversity as a fundamental characteristic of being and its uniqueness (Canevaro, 2008) brings into the realm of normality those dimensions that have long been stigmatized (Fiorucci et al., 2024; Cumming & Rose, 2022, p. 1027). The different social, personal, and cultural backgrounds currently present in academic contexts thus emerge as a new norm, serving as foundational elements for designing flexible and inclusive teaching from the very outset. The exploratory study presented in this contribution outlines, considering the previous discussion, an uncertain and indeterminate scenario where the directions toward universal teaching can find meaning and direction only within the UDL framework. This study serves as a crucial starting point within the context of an evolving PRIN project, which unfolds through various stages of in-depth and comparative analysis, involving four universities. Since the research is still in development, the results obtained so far, along with those that will emerge in the upcoming stages, provide an opportunity to initiate a meaningful and constructive dialogue among the different stakeholders involved, particularly between university faculty and students. This exchange, which can be fostered by the dual perspective emerging from the DANTE-U project, facilitates the development of dialogue between the experiences and opinions of both faculty and students. It acts as a catalyst for the experimental introduction of changes in university teaching design. The aim of these changes would not only be to enhance the quality of university teaching but also to test, monitor, and evaluate the effects of these innovations over time, with the goal of creating a cycle of continuous and pervasive improvement.

Author contributions

The paper shows the outcomes of the PRIN project 2022F5EZ43 – D.A.N.T.E.-U. Design Accessibility Network to Enjoy University. Design and Implementation of a UDL-based University Teachers Training Online Platform. While acknowledging that this article is the result of a collaborative effort among the authors, it's possible to attribute paragraph 3 and 4 to Andrea Fiorucci, paragraph 2 to Alessia Bevilacqua, and paragraph 1 to Elena Abbate.

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