

## Student-centered learning in higher education: relevant quality assurance indicators

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### Abstract:

Student-centered learning (SCL) is a key quality assurance standard promoted across the European Higher Education Area (EHEA), as established by the Standards and Guidelines for Quality Assurance in the EHEA (ESG). Its implementation requires articulated commitment, decision and practice undertaken by institutions, teaching staff and students. The current literature on quality academic learning and teaching explains SCL through various factors, that range from the creation of a student-centered higher education culture to the implementation of active and innovative learning strategies. However, the national quality assurance policies and practices might vary importantly.

The present paper aims to offer a view on the latest thinking and evidence regarding the SCL approaches in the EHEA and Romanian higher education, analyzed from the quality assurance perspective. Our research focus was double-oriented. We performed a systematic review of the strategies and frameworks used by quality assurance agencies to assess SCL implementation in higher education. Afterwards, we explored the perspective of Romanian higher education management and academics representatives on the SCL and its use for the design of quality higher education study programs. Our main research questions were: (1) What are the strategies and practices employed by the EHEA quality assurance agencies for the assessment of SCL implementation in higher education institutions? (2) What is the perception of Romanian higher education stakeholders on the concept of SCL, its implementation and its impact on curriculum development and students' learning? (3) What are the critical factors of SCL implementation that can be considered in elaborating future effective assessment procedures? Our study contributes to improving higher education quality assurance procedures by highlighting possible future guidelines for supporting and evaluating the implementation of SCL approaches.

**Key words:** *student-centered learning, quality assurance in higher education, SCL variables, effective higher education*

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## 1. Student-centered learning - concept and approaches

Student-centered learning (SCL) is a critical quality assurance standard promoted across EHEA. Its importance was highlighted from the early stages of the Bologna Process implementation in higher education institutions (London Communiqué, 2007). Further on, it was reasserted in relation to the need for an ongoing reform of higher education curriculum towards the development of learning outcomes (Leuven Communiqué, 2009). It received a more concrete and action-focused shape through the Bucharest Communiqué (2012), when SCL was presented in association with “innovative teaching methods and a supportive and inspiring working and learning environment” and was explained as an approach that fosters the development of students’ intellectual autonomy, critical thinking and self-confidence. In 2015, SCL became an explicit part of the Standards and Guidelines for Quality Assurance in the EHEA (the internal evaluation standards 1.3. and specific other standards that state the status and roles of students as active agents in the academic context) and inspired the future solid recommendations of the European Commission and EC commissioned studies, that SCL should be directly targeted and financed through specific actions related to curriculum development, teacher training and raising of student agency (Klemenčič, Pupinis, & Kirdulytė, 2020).

Today, student-centered learning is a key policy area of the Bologna Process. Through the Rome Communiqué, adopted in 2020, the ministers agreed on “Recommendations to National Authorities for the Enhancement of Higher Education Learning and Teaching in the EHEA”, to support the institutions in fostering student-centered learning and teaching. This is seen in close relation to the learning-outcomes approach in curriculum design requires new approaches to teaching and learning and tailored, flexible learning. SCL also involves empowered learners, who are active participants in their learning, but also enhanced teaching competencies and an inspiring working and learning environment.

While the formal context for the implementation of SCL was created and consolidated, the later thematic analyses (ESG 2015–2018 ENQA agency reports: thematic analysis) observe that “the most problematic standard for agencies to verify through external quality assurance activities is standard 1.3 (Student-centered learning)” (Tomas & Kelo, 2020). The idea is also underlined in a 2019 report on approaches to quality assurance of student-centered learning of European University Association (Gover, Loukkola & Peterbauer, 2019) that also states two of the possible sources for the difficulties in implementing student-centered learning: a lack of shared understanding of the concept and persistent uncertainties on the evidence that would prove that the requirements of the standard are met.

Yet, the existing literature on the topic reflects a clear effort made by a variety of European stakeholders to reach a common understanding on the concept of student-centered learning. Thus, the concept of SCL is generally presented as a broad (ESU, 2016), multidimensional concept that implies specific values, policies, practices related to human resources, curriculum, teaching, learning and evaluation practices, distinct academic community features and a specific institutional culture. In the policy and governance documents, it is primarily regarded as a true paradigm shift towards an improved institutional culture, characterized by supportive learning environments, connectivity, and collaboration. It is also presented as a new mindset (of teachers and students), that implies teaching staff training and recognition of quality teaching, students’ involvement, interactivity, and valorisation of individuality.

In the context of quality assurance recommendations and reports, SCL is often considered a *transversal filter for evaluation* (ESU, 2016, Klemenčič, Pupinis, & Kirdulytė, 2020), that is *context-sensitive* and would require quality assurance agents to focus on evaluation of institutional and teaching

*adaptability* and *curricular flexibility*, associated with academic mobility, targeting specific learning outcomes, and recognition and transfer of credits.

The *transversal/ overarching nature of SCL* refers to its pervasive effect when adopted institution-wide as an approach with implications for academic quality assurance. Thus, SCL has the potential to reshape the functioning paradigm of higher education institutions and the structure of the educational process, with significant effects on multiple levels:

- a. in terms of the quality of academic teaching and learning;
- b. in empowering and providing continuous professional development for university teaching staff;
- c. in streamlining educational and research policies and practices by involving students as decision-making partners in curriculum development.

These influences will lead to better alignment of study programs with contemporary professional development needs and expectations, including the ones coming from the labour market. Student-centeredness involves revisiting the institutional culture, restructuring policies and fostering an academic community that promotes communication, cooperation, continuous curriculum development, enhanced access to resources, inclusivity, and a focus on learning and development. The 2017 study of Klemenčič focused on conceptual considerations of European Policies on student-centered learning in higher education highlights all these implications and advances by labelling SCL as a meta-concept (Klemenčič, 2017, p. 3). In our view, this global perspective has real practical implications for both the implementation of SCL and its assessment from a quality assurance viewpoint.

A recent analysis developed for the European Commission looks at SCL from students' perspective and identifies three fundamental elements: student satisfaction, student engagement, and student agency, stressing student agency as the critical definitory factor. These three variables may become central in a SCL quality assurance strategy (Klemenčič, Pupinis, & Kirdulytė, 2020).

Even though the recent literature is unanimous in accepting that student-centered institutions and educational processes extend beyond adapting or diversifying teaching practices, when seen in practical terms, SCL is frequently described as an educational approach of a constructivist nature, that requires active teaching and learning strategies, implementation of innovative pedagogies and digital technologies to enhance significant learning, and professional and personal development of students (T4SCL, ESU & EI, 2010; ESU, 2015, Todorovski, Nordal & Isoski, 2015).

To articulate all the dimensions of SCL philosophy and practice, for the present study we advance a *working definition* of SCL:

*Student-centered learning (SCL) is a strategic approach to the educational process. SCL involves designing and implementing study programs, training activities, and teaching interactions to best cater to the academic, professional and personal developmental needs and interests of students. Specifically, SCL entails prioritizing learning outcomes, promoting engaging and authentic learning through innovative teaching practices, valuing high-quality teaching, and constructing learning communities where students are viewed as direct partners in developing the university curriculum and enhancing academic culture, policies, and practices.*

In the understanding of the authors of this paper, the term "learning" encompasses all the key attributes of the educational process: teaching, learning, and assessment, along with their specific interdependencies. For the sake of brevity, the acronym SCL is used as a conceptual label for the focus on the student in the educational and academic processes.

**The evaluation of SCL implementation and impact** is still problematic. Thus, relatively recent reports of the European Students Union (ESU, 2015) and of the European Commission (Klemenčič et.al, 2020), as well as the recent statement on the future of student-centered learning issued by ESU (2022) stress that students' perspective on SCL is not sufficiently considered, and urge for the development of standards and indicators that prove how SCL is working in practice. Its actual implementation requires articulated commitment, decision and practice, undertaken by institutions, teaching staff and students. The current literature on quality academic teaching and learning explains SCL through various factors that range from the creation of a student-centered higher education culture to the implementation of active and innovative learning strategies.

However, the quality assurance policies and practices are not convergent in using a commonly accepted set of assessment criteria and indicators for the effective implementation of SCL in higher education. We support the idea that each national quality assurance system should develop its own understanding of SCL and make the concept operational through specific quality assurance instruments and criteria.

Along the years several assessment frameworks and instruments<sup>4</sup> were developed. Even though they were not meant to be adopted as internal or external evaluation instruments that would be assumed at the level of national agencies, they represent an essential effort in the process of operationalizing SCL and its assessment.

## **2. Method**

The purpose of the present paper is to offer an extensive view on the latest thinking and evidence regarding the SCL approaches in international and Romanian higher education, analysed from the quality assurance perspective, as well as to reflect on it in the Romanian higher education context.

Our research focus was double-oriented. We performed a systematic review of the strategies and frameworks used by national and international quality assurance agencies for the assessment of SCL in higher education and we explored the perspective of the Romanian higher education stakeholders on SCL and on its possible impact for the design of qualitative higher education study programs.

Our main research questions were: (1) What are the strategies and practices employed by the EHEA quality assurance agencies for the assessment of SCL implementation in higher education institutions? (2) What is the perception of the Romanian higher education stakeholders on the concept of SCL, its implementation and impact for the curriculum development and students' learning? (3) What are the

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<sup>4</sup> The SCL toolkit (2010a) [ <https://www.esu-online.org/wp-content/uploads/2016/07/100814-SCL.pdf>], elaborated as part of project T4SCL.

SCL survey on the views of national unions of students and HE staff (2010c):

[[https://www.ehea.info/Upload/document/consultive/esu/2010\\_T4SCL\\_Survey\\_analysis\\_565154.pdf](https://www.ehea.info/Upload/document/consultive/esu/2010_T4SCL_Survey_analysis_565154.pdf)]

Self-assessment tool for HE (provided by EC) (SCLT): Todorovski, B., Nordal, E., & Isoski, T. (2015).

Overview on Student-Centered Learning in Higher Education in Europe: Research Study. *European Students' Union*. [https://www.ehea.info/media.ehea.info/file/Student\\_centred\\_learning/63/2/Overview-on-Student-Centred-Learning-in-Higher-Education-in-Europe\\_679632.pdf](https://www.ehea.info/media.ehea.info/file/Student_centred_learning/63/2/Overview-on-Student-Centred-Learning-in-Higher-Education-in-Europe_679632.pdf)

critical factors of SCL implementation that can be considered in the elaboration of future effective assessment procedures?

**The answer to the first question** included a systematic literature review on the strategies and practices employed by the European quality assurance agencies for the assessment of SCL implementation in HE institutions. The review included two types of sources:

- a. Official national and EHEA policy and regulation documents including principles, criteria and practices of quality assurance assessment of SCL
- b. Research reports regarding the initiatives and criteria for SCL implementation evaluation in the context of internal and external quality assurance.

*Inclusion criteria.* We considered documents dated no earlier than 2010, where the significance of SCL started to emerge at the level of the EHEA. The selected documents included the perspectives of stakeholders involved in the quality assurance of HE, including students. We selected and organized the sources so that they offer information on both the QA assessment strategies and practice and on the assessment criteria employed by the QA agencies.

**The second part of our study** aimed at exploring the perception of the Romanian higher education stakeholders on the concept of SCL, its implementation and its impact on curriculum development and students' learning.

*Participants.* The study included two categories of respondents. One category included higher education QA expert evaluators and managers of higher education institutions. The additional category included other higher education stakeholders (teaching staff members) selected on a voluntary basis.

*Survey instrument.* The exploratory study was based on data collected through SCL-HE Inventory, an instrument developed for the present study. The inventory included five categories of items, organized as follows:

- demographic data: higher education institution (university of employment), status-role in relation to quality assurance assessment, work seniority.
- items related to the perceived significance of SCL (category 5) and to the perceived institutional initiatives of implementing SCL (category 7) in the annexed SCL-HE Inventory). These two categories of items were to be ordered by the respondents in a hierarchy so that the most important associations for SCL to be highlighted.
- items related to the representation of SCL in the institutional culture (category 6.A)
- items related to the manifestation of SCL in learning, teaching, and academic assessment (category 6.B)
- items related to inclusion of SCL in the institutional policies, inclusively related to internal quality assurance, and professional development (category 6.C)

Items in categories 6A, 6B. and 6C were to be evaluated on a 5 options Likert scale.

A total number of 386 participants were involved in a survey undertaken through the online administration of the SCL\_HE Inventory. The composition of respondents' cohort partially determined the selection of statistical measures performed. The table below offers an image of the participants' specific seniority and QA related role:

Seniority in higher education		Role undertaken in quality assurance in academic structures.	
<b>Less than 5 years</b>	10	<b>without QA responsibilities</b>	106
<b>6-10 years</b>	21	<b>with QA responsibilities</b>	280
<b>More than 10 years</b>	355		

**Table 1.** Description of participants to the SCL\_HE survey

At the level of each category of items a set of statistical processing was undertaken. For items 5 and 7 that asked participants to order the options hierarchically, we performed descriptive statistic processing. For the three dimensions of item 6 (A, B and C), the internal consistency (Cronbach's alpha) was calculated. Since the groups formed by the seniority variable are unequal in volume, the homogeneity of variances of the groups was tested to choose the most appropriate comparative statistical test.

As a result of both studies, we extracted a set of critical factors of SCL implementation that can be considered in the elaboration of future effective assessment procedures, and we developed a model that may guide the future creation of assessment procedures and criteria.

### 3. Results

#### 3.1. Analysis of strategies and practices employed by EHEA quality assurance agencies for the assessment of SCL implementation

The evaluation of student-centered learning implementation in higher education is particularly reported as difficult to carry out. Recent. The ENQA Agency reports highlighted several reasons for this issue as reported by different EHEA QA agencies and systems, starting with a limited understanding of the very concept to the absence of its mapping and to the new status of this standard (ENQA, Tomas & Kelo, 2020). However, different EHEA quality assurance agencies, such as the National Agency for Quality Assessment and Accreditation of Spain – ANECA, the Finnish Education Evaluation Centre – FINECC, the High Council for the Evaluation of Research and Higher Education – HCERES (France) and the Academic Information Centre – AIC (Latvia), are promoting the student-centered education concept through their external assessment processes. In this section we report on different benchmarks used by QA agencies to assess SCL implementation in higher education of these assessments, focusing on how they have influenced the dynamics of teaching and learning, curriculum development and the overall educational experience of students.

One important benchmark is focused on promotion of **SCL higher education environments** through teaching and learning practices. Thus, the assessment practices draw stakeholders' attention towards the practicalities of student-centered learning. The evaluations by these agencies often highlight the need for institutions to adopt and effectively implement teaching methodologies that are able to support active learning and students' direct engagement with the contents, collaboration with peers, and application of knowledge in practical settings

A second focus we identified was on observing the way SCL is reflected by **academic curriculum design and development**. In terms of curriculum design, the reports from agencies like ANECA and HCERES often include recommendations for curriculum improvement, ensuring that courses are designed to meet the evolving needs of students and the wider societal and professional contexts. This might



involve integrating interdisciplinary approaches, fostering critical thinking, and providing opportunities for experiential learning.

***Development of fruitful educational experiences for students*** is a third aspect of SCL approach which we identified as a focus of QA agencies evaluation. This aim is evaluated by stressing on the importance of certain specific actions such as:

*a. Enhancement of student participation and feedback mechanisms*

In accordance with the ESG standards, agencies often recommend that institutions involve students in decision-making processes related to curriculum design, teaching methods, and assessment strategies. This participatory approach not only empowers students but also ensures that educational offerings are closely aligned with their needs and expectations.

*b. Resource Allocation and Support Services*

Cyclical QA evaluations generally lead to improvements in resource allocation and the provision of support services. Agencies like FINECC and AIC emphasize the importance of adequate resources, including learning materials, technology, and faculty support, to facilitate effective student-centered learning. Additionally, student well-being and support services, such as counselling and career guidance, are often highlighted in these evaluations, underscoring a holistic approach to education.

### **3.1.1. Challenges in assessing student-centered learning**

The impact of consistent focus on SCL approach is evident in educational practices' gradual but significant transformation towards more student-centered approaches. Institutions are increasingly adopting pedagogies responsive to student needs, preparing them not just academically, but also for their future professional lives.

A key challenge identified is the *practical observation of student-centered learning*, as outlined in ESG standard 1.3. Despite its critical importance in improving the educational experience, agencies often have difficulties verifying the proper implementation of student-centered learning practices. (EQNA, 2020). This highlights the need for more effective strategies and methodologies in assessing and promoting student-centered approaches in higher education, such as:

- **The assessment of student-centered learning from the perspective of learning outcomes implementation.** A particular issue highlighted in this respect is a need for a common understanding on how LOs function in the institution, between faculty members and at students' level.
- The assessment of SCL impact on **institutional culture**. The approach should be visible in the institutional statements, strategic plans, mission, actions within the European universities' alliances (as SCL is mentioned as a standard in the call for alliances);
  - The implementation of the **mobility principle** as a mean for promotion of connected frameworks, good practices and diverse study programs (joint programs, short term programs etc.).
  - The assessment of SCL from the perspective of study programs flexibility. A *particular issue* to be observed in this context is the degree in which the adoption of micro-credentials is observed as a mean for meeting employers and students' needs and interests.
  - The use of data to improve students' learning experience. This dimension implies observing the use of digital means and the data collected through them in order to inform decisions that directly affect the educational and personal experience of students.

- Making **learning resources accessible** through institutional measures. It implies ensuring that all materials and digital resources are accessible to all students, including those with disabilities.
- **Leadership and funding** related to SCL. It is an evaluation dimension that implies exploring ways in which leadership can influence and shape organizational culture to support and promote SCL.
- The assessment of the manner students' perspective expressed through representatives in decision-making processes is included in future actions and policy documents.
- The assessment of students' learning experience quality (the way study programs foster students' autonomy, self-regulation, use of academic resources and services, flexibility and inclusivity of learning environments, support services).
- The assessment of SCL from teachers' perspective and the evaluation of experience of teaching in higher education. This is an important criterion included in the very recent study prepared for the European Commission, including recommendations on SCL implementation under the expression teaching ecosystem (Klemenčič, Pupinis, & Kirdulytė, 2020). The main aspects are expected to be included in future QA assessment procedures would be the extent to which teaching and learning ecosystems are supportive, flexible, inspiring, in association with innovative pedagogies, digital technologies, learning technologies, active learning spaces, LOs based course contents, curriculum development principles and models (including constructive alignment (Biggs, 1983).

Analysis of external QA practices of these five agencies demonstrates the complexity and diversity of approaches taken. Overall, the consulted quality assurance reports reflect a multidimensional evaluative approach on SCL, and include SCL type criteria in the assessment of different institutional and study program dimensions. The results of our analysis highlight the challenges in mapping these assessment undertakings. As higher education continues to evolve, these assessments play a critical role in supporting the institutions to adapt and respond effectively to the changing educational landscape and student needs. The continuous development and refinement of quality assurance processes and methodologies are essential for maintaining and improving the quality of higher education.

### **3.2. Analysis of the Romanian higher education stakeholders' perception on the concept of SCL, its implementation and impact**

Two perspectives on the SCL approach perception, implementation and impact on the curriculum development and students' learning are articulated on the bases of a survey implementation: QA experts and other stakeholders' perspective. Examining the respondents' perception on the meaning of students-centered learning was necessary as literature states that one of the important sources of difficulties in SCL implementation seems to be a lack of shared understanding by various higher education stakeholders (Klemenčič, 2017). The results, synthesized in the table below, show that the option selected as *the most relevant* for explaining SCL was *Teaching strategies that encourage direct student involvement and cooperation (31%)*, followed by *Authentic cooperation and communication between teachers and students in actions that have implications for program quality and study/learning experience (27%)*. The two options indicated as the most relevant for SCL significance seem to express a tendency of the respondents to perceive SCL as a practical approach that may be promoted mainly within the teaching and learning processes and through the formative interactions with students. On the other end of the hierarchy, we have surprisingly found one of the essential ways of SCL implementation: *Student involvement in institution decision-making structures and processes*. 57% of the respondents placed this option on the lowest rank of the hierarchy, despite the formal requirement implemented in all Romanian universities for the specific representation of students in all governance structures and processes. Frequency of this option is followed by the statement *Students have access to resources and services contributing to creating complex, relevant, and authentic learning experiences*, which occupied the lowest rank for 17% of the respondents. These findings



suggest the necessity of going beyond the formal representation of students in management and decision-making structures, and create authentic ways to facilitate students' direct involvement in their academic pathway and experience. Our finding is consistent with the results of a recent study that explored students' perspective on SCL, emphasizing the need for a more genuine involvement of students in consultative and decision-making processes (ESU, 2015).

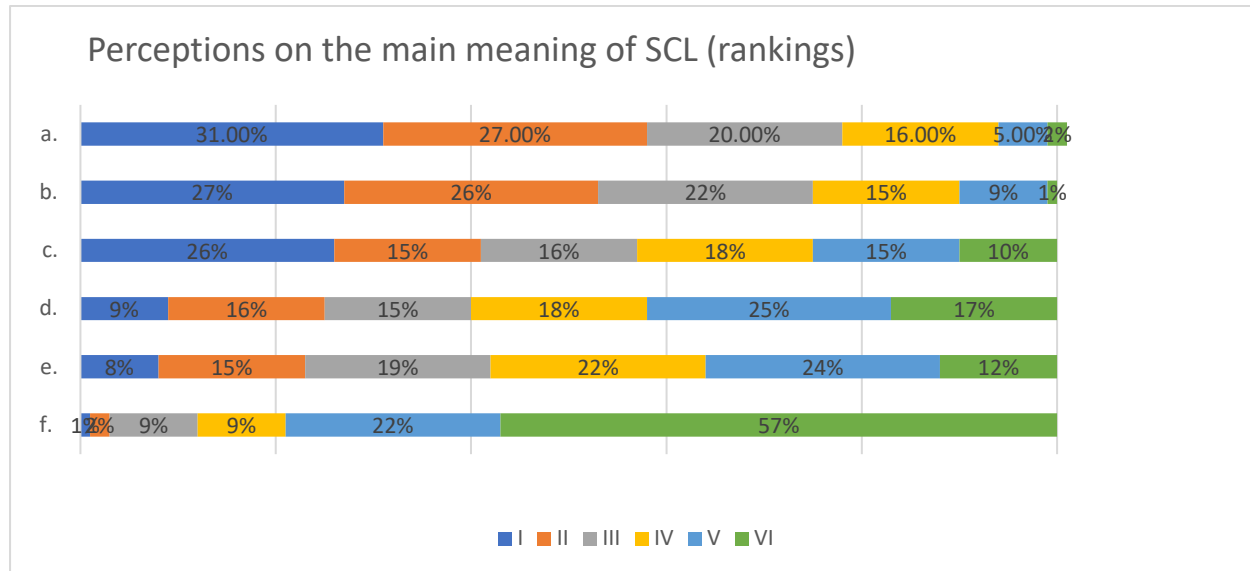


Table 2. Perceptions of the main meaning of SCL (rankings)

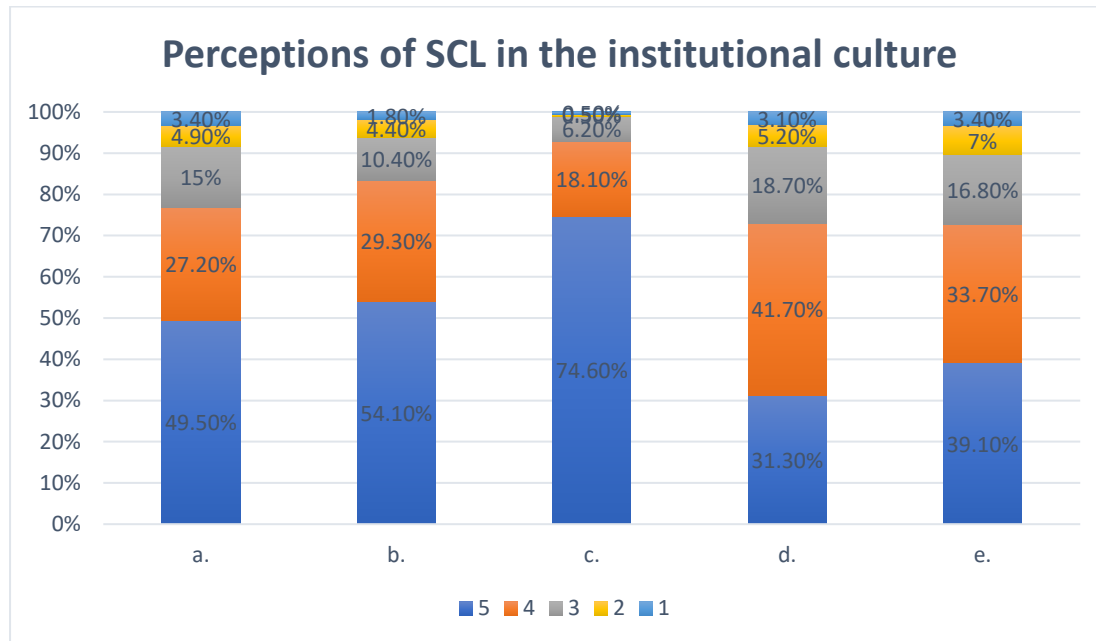
- Legend:

<b>a.</b>	Teaching strategies that encourage direct student involvement and cooperation
<b>b.</b>	Authentic cooperation and communication between teachers and students in actions that have implications for program quality and study/learning experience
<b>c.</b>	Focusing academic programs and processes on developing professional and transversal competencies
<b>d.</b>	Students' access to resources and services contributing to creating complex, relevant, and authentic learning experiences
<b>e.</b>	Real implementation of learning outcome-focused academic approach
<b>f.</b>	Student involvement in institution decision-making structures and processes

- I, II, III, IV, V, VI represent the ranking order of selection.

The perception of higher education stakeholders on the specific implementation of student-centered learning in higher education institutions was also explored. Participants scored the incidence of three categories of SCL implementation measures/ actions: measures related to institutional culture (vision, values, institutional climate), measures related to teaching, learning, and academic assessment and

measures related to institutional policies and professional development. Table 3 offer a synthetic image of the results.



• Legend :

a. There is a <b>culture of partnership and collaboration among teaching staff</b> in the university.
b. There is a culture of partnership and <b>collaboration between teachers and students</b> at the university.
c. There are clear policies <b>involving students in decision-making</b> structures and processes impacting the quality of study programs and teaching practices.
d. The principle of <b>flexibility and freedom of choice</b> is applied in the design and implementation of academic training programs.
e. The institution has <b>leadership practices</b> focused on institutional development towards better SCL implementation.

- 5, 4, 3, 2, 1 are the answer options on the Likert scale.

**Table 3.** Perceptions of SCL presence in the institutional culture

As indicated by the average scores attributed to the academic culture related statements, the statement with the highest incidence (74.6%) is indicated as being: *There are clear policies involving students in decision-making structures and processes impacting the quality of study programs and teaching practices*. While this is primarily a formal requirement in Romanian higher education, its high score suggests that respondents may perceive it as having a potentially significant impact on

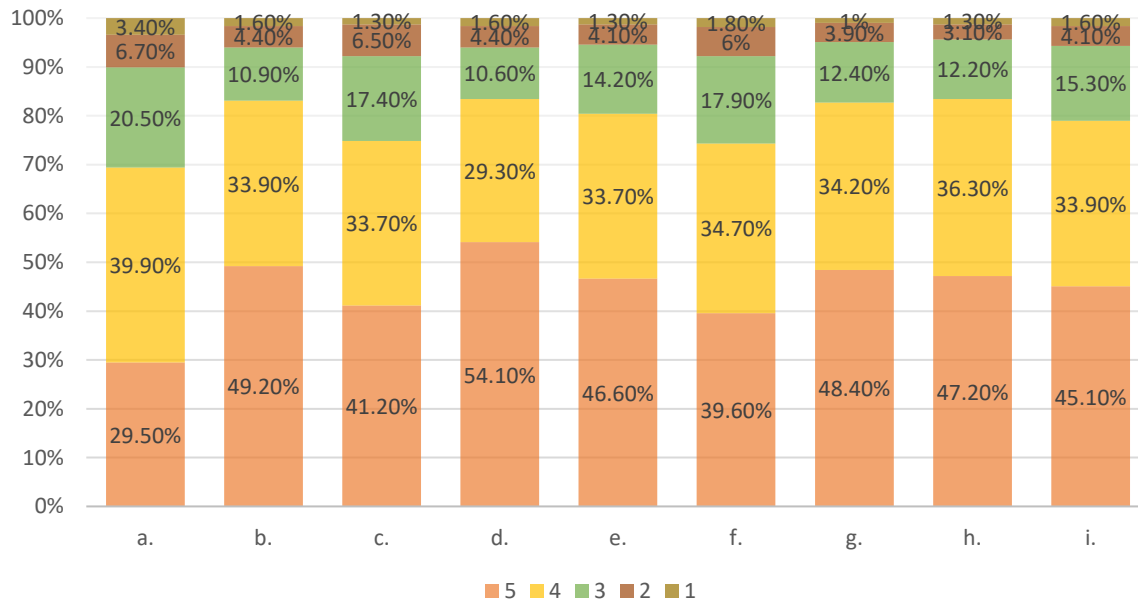
institutional culture. Consequently, it may have important implications for the academic practice and other aspects of university life.

Scoring of statements that refer to the culture of collaboration and partnership existing in the university is significantly high. Thus, 54.1% of the respondents indicate the presence *to a high extent* of a collaboration and partnership culture among teaching staff and 49.5% reported the existence of a collaboration and partnership culture between teachers and students at the university. This perception may be a good base for future specific SCL implementation actions such as a reflective attitude of teachers and students and an improved involvement of students in the shaping of the academic programs.

With regard to the actions related to SCL implementation in teaching, supporting learning and assessment, the most intriguing result was on the statement *In the design of study programs/ in the development of course outlines, in teaching, and evaluation, there is a clear concern for student engagement*. A relatively low number of respondents (29,5 %) recognized the existence of this concern in their institutions a situation that may indicate the need for an explicit promotion of students' involvement beyond their engagement in formal institutional structures. Namely, it could be useful to involve students in practical aspects related SCL implementation such as curriculum development actions. Meeting students' academic needs is a critical approach of SCL, present in the Romanian external quality assurance criteria, and involving students in curriculum design may be a good way to accomplish this expectation. . Use of former students' feedback and reflections could be an effective initiative in this respect. However, the above discussed result is pondered with a high recognition of the action: *In the academic activity, there are direct moments and ways to integrate student feedback* (54.1% of respondents indicated its presence *to a high extent*). This may indicate that universities would rather employ indirect ways to involving students in the shaping of academic activities.

The relatively high scores attributed to specific instruction-related aspects of SCL such as focalization on competence training (49.2% of respondents recognized its presence *to a high extent*), use of active learning strategies (48.4% of respondents recognized its presence *to a high extent*), creation of inclusive learning communities (47.2% of respondents recognized its presence *to a high extent*) and use of digital technologies (45.1% of respondents recognized its presence *to a high extent*) indicate a clear tendency of respondents to associating SCL with specific practical approaches to instruction. The data suggest that student - centered learning may be perceived primarily as being in the responsibility of the teacher and of the academic curriculum developers.

## PERCEPTION OF SCL IN TEACHING, LEARNING AND ASSESSMENT



• Legend:

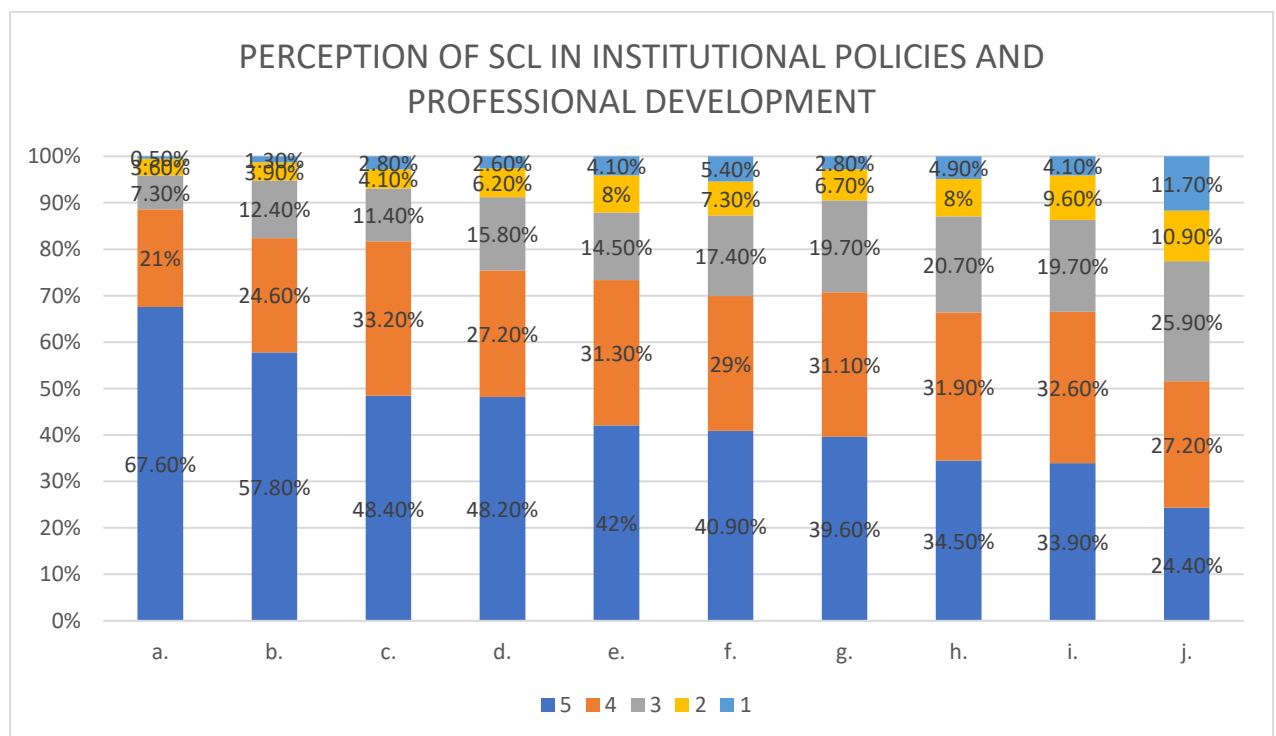
a.	In the design of study programs/ in the development of course outlines, in teaching, and evaluation, there is a clear <b>concern for student engagement</b> .
b.	In the design and implementation of teaching processes, there is a genuine concern for <b>developing students' competencies</b> , including those related to learning preparedness and lifelong development.
c.	Study programs are designed to allow adaptation of the curriculum and educational processes <b>according to the knowledge needs and interests</b> , as well as the development of students.
d.	In the academic activity, there are direct moments and ways to <b>integrate student feedback</b> .
e.	Academic <b>assessment has a clear formative dimension</b> , through feedback provided to students.
f.	Teaching processes allow recognition and valorization of <b>student diversity</b> .
g.	Teaching strategies encourage learning through <b>direct and active involvement</b> of students.
h.	The <b>learning environment is inclusive</b> , supportive, and constructive, promoting access to resources and the creation of learning communities.
i.	<b>Digital technologies</b> favor the implementation of SCL practices.

- 5, 4, 3, 2, 1 are the answer options on the Likert scale.

**Table 4** Perceptions of actions related to SCL implementation in teaching, learning and evaluation

The perception of SCL related actions in the academic institutions' policies and in the professional development was also explored. Participants in the survey evaluated the presence of ten specific actions that could be identified in the institutional policies and in relation with continuing professional development of faculty members. Table 5 presents the perception of respondents in order of their appreciation.

Table 4



• **Legend:**

a.	At the institutional level, support for <b>student mobility and exchanges of best academic practices</b> is promoted
b.	The institution provides <b>quality counseling and support services</b> to assist students in academic activities and personal development.
c.	At the institutional level, there is a direct promotion of implementing the <b>principle of competence-based and learning outcomes focused education</b> .
d.	There are clear policies for <b>involving students in decision-making structures</b> and processes with impact on the quality of study programs and teaching practices.

e.	Quality assurance structures in your institution undertake <b>periodic evaluations of SCL</b> implementation
f.	Explicit promotion of <b>student-centered university pedagogy</b> and quality learning is encouraged at the institutional level.
g.	Teachers have <b>access to resources</b> directly contributing to or facilitating SCL implementation in the teaching and research processes.
h.	The <b>impact of students' involvement in academic decisions</b> is significant and relevant
i.	The institution has structures and programs aimed at supporting the <b>professional development</b> and ongoing training of its teaching staff in SCL-related fields.
j.	There is an explicit policy for acknowledging/rewarding/ <b>formally recognizing of quality teaching</b> .

- 5, 4, 3, 2, 1 are the answer options on the Likert scale.

**Table 5.** Perception of SCL implementation in institutional policies and professional development

The promotion of students' mobility and exchanges of best academic practices were practices recognized by the respondents as highly present in their respective institutions (67.6% of the respondents evaluated the presence of this action *to a very large extent*). This result is consistent with the fact that students and staff mobilities are recognized as the main way of promoting SCL by ESU and EUA. Important percentages of participants perceived the *explicit promotion of **student-centered university pedagogy** and quality learning at the institutional level* to a large extent (29%) and to a very large extent (40.9%). This is a systemic approach that may have an important impact on teaching vision and practices and draws the attention on the relevance of a so-called *scholarship of learning and instruction* explicitly assumed by universities. A recent study that analyses possible ways of bridging the policy-practice gap with regard to SCL argues for the necessity of such an undertaking (Šušnjar & Hovhannisyan, 2020).

The items perceived as present in the academic institutions to a less extent are the ones related to *structures and programs aimed at supporting the **professional development** and ongoing training of its teaching staff in SCL-related fields* (33.9% of the respondents evaluated its presence *to a very large extent*) and to existence of an *explicit policy for acknowledging/rewarding/**formally recognizing of quality teaching***. (24.4% of the respondents evaluated its presence *to a very large extent*). This perception may be considered problematic as the latest studies underline the necessity of considering the *quality of teaching experience* as a relevant focus for the promotion of SCL (Gover, Loukkola & Peterbauer, 2019; Nesamvuni, 2021). Similarly, literature argues for the relevance of implementing formal ways of teaching expertise and mastery recognition (Gover, Loukkola & Peterbauer, 2019), an initiative that is worth receiving a greater attention in Romanian universities that are generally organized according to a Humboldtian model. The recent prefiguration in the Romanian new educational law of higher education of the differentiated professional routes may be a solution in this respect.

Surprisingly, another aspect that was reported as present to a lower extent in the academic landscape was the *impact of students' involvement in academic decisions*. While the presence of students in



academic structure was recognized to a high extent by the respondents, the relevance of their involvement is less appreciated, as about 34% of the respondents consider its significance as moderate and low. This finding raises the issue of the effective and qualitative involvement of students in different aspects of the academic life. With regard to SCL assessment, going beyond the formal representativity of students and exploring specific aspects such as: students' credibility in the eyes of stakeholders and ways trustworthiness can be cultivated in the academic environment or students' pedagogical or administrative expertise and experience and ways it can be increased and used may be aspects to be considered in the future.

An in-depth analysis of the data related to perception of SCL in the three dimensions of institutional culture, teaching and institutional policies and continuing professional development of academic staff allowed us to explore possible correlations between reported perceptions and two specific aspects characteristic to the survey participants. Thus, at each dimension level, the total score was calculated as the arithmetic mean of the items composing the dimension. The internal consistency (Cronbach's alpha) of each dimension was as follows: Institutional Culture ( $\alpha=0.88$ ), Teaching, Learning, Evaluation ( $\alpha=0.93$ ), Institutional Policies ( $\alpha=0.94$ ). The range of each scale varies between the values of 1 and 5. Since the groups formed by the seniority variable are unequal in volume, the homogeneity of variances of the groups was tested to choose the most appropriate comparative statistical test. As the analysis of variance homogeneity (Levene's test) revealed significant heterogeneity of variances, we opted for the Welch test. Table 6 presents the comparative results.

**Table 6.** The perception SCL implementation in higher education, based on seniority.

Dimension / Seniority		N	Mean	Std. Dev.	Welch test	p
Institutional culture	Less than 5 years	10	3.98	.86	1.85	0.187
	6-10 years	21	3.78	1.17		
	More than 10 years	355	4.23	.75		
Academic learning and assessment	Less than 5 years	10	4.20	.74	1.67	0.216
	6-10 years	21	3.76	1.02		
	More than 10 years	355	4.18	.75		
Institutional policies	Less than 5 years	10	3.90	.85	1.60	0.229
	6-10 years	21	3.57	1.21		
	More than 10 years	355	4.04	.85		

As it can be observed, there were no statistically significant differences among the three seniority groups regarding the perceived level of implementation of SCL in higher education.

We also performed an analysis of the perceived level of SCL implementation based on participants' involvement in the quality assurance process.

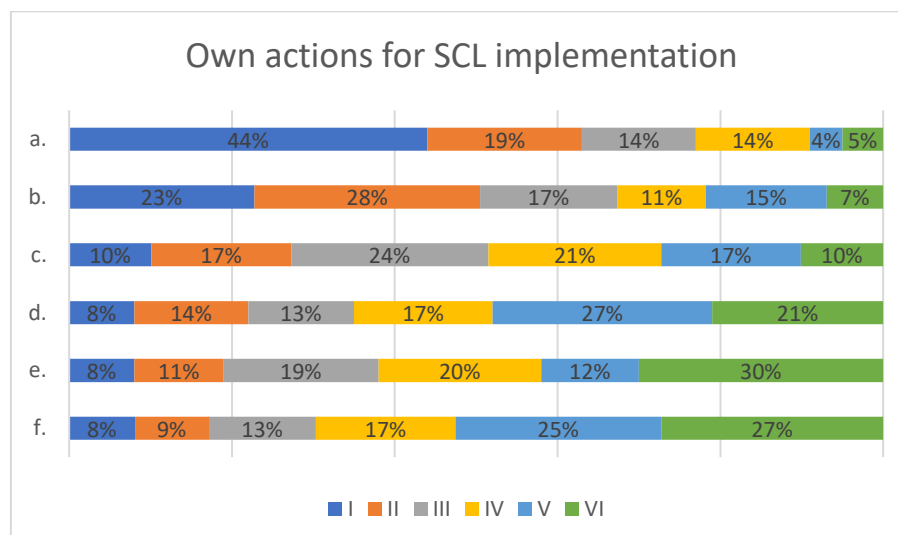
Table below presents the descriptive statistic data related to this variable.

**Table 7.** The perception of SCL implementation in higher education based on participants' involvement in quality assurance.

Dimension / responsibility in QA		N	Mean	Std. Dev.	t test	p
Institutional culture	without QA responsibilities	106	3.94	.91	-3.54	0.001
	with QA responsibilities	280	4.29	.71		
Academic teaching, learning and assessment	without QA responsibilities	106	3.98	.91	-2.37	0.019
	with QA responsibilities	280	4.21	.70		
Politicele instituționale	without QA responsibilities	106	3.78	.99	-2.88	0.004
	with QA responsibilities	280	4.10	.80		

From the table above, it can be observed that respondents with institutional responsibilities related to quality assurance perceive a significantly higher degree of SCL implementation in higher education, a difference that holds true for all three analyzed components. This result may be explained by the fact that academics with quality assurance responsibilities have a deeper understanding of SCL and its implications. By knowing what to observe and being able to see the implications of SCL implementation, the respondents with quality assurance responsibilities may become resource professionals in promotion of SCL and of quality assurance principles and standards in their institutions. On the other hand, the data emphasizes the need for a more systematic and large-scale promotion of quality assurance principles such as SCL and its operational implementation through actions such as continuing professional development of teaching staff on specific topics associated with student-centered approaches to learning and instruction.

The survey we carried out also looked at the participants' actions for SCL implementation. Table 8 includes participants' perceptions on the importance of six different specific initiatives related to student-focused teaching.



- Legend:

a. Permanent design and development of courses and teaching activities
b. Intensifying active and interactive teaching
c. Utilizing feedback received from students
d. Involving students in research
e. Learning outcomes-focused evaluation
f. Organizing and participating in scientific events for students

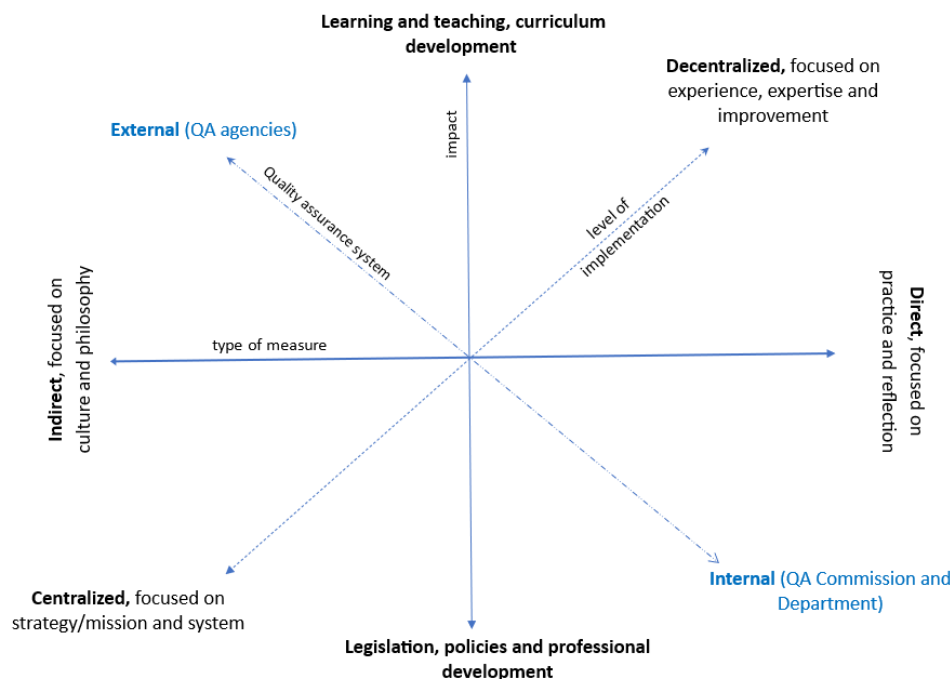
- 5, 4, 3, 2, 1 are the answer options on the Likert scale.

**Table 8:** Perceptions on respondents own actions for the implementation of SCL

The data shows that the continuing development of courses and teaching seems to be the initiative that could help shape more student-oriented study programs. This may be a very complex initiative which could include variations in different components of academic activities, from redefining of learning outcomes to new learning contents insertions or new instructional strategies. The incidence of certain recent accents adopted in Higher education is however surprisingly low. Thus, *involving students in research, designing of learning outcomes focused evaluation or organizing and participating in scientific events for students* were placed at the lowest ranks, an indication for a possible lack of pedagogical expertise on how these approaches could be accommodated in the academic instruction routines.

### **3.3. Critical factors of SCL implementation to be considered in elaboration of effective assessment procedures**

Our analysis of available literature on the implementation of SCL in higher education institutions and the quality assurance evaluation related to SCL, and the survey undertaken lead us to the organization of various actions and criteria we identified in accordance to four dimensions which we articulated in the following model:



A model of QA measures for the SCL implementation in HE

Fig 1. Glava et al. **A model of critical categories of factors in SCL implementation**

The model groups the quality assurance actions and criteria that may be considered in future assessment strategies related to the implementation of SCL according to:

- **Type of measures.** This is a dimension emphasized by European University Association in the research report issued in 2019, with reference to primary, secondary and latent measures undertaken at the institutional level;
- **Relevance and impact.** This dimension refers to the implementation context, which may be institutional (legislation and institutional policy and rules) or/and practical (in teaching, learning, evaluation and curriculum development);
- **Level of implementation:** a dimension that groups specific actions according to their impact on legislation and systemic higher education development (centralized measures), or on the improved teaching and learning experiences (decentralized measures, self-generated, and with a visible impact on improved expertise in both teachers and students);
- **Quality assurance authority:** a dimension that refers to the authority that proposed the quality criteria related to SCL.

The interaction of the respective dimensions creates action plans that may have practical relevance for the elaboration of assessment strategies that reflect specific accents. Thus, for instance, a combination of measures articulated in the frame of QA agencies recommended, decentralized measures with implications for the practice of teaching, learning and curriculum development will lead to a SCL implementation strategy that is assumed more autonomously by the teaching staff through continuing training or adaptive teaching and learning measures.

## **Conclusion**

Our study contributes to the improvement of higher education quality assurance frameworks, by highlighting possible future guidelines for supporting and evaluation the implementation of the SCL approaches. As a result of the literature review and of the survey-based investigation, we developed a comprehensive model of quality assurance actions and measures related to student-centered learning approach implementation in higher education. The model emphasizes four categories of factors that could be observed both by internal or external QA evaluation missions and may be promoted as routines that could enhance a student-centered learning institutional culture and environment.

Annex 1.

**SCL-HE inventory**

SCL-HE inventory was created to collect data on how the principle of Student-Centered Learning (SCL) is understood and applied in higher education institutions in Romania. Thank you for agreeing to complete this inventory. To enhance the informative value of our initiative, we kindly ask you to read the explanatory notes at the end before proceeding with the questionnaire. Additionally, please respond to each item according to the specific instructions.

We assure you that your provided responses will be used solely as aggregated data and will be extremely valuable to us in better understanding the subtle implications of SCL on the quality of education in higher education.

1. Which of the phrases below explains, to the greatest extent, the meaning you attribute to the concept of Student-Centered Learning Select the three most relevant phrases that, in your opinion, are the most significant, marking them in the table below:

	Mark your choices in the boxes below
Teaching strategies that encourage direct student involvement and cooperation	
Authentic cooperation and communication between teachers and students in actions that have implications for program quality and study/learning experience	
Student involvement in institution decision-making structures and processes	
Students' access to resources and services contributing to creating complex, relevant, and authentic learning experiences	
Real implementation of learning outcome-focused academic approach	
Focusing academic programs and processes on developing professional and transversal competencies	

2. Evaluate, based on the indicators below, the extent to which student-centered learning (SCL) is found and assumed at your institution (where 1 means *to a very small extent* and 5 means *to a very large extent*).

A. In INSTITUTIONAL CULTURE (VISION, VALUES, INSTITUTIONAL CLIMATE)					
The principle of flexibility and freedom of choice is applied in the design and implementation of academic training programs.	1	2	3	4	5
There is a culture of partnership and collaboration among teaching staff in the university.	1	2	3	4	5
There is a culture of partnership and collaboration between teachers and students at the university.	1	2	3	4	5
There are clear policies involving students in decision-making structures and processes impacting the quality of study programs and teaching practices	1	2	3	4	5
The institution has leadership practices focused on institutional development towards better SCL implementation.	1	2	3	4	5



B. In TEACHING, LEARNING, AND ACADEMIC ASSESSMENT					
In designing study programs/developing course outlines, in teaching and assessment, there is a clear concern for implementing the principle of student-centered learning (SCL).	1	2	3	4	5
In the design and execution of teaching processes, there is a genuine concern for developing students' competencies, including those related to learning preparedness and lifelong development.	1	2	3	4	5
Study programs are designed to allow adaptation of the curriculum and educational processes according to the knowledge needs and interests, as well as the development of students.	1	2	3	4	5
In designing study programs and within the teaching process, there are direct moments and ways to integrate student feedback.	1	2	3	4	5
Academic assessment has a clear formative dimension, through feedback provided to students, transparency, and a regulatory nature for subsequent teaching-learning processes.	1	2	3	4	5
Teaching processes allow recognition and valorization of student diversity.	1	2	3	4	5
Teaching processes allow differentiated and individualized approaches.	1	2	3	4	5
Teaching strategies encourage learning through direct and active involvement, contextualized and practical engagement of students.	1	2	3	4	5
The learning environment is inclusive, supportive, and constructive, promoting access to resources and the creation of learning communities.	1	2	3	4	5
Digital technologies favor the implementation of SCL practices.	1	2	3	4	5

C. In INSTITUTIONAL POLICIES AND PROFESSIONAL DEVELOPMENT					
At the institutional level, the direct promotion of implementing the principle of focusing on competency development and results-oriented teaching is encouraged.	1	2	3	4	5
Quality assurance structures in your institution undertake periodic evaluations of SCL implementation.	1	2	3	4	5
There are clear policies involving students in decision-making structures and processes impacting the quality of study programs and teaching practices.	1	2	3	4	5
The institution provides quality counseling and support services to assist students in academic activities and personal development.	1	2	3	4	5
The institution has structures and programs aimed at supporting the professional development and ongoing training of its teaching staff in SCL-related fields.	1	2	3	4	5
Teachers have access to resources directly contributing to or facilitating SCL implementation in the teaching and research processes.	1	2	3	4	5
There is an explicit policy for acknowledging/rewarding/formally recognizing quality teaching.	1	2	3	4	5
Explicit promotion of student-centered university pedagogy and quality learning is encouraged at the institutional level.	1	2	3	4	5

The impact of student involvement in academic decisions is significant and relevant.	1	2	3	4	5
At the institutional level, support for student mobility and exchanges of best academic practices is promoted.	1	2	3	4	5

3. To what extent do you consider that you have/will put into practice SCL-specific approaches in your own academic and teaching activities?

Communicating with students	1	2	3	4	5
Involving students in research	1	2	3	4	5
Organizing and participating in scientific events for students	1	2	3	4	5
Permanent design and development of courses and teaching activities	1	2	3	4	5
Utilizing feedback received from students	1	2	3	4	5
Intensifying active and interactive teaching	1	2	3	4	5
Outcome-focused learning evaluation	1	2	3	4	5

Thank you

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