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Strategies for Quality in Higher Education

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Abstract

The thesis investigates the multifaceted concept of quality in higher education at both international and national levels, considering the emphasis on upholding and implementing quality standards and accrediting undergraduate and postgraduate programs. The objective of the thesis is to explore the concept of quality and its correlation with curricula, teaching effectiveness, research, student services, and infrastructure. Additionally, this study aims to compare global practices with local approaches and highlight evaluation techniques.

The thesis is structured into four sections: defining quality in education systems and subsystems, quality strategies and practices in higher education, and their comparative analysis. The study concludes with a discussion and recommendations.

Keywords: quality in higher education, strategies and quality systems, evaluation of educational systems.

Abbreviations

ASPETE= School of Pedagogical and Technological Education

CHEA= Council for Higher Education Accreditation

DAAD= Deutcher Akademischer Austauschdienst (German Academic Exchange Service)

DSA= Disabled Student's Allowance

ECTS= European Credit Transfer and Accumulation System

EHEA= European Higher Education Area

ENQA= European Association for Quality Assurance in Higher Education

ERC= European Research Council

EU= European Union

HCERES= High Council for Evaluation of Research and Higher Education

HE= Higher Education

HEHA= Hellenic Authority for Higher Education

HEI= Higher Education Institution

HES= Higher Education System

HFRI= Hellenic Foundation for Research and Innovation

HRK= Hochschulrektorenkonferenz (German Rectors' Conference)

HQAA= Hellenic Quality Assurance and Accreditation Agency

MODIP=Μονάδα Διασφάλισης Ποιότητας (In Greek) Quality Assurance Unit

NCSR= National Centre for Scientific Research

NRA= National Research Agency

NSRF= National Strategic Reference Framework

OECD= Organization for Economic Cooperation and Development

TEI= Technological Educational Institution (in Greece)

TQM = Total Quality Management

R&D= Research and Development

PUK= Partnerships UK

QA= Quality Assurance

UOI= University of Ioannina

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CHAPTER 1. INTRODUCTION

Quality is important in various aspects of life, including education, products, services, and work, for several reasons. Consequently, quality matters because it leads to greater satisfaction, trust, efficiency, and long-term success, whether in business, education, or healthcare. It is a fundamental element for achieving and maintaining excellence in virtually any endeavor.

In higher education, quality is crucial to the success of universities and the development of students' future professional skills. In higher education, to achieve high quality, many factors must be examined. On this thesis we will address the quality of higher education not only domestically but globally as well, by looking at what strategies and practices are being used and furthermore by a comparative analysis and suggestions that will enhance the quality.

In Greece, quality in higher education stands as a topic of significant importance as well as concern. Higher education institutions in Greece, have been facing various challenges in maintaining and upgrading the quality of education they offer. It's important to note that Greece has been making efforts to address these challenges and advance the quality of its higher education system. The country's higher education institutions continue to work on aligning their programs with international standards and ensuring that graduates are forearmed for the future.

To continue, quality in higher education is a global concern, and various countries and regions have implemented mechanisms to make certain and enhance the quality of higher education institutions and programs. It's driven by the shared goal of providing students with the best possible education, promoting research and innovation, and contributing to the economic and social growth of nations. Universities and governments around the world continue to work on maintaining and enhancing the quality of higher education to satisfy the evolving needs of students and society.

In European Union, for example, quality in higher education is a top priority and there are various mechanisms in place to establish and enhance the quality of education across the continent (Van Vught, & Westerheijden, 1993). These mechanisms are essential for promoting the international competitiveness of European universities and

providing students with high-quality educational experiences. Such mechanisms, as Van Vught and Westerheijden (1993) suggest, concern the institution, with the allocation of the budget, the students, with exams and the academic staff. Overall, Europe places a strong emphasis on quality assurance and enhancement in higher education, with a focus on collaboration, innovation, and student-centered approaches. The commitment to maintaining high educational standards contributes to the continent's reputation as a hub for quality higher education and research (Van Vught, F. A., & Westerheijden, D. F., 1993).

1.1 Definition of Quality

"Quality" refers to the degree to which something meets certain specifications, standards, or expectations. As Rafael Aguayo (1991) suggests, *"quality defined from the user's point of view is anything that enhances satisfaction" (pp. 50).* Quality represents the perception of how effectively, efficiently and satisfactorily some specifications or expectations are met. It can be applied in many areas of life including education, health, work, production and many others. Factors affecting quality vary by sector. In education, for example, quality is related to the quality of teaching, the level of knowledge acquired by pupils or students, the assessment of results and many other factors (Harvey &, Green, 1993).

For Deming, quality is intertwined with reference to customer satisfaction. This means, the quality of a product or service will be judged by the customer based on how effective it is. Additionally, quality is multifaceted. It is not possible to define the quality of a service or a product with regards to a single characteristic or factor since there are certainly different degrees of quality. (Hoyer, Hoyer, Crosby, Deming, 2001).

For Crosby, the definition of quality is necessary. Otherwise, our knowledge is not enough about what we are doing to control it. Someone must have the knowledge about what the requirements are and apply the data into a measurable product or service characteristics. Consequently, it can be determined if a product or a service is high quality or not. (Hoyer, Hoyer, Crosby, Deming, 2001).

Moving on, according to Garvin (1988), there are four important ways through which quality can be attained, as Kundu (2017) suggests:

First of all, there is the product-based approach. In this point of view, the quality of a product is defined based on the based on the existence or the non-appearance of certain characteristics. The notable the quantity of a desired characteristic, the higher the quality of the product or a service.

Furthermore, there is the system-based factor. In this perspective quality is considered as compliance to demands or specifications. It presumes that specification is a valid substitute for a customer requirement (Kundu, 2017).

Another approach is the user-based one. The foundation of this approach is that the main objective of an organization is to satisfy the customer.

And last but not least, the value-based one. This approach consists of the idea to offer to customers services or products that have certain characteristics with a price acceptable from the customer.

Overall, quality is an important concept in society, as it is a key criterion for evaluating and improving products, services, processes and educational activities. Achieving high quality is often associated with increasing efficiency, achieving goals and improving people's satisfaction. (Hoyer, Hoyer, Crosby, Deming, 2001).

1.2 Quality in Higher Education

Quality in education has a lot of definitions that vary from time to time and most of the times it depends on different considerations of the individual and society as well. There are many challenges to define quality and it depends upon the point of view of the stakeholders. We might say it is difficult to define quality in higher education. Quality in higher education is usually divided into several categories and dimensions, each of which is assessed separately (Welzant, H., Schindler, L., Puls-Elvidge, S., & Crawford, L., 2011). We can say that quality in Higher Education is the ability of a system, cultivated and elementalized, to continuously satisfying the demands and requirements of the elements that they constitute or generally interact with it, since services and products offered, constitute the pillar of the existence of quality in

education. In the case of education, it is the students, teachers, social partners, scientific or professional bodies (Welzant, Schindler, Puls-Elvidge, & Crawford, 2011).

There are many categories of defining quality in higher education. First of all, there is the exceptional one. The exceptional concept of quality assumes as an axiom that quality is something special. There are some variations of this. First, the traditional concept of quality as discreet, second, the view of quality as embodied in excellence (for example, exceptional high standards), and third, a weaker concept of exceptional quality, as the completion of some required (minimum) standards (Harvey, L., & Green, D., 1993). Furthermore, another definition is the transformative one. In this concept, education is not a service for a client, but a continuous process of transformation of the participant, whether he is a student or a researcher. This leads to two concepts of transformative quality in education, consumer empowerment and consumption empowerment (Harvey, L., & Green, D., 1993). According to that point of view, we can say that education is more focused in the spiritual cultivation of the individual and generally in the whole development of a personality and character. According to Harvey and Green, 1993, that can be can be enhanced by the empowerment of students with student evaluation, by giving control to students and the opportunity to choose (for example, the learning process of a course) and by their critical ability development.

Lastly, one more definition is the purposeful definition of quality in higher education. According to Welzant, Schindler, Puls-Elvidge, & Crawford, (2011), in this case, institutional products and services are aligned with a specific vision and set specific requirements or standards, including those defined by accreditation and/or regulatory bodies. It is therefore clear that quality in higher education raises questions as there are many definitions of it and reflections of different perspectives.

In order to achieve all this, some indicators are used. These are the administrative indicators, student support indicators, instructional indicators and student performance indicators. In the administrative indicators are included quality indicators related to the administrative functions of an institution, such as for example the development of a relevant mission and vision, institutional legitimacy, the achievement of internal/external standards and goals, and provision of resources for optimal

institutional functioning. Student support indicators refer as to how effective and available are student support services in order to adequately help students. Instructional indicators refer to how effective and relevant are courses and programs that prepare students for their future employment. Last but not least, student performance indicators which refer to student engagement (Welzant, H., Schindler, L., Puls-Elvidge, S., & Crawford, L., 2011).

1.3 Total Quality Management in Higher Education

*According to Total Quality Management (TQM) ideology, the only meaningful definition of quality is regarded as the customers' perceptions of quality (*Hill, F.M. and Taylor, W.A. (1991, pp.4). TQM is a management approach that focuses on achieving long-term success through customer satisfaction. TQM is a holistic approach to quality and is pertaining on to the principle that every employee in an organization has to take part in a role ensuring the quality of products or services. TQM has been applied in various industries and has been associated with improved product quality, increased customer satisfaction, and greater efficiency. It is a comprehensive and ongoing approach to quality management that strives to create a culture of quality and excellence within an organization (Hill, F.M. & Taylor, W.A, 1991).

TQM in higher education refers to the overall degree of quality provided by a higher education institution, such as universities and colleges. This includes evaluating and enhancing all aspects of the educational process and its after-effects. Total quality in higher education requires continuous assessment, improvement and adaptation to new demands and challenges to ensure the provision of high-level education and research (Ioannidou, 2006).

Bellow, we can see a proposed framework of total quality management system that can be used in higher education. This is an indicative framework showing the pattern that can be used. More specific, it is based on the process-based quality management system that is used by ISO in ensuring quality. There are however, many modifications and improvements compared to the original model. The reason behind

that is to show a model for an educational quality management system (Mat Jani, Hajar & Ehsan, Selangor, 2011).

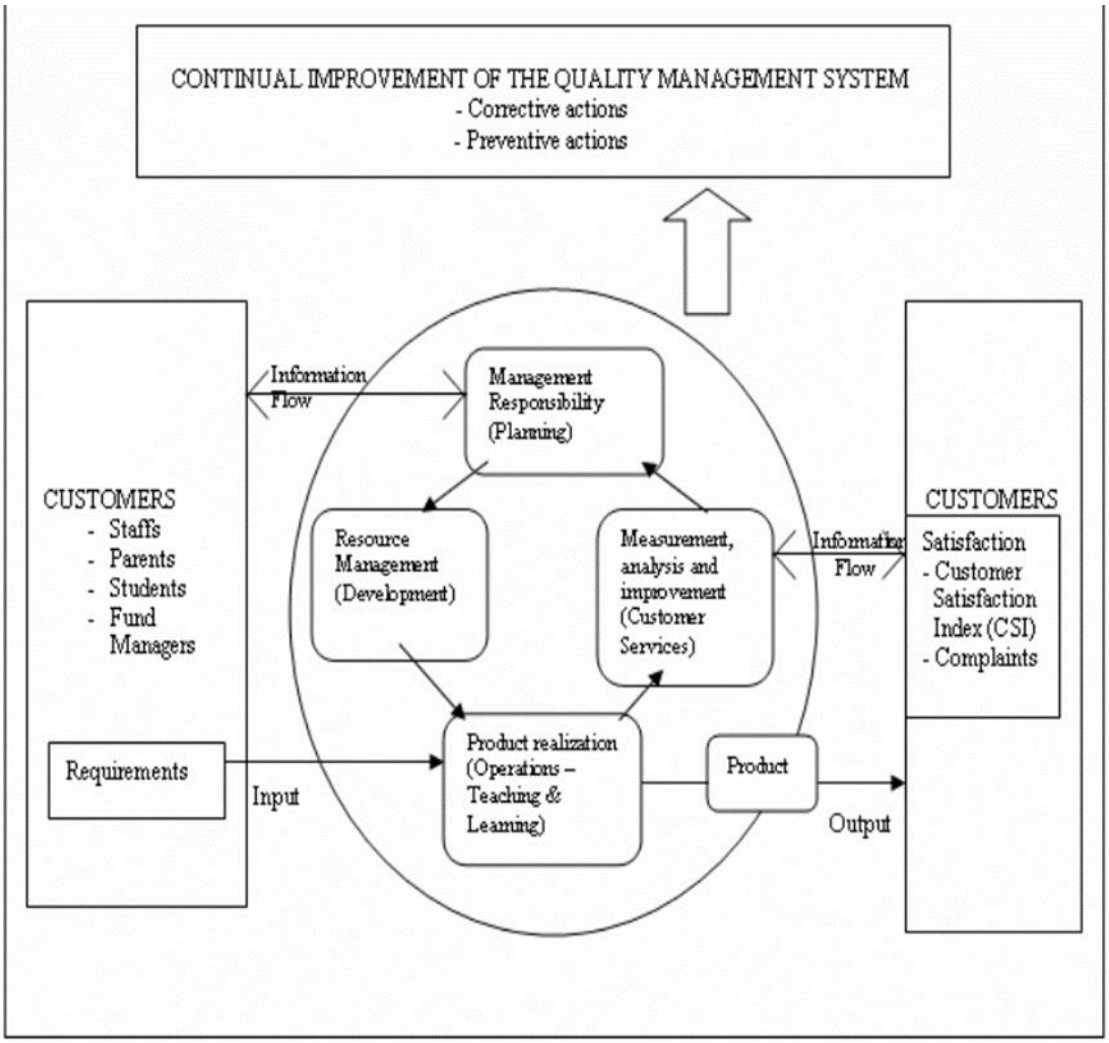

Figure 1. Framework of Total Quality Management System (Jani, H. M. 2011, October)

1.3.1 Elements That Make up the Quality of Education

Quality in higher education refers to the evaluation and improvement of educational programs, educational activities, and general educational experiences provided to students in universities and colleges. Quality in higher education is critical to producing educated individuals and preparing them for their professional and social lives (Gopal K. Kanji, Abdul Malek & Bin A. Tambi ,1999).

Important elements associated to quality in higher education include:

Teaching Quality: Effective teaching is a key element. This includes teaching methods, student assessment and transparency in teaching. Specifically, the goal of transparency is to provide more solid support for student success, particularly among students who may come from less privileged academic background. According to Indiana University Bloomington, (https://citl.indiana.edu/teaching-resources/diversity-inclusion/tilt/index.html) some methods of enhancing transparency in a course are the use of active learning techniques and Classroom Assessment Techniques (CAT's) in order for students to understand the course of material, as well as explaining this purpose to students with class discussions inviting them to participate in planning topics.

In particular, increasing attention is being paid to the quality of learning and teaching at university level in the whole world (Devlin, 2007) and there is increasing demand firstly to ensure effective teaching in universities and secondly to be able to implement that effectiveness. University teaching is a multi-disciplinary activity based on extensive professional skills and practices and high levels of disciplinary and other expertise (Devlin, Samarawickrema, 2010). Young and Shaw (1999) proposed six major factors of effective teaching. These are the value of the subject, the motivation of students, a comfortable learning atmosphere, the organization of the subject, an effective communication and lastly, concern for student learning. In order to engage all students, teachers must have an appropriate pedagogical response that accommodates a broader range of not onlt learning styles but preferences as well. Moreover, a wider range of linguistic knowledge, cultural and educational backgrounds than was the case in the past. Each course should be carefully planned but flexible so that necessary adjustments can be made during the course based on feedback (Devlin, Samawarickrema, 2010).

We could say that teaching quality in higher education is a principal factor that directly impacts the learning experience and outcomes of students. It encompasses an extensive range of elements that strengthens the effective teaching and student engagement. Concerning student engagement, the increasing friction of students and the lack of engagement is a worldwide debated issue addressing the worrisome rise of students that are not engaging and therefore, dropping out (Crabtree, 2023). Castello et. al. (2017) mentioned many components that can have influence upon students' success. Some of them are feelings of solitude, the lack to create networks and

socialize, apathetic personalities, economic problems and the capability to balance personal life with academic work. More specifically, as Crabtee mentions, change over, other obligations, mental health issues, inadequacy of confidence and motivation, difficulties to learn, no support, cultural barriers and difficulties to join are the main reasons why students do not engage. Many of the reasons cited were often the result of universities' 'culture of institutional neglect', where HE institutions failed to help students integrate and transition into a university environment (Crabtree, 2023).

Ultimately, the desired result of teaching quality in higher education is to create an environment where students are motivated, engaged, and equipped with the knowledge and skills they need to succeed in their academic and professional pursuits.

Continuous Evaluation: According to Sant Hirdaram, (one of the best colleges for girls in Bhopal, India) continuous evaluation of curricula and student performance is important for improvement. We must continue searching procedures for enhancing the curricula in the best way possible. Continuous evaluation refers to a proceeding process of assessing and enhancing various aspects of the educational experience to improve the quality of teaching, learning, and institutional performance (https://shgc.in/continuous-and-comprehensive-evaluation). According to Spiel, Schober & Reisman (2006), to achieve comprehensive information, sound curriculum evaluations must go beyond student course evaluations. They must explore proximate goals, conditions, and long-term effects of university education. This approach contrasts with traditional methods of periodic or summative assessments, like final exams or end-of-semester evaluations. Continuous evaluation is designed to provide more timely and formative feedback, facilitating ongoing improvements.

In summary, we could say that by implementing continuous evaluation practices, higher education institutions can ensure that they remain responsive to the evolving needs of students and the requirements of the job market. It fosters a culture of ongoing improvement and innovation in teaching and learning.

Teaching Staff Development: The professional development of teachers and teaching staff is crucial for quality. The European Association for Quality Assurance in Higher Education (ENQA) established in Guidelines for national external quality

assurance systems that institutions should have ways of ensuring that staff involved in teaching students are qualified and competent to do their job properly and further that institutions should ensure that their staff recruitment and appointment processes include a means of ensures that all new staff have at least the minimum necessary level of competence (ENQA, 2007, cit. after van de Ven, 2008).

According to Požarnik (2009), the fundamental idea is that Higher Education (HE) institutions should slowly approach teaching to a more student-centered sense and encourage active learning, with more varied methods and move away from rigid traditional lecture-based teaching. Thus, setting challenging goals and assignments, monitoring student learning and providing appropriate feedback, is essential.

Consequently, in order to succeed to that, measures must be taken. The monitoring of students' progress should be related with services or a significant number of academic staffs so that everyone can monitor a small group of students, without delays, helping students as much as possible. The professional development of the teaching staff should be combined with a significant increase in the number of teachers. One of the most important factors according to Hosburgh (1999), is giving feedback to students. Processes engaged in to give feedback might contribute to a transformative learning which is very important.

Consequently, teaching staff development should be an ongoing process that aligns with institutional goals and the changing needs of both faculty and students. It is essential for promoting effective teaching and maintaining the overall quality of higher education.

Current and Modern Courses: Renewal of curricula to keep pace with developments in the world is essential. Changing learning strategies and curricula has as a result the improvement of learning outcomes and streamline teaching processes.

Connecting with the Community: Engaging with the local community and business world helps boost employment and the quality of education. (Siskos. 2009, Eythimiadou 2003).

Student Support: The provision of necessary services and support, including support for students with special needs, are very essential. It is important to note that student support in higher education is a comprehensive system of resources, services, and

programs designed to assist students in their academic, personal, and professional development. Providing effective student support is crucial for ensuring student success and well-being throughout their higher education journey. Some ways to accomplish that is as Stewart (1993) suggested, are class teaching at study centers, individual tutorials at study centers or other locations, annual residential, study or self-help groups, social events and counselling sessions at study centers. Although, this statement is 30 years ago, we can still support these methods and find them effective.

Research Activity: Research contributes to the development of knowledge and scientific progress, and is often combined with teaching. It must be mentioned however, that while the research achievements of teaching staff are considered in their promotion, their teaching performance is actually not considered. Therefore, although teaching is the main work of academics, this is not evaluated in their career development. In today's world, research is becoming increasingly important in many countries.

1.4 Individual Subsystems of Quality in Higher Education

Quality in higher education is a multifaceted concept that encompasses various individual subsystems or components. These subsystems are interrelated and together contribute to the overall quality of an institution or program. Here are some of the key individual subsystems of quality in higher education:

Curriculum and Academic Programs: The design, relevance, and effectiveness of academic programs, including the curriculum, course materials, and learning outcomes are very important. Academic programs and curricula in higher education play a pivotal role in shaping the educational experiences of students and, ultimately, their preparedness for careers and lifelong learning. Curriculum structure elements include interesting module content/books, excellent study materials, well-regulated module framework, availability of module structure information, variety of elective modules/modules in areas of specialization, workshops and weekly timetable (Kundu, 2017).

Curriculum structure elements include interesting module content/books, high quality study material, effective module structure, availability of module structure information, variety of elective modules/modules in areas of specialization, workshops and weekly timetable

Faculty and Staff: The quality and qualifications of faculty members, including their expertise, teaching abilities, and research contributions play a major role as well. Moreover, the quality and effectiveness of administrative and support staff is also important. Based on the study of Oldfield and Baron conducted in 2020 on management student perceptions of service quality, it is important for staff to possess knowledge to answer questions regarding the subject and understand the need of their students. Staff must be people that students are confident with and people that they are caring towards their students. Moreover, they must answer their questions promptly. As far as the administration is concerned they should keep records and show undivided attention in solving student's problems. Support services must conclude the tasks on time, provide immediate assistance to a visually appealing facility (Kundu, 2017).

In terms of administration, they should keep records and show interest in solving students' problems. Support services must complete tasks on time, provide prompt assistance from support staff and visually appealing physical facilities

Teaching and Learning: This applied to the methods and strategies employed in teaching and learning, including pedagogical approaches, assessment methods, and the use of technology (Kundu, 2017).

Research and Innovation: Research and innovation includes the institution's dedication to research and innovation, including the quality and impact of research, the availability of research resources, and opportunities for student research involvement (Kundu, 2017).

Student Services: This category consists of the availability and quality of support services such as counseling, career guidance, academic advising, and extracurricular activities (Kundu 2017).

Infrastructure and Facilities: The physical infrastructure, including classrooms, libraries, laboratories, and IT facilities, and their accessibility, adequacy, and

maintenance are something very important. According to a study conducted by Narang in 2012, facilities must be composed of well-appointed communication classrooms with effective classroom management, training on modern technology, adequate facilities and infrastructure for service delivery, computer labs, art facilities, integrated learning resources, residential and recreational facilities, and aesthetic view of facilities. Moreover, student support facilities must include IT facilities, learning resource centers, vending machines on campus cafeterias/canteens and recreational facilities. Lastly, the facilities must include accessibility of parking, security measures, registration procedures, toilet facilities, and accommodation facilities/services. In this way, students have the best equipment to work with, a very pleasant space to be, and everything to facilitate themselves. Consequently, they get more productive and efficient. integrated

Assessment and Accreditation: The institution's processes for assessing and ensuring the quality of its programs, including accreditation by relevant accrediting bodies is important as well. According to Volkwein (2010), to be accredited, each institution should gather and present evidence that it is achieving its educational goals and producing improvements both inside and outside the classroom. Such improvements are in the way new students experience the situation, academic advisement, mentoring, residential life, teaching effectiveness, and the general education curriculum. Additionally, as noted by Volkwein (2010), the other regional accreditation bodies and several of the discipline-based accreditors (notably the Accreditation Board for Engineering and Technology and the Association to Advance Collegiate Schools of Business) have also strengthened their evidence for evidentiary results. Accordingly, accrediting bodies rightly draw attention to the dual purposes of assessment: internal improvement and external accountability.

Admission and Enrollment: This refers to the admission criteria and procedures, as well as the diversity and qualifications of the student body. According to a research that was conducted by Declercq, & Verboven, in 2018, admission standards that are designed well, can lead to resource savings in view of the fact that, as less students enroll the more students graduate without delays. Consequently, the savings can be used for other purposes and additionally other investments in the higher educational system, for example more scholarships to people with socially disadvantage backgrounds.

Governance and Leadership: The effectiveness of the institution's leadership, governance structure, and decision-making processes in promoting quality and accountability is one of the most important factors. Sakthivel et al. (2005) recommended a quality model for educational institutes based on the TQM concepts. One of the suggestions was top management commitment namely, leadership is the predecessor of process improvement. It consists of top management commitment and support.

Financial Stability: The institution's financial health, including its ability to support its mission and maintain quality in the face of economic challenges, is paramount. According to a research conducted by Laktionova, Yurchyshena and Matviychuk in 2021, the results of the research showed that financial stability of universities certify its ability to invest in educational and research activities. This is one of the key economic criteria of its sustainability, without which the mission and strategic objectives could not be accomplished.

Community and Industry Engagement: This refers to the extent in which the institution collaborates with the community and industry to improve the quality and relevance of its programs (Kundu, 2017).

Internationalization and Diversity: This refers to the efforts to promote diversity and internationalization, including international student exchange programs and multicultural education. Institutions will engage in different activities with lesser or greater extend. Some of them are international or collaborative partnerships, international faculty exchange and/or recruitment or international mobility for domestic students (Killick, 2017).

Student Outcomes: The success and achievements of students, including graduation rates, employment outcomes, and post-graduation satisfaction (Astin, 1980). The graduation rate is a sought-after indicator in Greece and is published by Hellenic Authority of Higher Education (HAHE), among many other indicators, according to Handbook of Quality Indicators OPESP, such as percentage of female graduates with normal duration of studies in terms of the total number of graduates with normal duration of studies or percentage of graduates with duration n+2 years of studies in total of graduates, all part of the "Graduates of Undergraduate Study Programs – population" indicator. In Greece for example, these recent years, there is an extensive

impression that the number of students dropping out in Greek Universities is repeatedly increasing. Although there are no methodically recorded data, the number of students who graduate is significantly lower than the number of those admitted students and the leakage trend seems to be increasing. A large number of students drop out their studies for various reasons (Mpamnios, 2019).

Institutional Culture and Values: The values, ethics, and culture of the institution, including its commitment to academic freedom and ethical standards. As Tierney &, Lanford (2018), noted, a framework that establishes the institutional culture, results in managers clarifying the identity of the institution by emphasizing its unique characteristics.

Continuous Improvement: The institution's commitment to ongoing self-assessment and improvement in all of the above subsystems, often guided by strategic planning and feedback mechanisms is one important factor as well. Achieving quality is very important to the academic ethos and academics themselves know best about the level of quality they are at any given time (Campell and Rozsnayi ,2002).

In summary, these subsystems are interconnected, and addressing one can have an impact on others. Institutions of higher education must pay attention to each of these subsystems to ensure and enhance the overall quality of education they provide. Regular assessment and feedback from stakeholders are essential for continuous improvement in these areas (Vlachos, D 2008, Zachou, E, 2018, Eythimiadou 2003).

CHAPTER 2. STATEGIES OF QUALITY IN HIGHER EDUCATION

2.1 General Framework of strategies

Educational quality systems differ from country to country and are decided by department/institution/university etc. (Brennan, De Vries, Williams, 1997).

The strategic plan is extremely important because through it the goals of quality in education are achieved. More specifically, as shown in the figure below, what each institution should do is to make an analysis of the environmental and natural resources

it has at its disposal. For example, the market environment and resources such as how many personnel they have, or what facilities they have. These should be studied, evaluating them via an analysis of strengths and weaknesses. This will lead to the next step which is the goal formulation. In this step objectives, goals and missions are need to be discussed. What it is expected to achieve and with what means. For this to happen there must be a strategy formulation, such as product market opportunity strategy. Then at this point it is created the organization design which finally leads to the final step, the system design. This model seems to be simple and generalized enough to be applied in to different contexts in college or university settings.

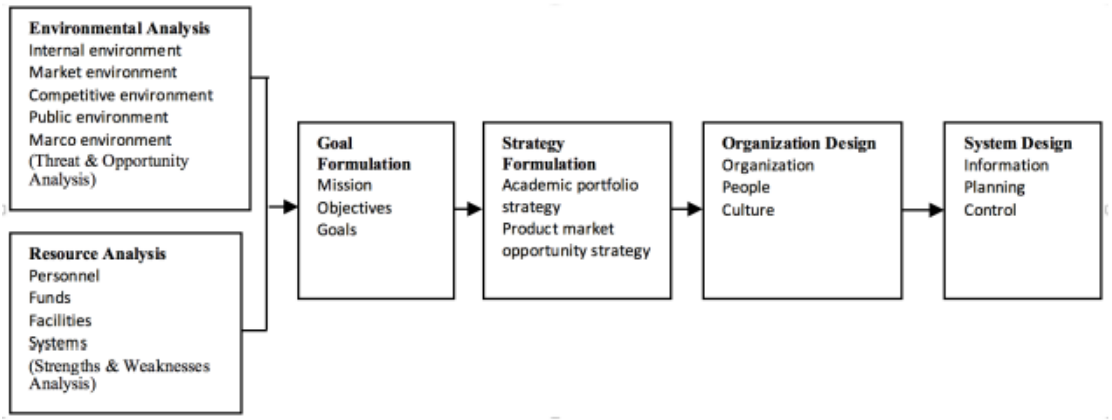

Figure 2. Environmental and Resources Analysis (Chen, S., Na-Songkhla, J., & Donaldson, J.A. ,2018)

As we mentioned before, quality is the achievement of objectives. This is pursued by

- *Systematic, structured and continuous improvement effort*
- *Development of improvement mechanisms*
- *Development of quality philosophy*
- *Critical self-analysis and evaluation (Soldatos, 2016)*

Consequently, quality in higher education is essential for providing students with a meaningful and valuable learning experience. Institutions of higher learning should

continuously strive to improve and ensure the quality of education they offer. Here are some strategies to promote and maintain quality in higher education:

Clear Educational Goals and Objectives: Establish clear and measurable educational goals and objectives for each program and course is very important. These goals and objectives should be aligned with the institution's mission and vision. As Kotler (1981) pointed out, the purpose of developing a clear set of institutional goals aims to keep the organization from future failures and uncertainty. The institutions need to have a clear picture about the final result of the planning period. They need to know what they want to accomplish not only the first year, but several down the line. Objectives enable the school to determine what it needs to do, set performance targets for individuals and evaluate results. Without goals, whatever the organization does or achieves can't be considered acceptable; there is no standard for planning or control.

Curriculum Development: Regularly review and update the curriculum to ensure it remains relevant and up-to-date with industry trends and academic developments.

Faculty Development: Invest in faculty development programs to keep instructors updated on the latest teaching methods, research, and best practices in their respective fields. As noted by Kotler (1981), the first step to create a strategic plan is to carefully analyze the environment. That is why the environment keeps changing and needs new organizational strategies.

Student-Centered Learning: Promote active and experiential learning approaches that engage students in the learning process, such as problem-based learning, flipped classrooms, and project-based assessments. Elements associated with higher student learning achievement include:

• Creating insistence for advancement (given the limitations of aid delivery)

• Creating dependence on local resources

• Participation and sharing of information

• Identification of stakeholders

• Division of tasks between stakeholders

• Diagnosing community needs and support

• Pinpointing relevant existing local organizations

• Configuration of community mobilization methodology

• Design, implementation and monitoring technology development

• Capacity building and long-term commitment

Patterns of school factors associated with higher academic achievement vary by location, and the effectiveness of different inputs varies with initial conditions (Shukla et al. 1994, as cited in World Bank 1997).

Assessment and Feedback: Implement robust assessment and feedback mechanisms to gauge student learning outcomes and provide timely feedback to students. Use this data to make improvements. Dynamic innovation is exemplified by data-based triangulation of assessments collected from students, teachers, and field-based constituents for the purposes of program development and/or modification. (Agarwal, 2018).

Accreditation and Quality Assurance: Pursue accreditation from relevant accrediting bodies to ensure that the institution satisfies the established standards of quality. This external evaluation helps maintain and enhance quality. According to Suleiman (2023), Quality Assurance (QA) strategies in Higher Education Institutions (HEIs) are planned to ensure the provision of high-quality education and services to the community. These strategies include a series of activities and assessments that strengthen in to maintaining and upgrading the quality of education provided by the institution.

As seen in the figure below, the first step in quality assurance, is a clear vision and mission for an organization. Without it there is no quality assurance. This shapes the whole process and it must be communicated amongst stakeholders. Then, the next step is the concept of program and curriculum design. It creates the ability of balance. After that, we move onto the faculty members. They are the ones who will determine the quality, morals, commitment, collaboration, and efficiency of the students. The person with the highest responsibilities is often the dean of the faculty of the department. Faculty members lead to teaching and learning methods. The effectiveness of teaching methods can have a greater impact in students for their critical thinking skills and most of all to succeed in their academic life. This leads to facilities. With the proper facilities students are more willing and do have better performance. Moreover, research and innovation activities must be encouraged. In

this way, quality of education will be enhanced. This finally leads to quality assurance of evaluating the quality of a system improving it in order to achieve the best results and guarantee the quality of an item. In conclusion, this is a circle that must be followed step by step to achieve quality insurance in the best possible way (Suleiman, 2023).

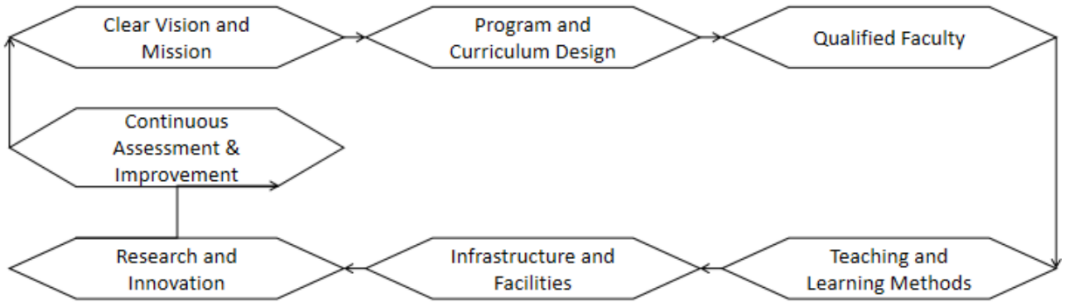

Figure 3. Steps for Quality Assurance (Suleiman, Ahmed, 2023).

Student Support Services: Offer comprehensive support services, including academic advising, career counseling, mental health services, and tutoring, to assist students in their academic and personal development. As Lawrence noted, *"Colleges and universities must be intentional about working together to support student success. One of the first strategies to ensure that students are successfully retained is creating a collaborative approach to academic advising, which is a key process for enhancing student success outcomes"* (Lawrence, 2023, pp.6).

Technology Integration: Integrate technology effectively into teaching and learning processes to enhance the educational experience and improve accessibility for students. Strategies suggested to enhance quality include improved inputs such as the use of more technology, stimulus for teacher productivity, establishing or clarifying national standards, and increased in-service teacher training (Chapman, Adams, 2002).

Diversity and Inclusion: Create a diverse and inclusive learning environment that respects and celebrates differences. Encourage diverse perspectives and backgrounds within the student body and faculty. From an educational point of view, the basis of mutual inclusion is equality, which means a completed learning environment. This is complemented by personalized support and content, which consequently enhances

equity, assisting to the educational success of students in scope of inclusion (Varga, 2015, Vitez, 2021).

The comprehensive educational environment contributes to the success of every participating student by involving and supporting excluded people (UNESCO, 2009a, 2009b). Student diversity can mean their personal, inherited privileges and/or socio-economic background and the above in their cultural environment. At the individual level, diversity is multidimensional, as it consists of many (advantageous or disadvantageous) characteristics and privileges (Varga 2015, Vitez 2021).

Continuous Improvement: Establish a culture of continuous improvement by regularly assessing and reflecting on the effectiveness of programs and teaching methods. Use this feedback to make necessary adjustments. In Greece for example, there is the Quality Assurance Unit (QAU) or in Greek, Μονάδα Διασφάλισης Ποιότητας (ΜΟ.ΔΙ. Π) , which mainly concerns the continuous evaluation and re-evaluation of the educational process. Every university in Greece has its own QAU. For example, the Quality Assurance Unit of the Technical University of Crete is the central coordinating body for all quality assurance and evaluation procedures of the Institution and is responsible for the organization and implementation of the Institution's Internal Quality Assurance System (IQAS), in accordance with the Institution's strategic objectives, the international practices, especially those of the European Higher Education Area, and the principles and directions of HAHE. The formation, organization, operation and powers of MODIP are determined by a decision of the Foundation's Senate (https://www.modip.tuc.gr/el/archi).

Research and Innovation: Promote research and innovation within the institution to stay at the forefront of knowledge and contribute to the academic community.

Engage Industry and Employers: Collaborate with industry and employers to ensure that academic programs align with workforce needs and provide students with relevant skills and knowledge.

Internationalization: Encourage international collaboration, student and faculty exchange programs, and a global perspective to broaden students' horizons. Internationalization includes the policies and practices undertaken by academic systems and institutions to cope with the global academic environment. Campus-based internationalization initiatives includes study-abroad experiences, curriculum

enrichment via international studies majors or area studies, strengthened foreign-language instruction, and sponsorship of foreign students to study on campus (Siaya Hayward, 2003, Altbach, Knight, 2007).

Transparency and Accountability: Be transparent in reporting academic results, program outcomes, and other performance indicators. Hold all stakeholders accountable for maintaining quality.

Budget Allocation: Allocate sufficient resources for quality education, including funding for infrastructure, faculty development, and research activities. According to Liefner (2003), in a Higher Education System (HES) without private funding or performance-based budget allocation, the institution bears the risk of unsuccessful projects because it guarantees funding and salaries regardless of performance. Although there are public sources as well, mostly in Europe, a high proportion of funding for higher education institutions is provided by private actors, for example, in the form of tuition and fees, gifts, grants, or research contracts. Their demand drives many activities of universities, faculty, and staff (Liefner, 2003).

Ethical and Professional Standards: Promote ethical conduct and uphold professional standards in all aspects of education and research. It is important for all the members of an institution to provide any information considering professional ethics, so they are able to benefit in many ways. The benefits they get are maintaining good terms and relationships with others, performing their job duties in a satisfactory manner, gaining a sense of job satisfaction and retaining their job (Kapur, 2020).

Stakeholder Engagement: Involve all stakeholders, including students, faculty, alumni, and the community, in decision-making processes and quality assurance efforts.

By implementing these strategies, higher education institutions can maintain and enhance the quality of education they provide, ultimately benefiting their students and the broader community.

2.2 Strategies in Greece

According to the European Union (EU), education remains a top priority for Greece and is preserved in the Greek Constitution. Higher education is determined only by institutions that are legal entities under public law. Higher Education Institutions enjoy full self-governance and academic freedom. They are subject to state supervision by the Ministry of Education and Religious Affairs, in accordance with Article 16 of the Constitution.

In Greece, according to EU, higher education is provided by HEIs (total number 25) and includes two parallel and distinct sectors:

1. The university sector that includes universities, national technical universities and the Higher School of Fine Arts.

2. The School of Pedagogical and Technological Education (Greek: Ανώτατη Σχολή Παιδαγωγικής και Τεχνολογικής Εκπαίδευσης) or ASPETE (Α.Σ.ΠΑΙ.Τ.Ε.) which specializes in training teachers. ASPETE belongs to the university and particularly the technology sector.

Higher education in Greece has undergone significant changes and reforms in recent years, driven by economic, social, and global developments. Several strategies and initiatives have been implemented to improve the quality of education and enhance the competitiveness of Greek universities. Some of the key strategies in higher education in Greece include:

Bologna Process: Greece is a signatory of the Bologna Process, which aims to create a common European Higher Education Area (EHEA). As part of this process, Greece has implemented a three-cycle degree system (bachelor's, master's, and doctoral degrees) and adopted the ECTS (European Credit Transfer and Accumulation System) for credit recognition (Crosier, Parveva, 2013). It is important to note that since the beginning of the Bologna Process, European higher education systems have grown significantly.

Quality Assurance: According to the Council for Higher Education Accreditation (CHEA), the Hellenic Quality Assurance and Accreditation Agency (HQAA) was established to ensure the quality and international recognition of Greek higher education institutions and programs. Quality assurance processes include accreditation of programs and institutions, internal and external evaluations, and

development of quality standards. The HQAA is governed by the President and the Supreme Council.

It has administrative autonomy and is supervised by the Minister of Education, who exercises legality control. According to ADAA, as part of its mission a) it contributes to the formulation and implementation of the national strategy for higher education and to the distribution of the grant of Higher Education Institutions (HEIs) and b) it evaluates and certifies the quality of operation of a T.E. I. The Authority guarantees the transparency of all actions and posts on its website the activities it develops and the decisions it takes (https://www.ethaae.gr/el/ethaae/about-hahe).

Research and Innovation: According to Bratsas, Chondrokostas, Koupidis and Antoniou (2021), a very large amount of the European Union's total budget is spent on regional policy, through the structural funds with the main objective of reducing the economic disparities between the member states and supporting job creation, business competitiveness, economic development, sustainable development, and improving the quality of life.

Greece has been promoting research and innovation in higher education through programs like the National Strategic Reference Framework (NSRF) and Horizon 2020. These initiatives aim to strengthen research capabilities, foster collaboration between academia and industry, and enhance innovation in various fields. According to the Organization for Economic Cooperation and Development (OECD) (2021), in 2016, the government made a strategic investment in science and research, with the formation of the Hellenic Foundation for Research and Innovation (HFRI) as a funding and evaluation agency for investigator-led research, for postdoctoral fellowships and doctoral scholarships.

Internationalization: Greek universities have been actively pursuing internationalization strategies to attract more international students and researchers. They offer programs in English, participate in student and staff exchange programs, and collaborate with foreign institutions. According to the Organization for Economic Cooperation and Development (2021), although postgraduate educational programs are mainly offered in Greek, an increasing number of these programs are offered in English, or other languages.

Digital Transformation: The COVID-19 pandemic accelerated the digital transformation of higher education in Greece. Universities have adopted online learning platforms and tools, making education more flexible and accessible. However, the transformation is not complete. According to the Organization for Economic Cooperation and Development (2021), the COVID-19 pandemic has energetically accelerated digital transformation, with shifts from in-person to online courses, straining students' skills and institutional resources. In the wake of the COVID-19 pandemic, Greek HEIs have supported research and knowledge transfer across the country. Nevertheless, Greece continues to strive for upgrading in fields such as connectivity and digital literacy.

Lifelong Learning: Lifelong learning initiatives aim to provide education and training opportunities for individuals of all ages and backgrounds. As Karalis and Korres (2010) point out, there was a remarkable quantitative expansion of lifelong learning activities occurred, while simultaneously new types of adult education organizations were created and the number of adults participating in continuing education activities increased. Greek universities offer a variety of continuing education programs, including short courses, online courses, and adult education.

Modernization of Curricula: Greek universities are working on updating and modernizing their curricula to meet the evolving needs of the job market and society. This includes incorporating interdisciplinary approaches and addressing contemporary challenges.

Entrepreneurship and Start-ups: Initiatives to promote entrepreneurship and support start-ups have been integrated into higher education. Universities collaborate with incubators, accelerators, and innovation centers to foster an entrepreneurial spirit among students and researchers. According to the Organization for Economic Cooperation and Development (2021), HEIs also organize entrepreneurship events open to the general public. The University of Western Macedonia offers seminars to anyone interested, provides orientation services and organizes student visits to incubators, technology parks and research centers.

Equally, Aristotle University of Thessaloniki, through its Career Services Office, in the last three years has offered 14 seminars and a variety of workshops. The Aegean

Startup, the digital accelerator of innovation and entrepreneurship of the University of the Aegean, offers similar services, focusing on the Aegean area.

Similarly, the Technical University of Crete contributes to innovative projects. For example, they have a very modern lab, the TUC Inno Lab. The TUC Inno Lab is an open structure of a horizontal, interdisciplinary, manufacturing laboratory for the entire Technical University of Crete that offers an immediate possibility for the initial implementation of a Proof-of-Concept (POC) or a prototype, through the provision of appropriate logistical infrastructure (3D printers, 3D scanners, CNC machines, laser cutters, plasma cutters, etc.). (https://www.innovation.tuc.gr/el/lab) Additionally, many workshops take place such as VR technology, Technological applications of geoinformatics, Energy saving technologies and many more.

Inclusivity and Equal Access: Efforts are being made to improve access to higher education for underrepresented groups, including students with disabilities, refugees, and low-income students. Scholarships and support programs have been introduced to ensure equal opportunities for all. According to the Organization for Economic Cooperation and Development (2021), Hellenic State Scholarships Foundation (IKY), support the flexibility of students. Hellenic State Scholarships Foundation also acts as the National Agency for Erasmus+ in the field of education and training.

Strengthening Collaboration: Greek universities are encouraged to collaborate with each other, with industry partners, and with international institutions to enhance the exchange of knowledge and resources. This collaboration can result in joint research projects, student and staff mobility, and improved educational outcomes. In University of Ioannina for example, the Directorate of International & Public Relations is one of the University's structural administrative units which includes numerous activities to first of all globalize the university and secondly to strengthen its reputation.

These strategies reflect Greece's commitment to improving the quality, relevance, and competitiveness of its higher education system in the global context. However, challenges remain, including the need for sustainable funding, addressing brain drain, and ensuring the ongoing success of reforms.

2.3 Internal Quality Assurance System: The case of the Technical University of Crete

Each university in Greece has its own internal system for quality assurance or else known in Greek as MODIP (ΜΟΔΙΠ= Μονάδα Διασφάλισης Ποιότητας) which have as their object the procedures for the quality assurance of each Institution in collaboration with HAHE. This is accomplished by setting targets and using indicators. te

Below we will refer to the internal security system of the Technical University of Crete. In the Quality Assurance Manual of TUC, we can clearly see what processes are required to ensure quality. First, we start with an introduction regarding what is foreseen, for example by the responsibilities of the administration, but also about the quality policy.

The first step of the processes is the political assurance of quality through its design, review and evaluation. The second process step concerns the allocation and management of resources that are available. In other words, the availability of financing, the availability of infrastructure and also human resources. The third and very important step is the establishment of goals to ensure quality. These goals relate to the educational work, such as learning outcomes, to research activity and innovation, to the establishment of quality assurance of infrastructure and management systems and lastly, to the establishment of goals to ensure human resource development. Following these, the next step is the internal evaluation and then the collection of all data, measurement, analysis and improvement of the above. Finally, the information is made public and as the last process, there is the external evaluation.

More specifically, we will refer to some strategic goals that are set. According to Quality Targeting of TUC, one constant goal is the improvement of quality in education, the promotion of internationalization and extroversion. The quality target of this is the increase of percentage of students to go on ERASMUS and the actions to achieve this are drafting a memorandum of proposals by MODIP. Another quality target is to increase the percentage of participants in the evaluation courses. This will

be achieved by 1. Evaluations Process Update courses by the students 2. Update Feedback and Utilization Process Grade Evaluation Results. Continuing, for the infrastructure, the strategic goals is the effective function and the quality goal is to increase percentage of students who have free accommodation. The actions required for this goal are the completion of new student residences, and the rationalization about free accommodation criteria. There are many strategic objectives aimed at quality assurance. Some of them are the ones we mentioned. It is clear that TUC puts a lot of effort into quality assurance.

2.4 Europe and Greece: a comparison

When comparing the quality of higher education in Europe as a whole to Greece, there are several key distinctions to consider. In Europe, there is diversity amongst institutions. Europe encompasses a wide range of countries, where each one consists of its own higher education system. European countries have diverse types of institutions, including world-renowned universities, specialized institutions, and vocational schools. According to Brennan et.al. (1993), this arises from the growth of the European market to extend the search by employers for new graduates across all nations and a variety of systems in higher education. This has as a result the aspiration of students to study abroad and enhance their opportunities and mobility across national boundaries. The choice of each subject and institution is also subject to different systems in higher education.

Moreover, research excellence must be considered. In many Europeans countries, such as the United Kingdom, Germany, and the Netherlands, there is a strong emphasis on research and innovation. They invest heavily in research and development and often collaborate with international partners. As Teichler (2005) point out, many universities and certain national bodies have established centers of ‘staff development’, ‘teaching and learning’, ‘didactics of higher education’, etc. Their staff is expected to do research, to train teaching staff and to assist curricular innovation. Specifically, in Greece, the Teaching and Learning Support Center of the Technical University of Crete (https://www.tls.tuc.gr/el/archi) as part of quality assurance as well, seeks to inform and educate the members of the Institution's

Academic Community in teaching and learning issues in any suitable way, either online (workshops), or textually (website), or through asynchronous training (E-Class).

Furthermore, Europe enhances mobility and exchange programs. As Brennan et.al (1993) suggest, there is a long history of student and staff mobility through programs like Erasmus+ and the Bologna Process. These programs make it easier for students to study in different European countries and earn degrees recognized across the continent.

Additionally, one very important factor in Europe is the diversity considering the language. Students have the opportunity to study in various languages, including English, French, German, Spanish, and more. This linguistic diversity provides international students with a wide array of choices.

European countries have established quality assurance mechanisms to ensure that higher education institutions maintain high standards. Accreditation agencies evaluate and accredit universities and programs to meet these standards.

Last but not least, funding for higher education varies across European countries, with some offering low-cost or free education to both domestic and international students, while others have tuition fees. This can impact the resources and facilities available at institutions.

While the above are the general context of Europe, compared to Greece, many factors must be considered. We will divide this in two categories: the advantages and disadvantages.

2.4.1 Disadvantages of the Greek Higher Education System

To begin with, we must mention the economic factors. Greek higher education system has been by the country's economic challenges. Budgetary constraints have had an impact on the availability of resources for higher education. Consequently, this results in the selection of other European countries with greater mobility and options from which candidates can choose. The following graph strengthens the above statement. Specifically, we can see that Greece is clearly in the last position of expenditure per student as it will be shown below according to OECD with the amount of 2,603

dollars per student, while first is Luxembourg with 34,741. This amount is thirteen times greater and shows that Greece is much lower and needs to invest more in education. As a result, it is reasonable for students to seek better study opportunities.

Moreover, another disadvantage in the Greek system is the language of instruction. Greek universities primarily offer programs in the Greek language, which may pose a language barrier for non-Greek-speaking international students. For example, the official language of the National and Kapodistrian University of Athens is Greek, which is the official language of the country, as well as one of the 23 languages of the European Union.

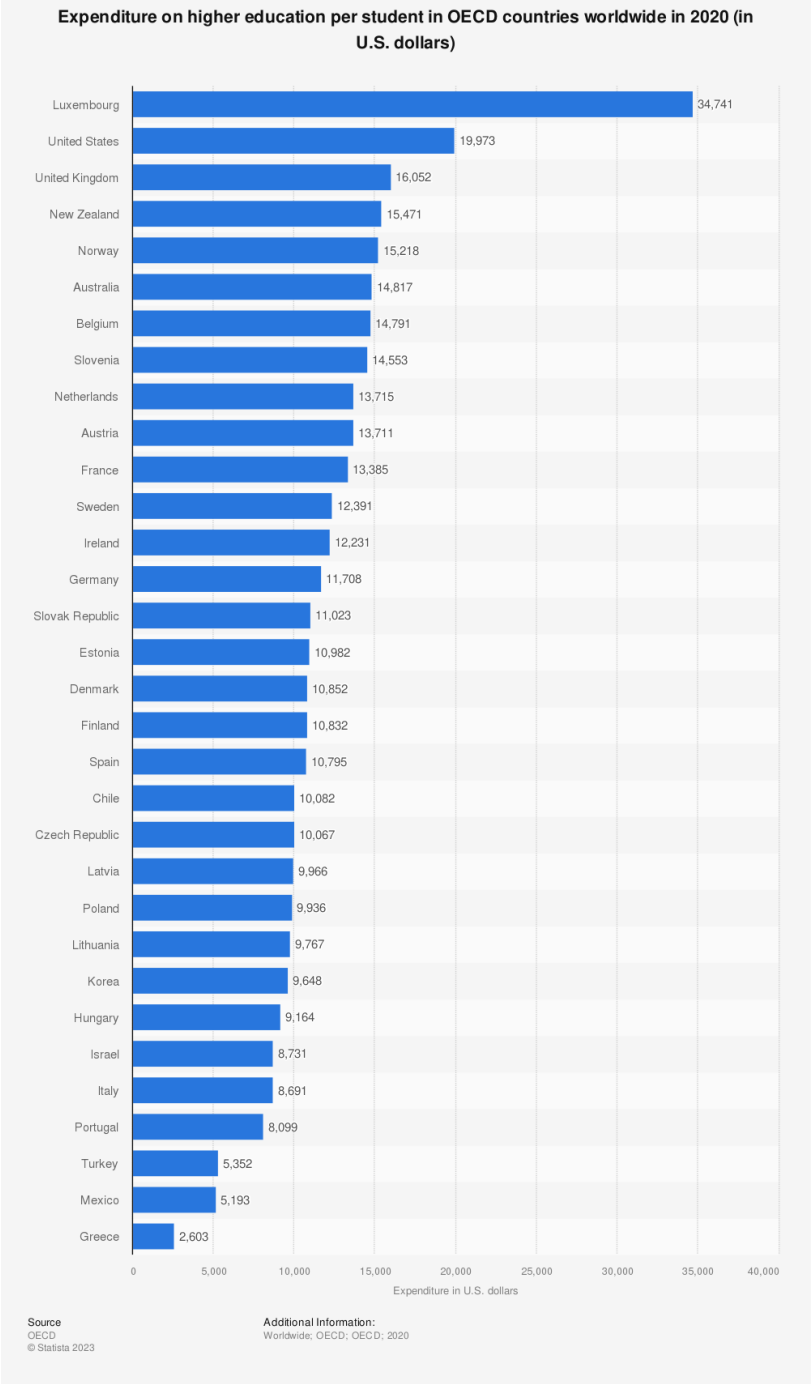

Figure 4. Expenditure on HE per student in OECD countries (2020) (Einar H. Dyvik , Oct 26, 2023).

2.4.2 Advantages of the Greek Higher Education System

Bologna Process: According to the European Union, Greece is part of the Bologna Process, as we mentioned before, which has standardized higher education across Europe. In addition, Bologna Process, ensures the mutual recognition of qualifications and learning periods abroad completed at other universities and implements a quality assurance system to enhance the quality and relevance of learning and teaching.

Internationalization: Greece is working to expand the internationalization of its higher education system. This includes efforts to attract more international students and foster international collaborations. According to the European Union, Greece engages in European projects, such as ERASMUS +. Technical University of Crete is such an example. Students, teaching and administrative staff of higher education institutions have the possibility to move with a scholarship from the European Union to another country, European or non-European, i.e. to a Partner Country, in order to study, work, teach, train and develop professional qualifications and skills.

In the last 35 years, more than 12,000,000 people have moved through the program and participated in some of the activities offered (https://www.tuc.gr/el/spoydes/erasmus-kinitikotita-foititon-prosopikoy-aei) .

Additionally, according to EU, Greece encourages plans and perform initiatives, strategies and actions related to the European and international dimension in education and training. These policies aim to:

- Strengthening the status of education.
- Respond efficiently to the needs of modern Greek society.
- Embrace cultural diversity and world cultural heritage.

According to the European Union, the European and international dimension of education and training is promoted through:

- ❖ Participation of Greece in the development and implementation of EU educational programs and policies.
- ❖ Participation in European and international organizations and their programs.
- ❖ Development of national initiatives for the conclusion of bilateral and multilateral educational agreements.

- ❖ Promotion of the European and international dimension in the curricula at all education and training levels.
- ❖ Promotion of the Greek language education and enhancement of Greek studies abroad.

As an active member of the international community, Greece develops international - bilateral and multilateral relations in matters in the field of education.

Educational measures and programs are performed in cooperation with bodies of international organizations. Simultaneously, an effort is being made to spread and utilize the international educational policy by the Greek educational context.

Some universities have introduced programs in English to attract international students, however, the options are still few. One of them is the Technical University of Crete. Even though in most of universities the primary instruction is Greek, TUC provides numerous study programs that are taught in English and are available to international students. Additionally, TUC collaborates with various international universities and research institutions for research, student exchanges, staff exchanges and more. Dozens of international students from all over the world study at the university every year and their number are growing. Some of the programs offered are:

- Master in Machine Learning and Data Science
- Master in Sustainable Engineering and Climate Change
- Biomedical Engineering MSc Program
- Master in Technology and Innovation Management
- Petroleum Engineering postgraduate program
- International MSc in Advanced Clay Science

(https://www.tuc.gr/en/studies/international-study-programmes)

Finally, one of the goals of the Greek educational policy is the promotion of the European dimension in regard of education and training. Hence, measures are accepted and actions are being put into practice in accordance with the objectives of

the strategic plan on European cooperation in education and training for the European education Area and beyond (2021-2030).

Quality Assurance: The Hellenic Quality Assurance and Accreditation Agency (HQAA) is responsible for accrediting Greek higher education institutions and programs to ensure they meet quality standards.

Affordability: Public higher education in Greece is heavily subsidized, making it more affordable for domestic and EU students. However, austerity measures and economic challenges have impacted funding. According to Study in Greece, Greek universities have affordable tuition fees for International students. On average, students pay a tuition fee of 5,000-13,000 EUR per year for international Bachelor's degrees, and 1,000–8,000 EUR per year for Masters. Being one of the most affordable countries in Europe, you won't spend a lot on accommodation in Greece. For instance, students with financial needs can often live in university residence halls for free. However, for apartments, the rent is between 250 and 600 EUR/month. Monthly utilities can cost you around 80–120 EUR.

It's important to recognize that the quality of higher education can vary not only between countries but also within countries and institutions. The choice of where to pursue higher education should depend on individual academic and career goals, language proficiency, financial considerations, and personal preferences. Students interested in studying in Greece or another European country should research specific universities and programs to assess their suitability for their educational needs.

CHAPTER 3. STRATEGIES BY COUNTRY

3.1 France

France places a strong emphasis on maintaining high quality in its higher education system. Several factors and strategies contribute to the quality of higher education in France:

Accreditation and Quality Assurance: France has a rigorous system of accreditation and quality assurance in place. The High Council for Evaluation of Research and Higher Education (HCERES) is responsible for evaluating the quality of research and higher education institutions. Accreditation is essential for universities and programs to maintain their credibility.

Research Excellence: France is known for its strong emphasis on research in higher education. The country has several world-renowned universities and research institutions. Funding for research is provided by organizations like the National Research Agency (NRA) and the European Research Council (ERC). According to Paivandi (2017) the National Centre for Scientific Research (NCSR), is the largest governmental research organization in France and the largest fundamental science agency in Europe. Moreover, according to the OECD, university presidents have long been first among equals. Most of them are very well known for their work with recognized academic status. They are generally people with exceptional academic reputations, such as the President of Nanterre, René Rémond, the President of the Sorbonne, Ricoeur, etc. We can see that France has a strong presence in the field of R&D. Between 2008 and 2019, it is visible that the number of personnel in France steadily increased in the field of experimental research and development. While in 2008 France had nearly 230,000 research employees, in 2019, the number reached more than 313,000 (Statista. Retrieved December 09, 2023, from https://www.statista.com/statistics/1224188/number-randd-personnel-france/).

Bologna Process: France, also part of the Bologna Process, has adopted the three-cycle degree system (bachelor's, master's, and doctoral degrees) and the European Credit Transfer and Accumulation System (ECTS), which facilitates credit recognition and student mobility within Europe. However, France has a single 180 ECTS model for bachelor's degrees (Crosier, Parvera, 2013).

Grandes Écoles: According to Kaiser (2001), in the sixteenth to eighteenth century were developed alternations and models of higher education. The major different model was the so-called Grandes ecoles, which was a specialized school created in the 18th century to train and educate engineers and officers to high standards for the civil service. In the 19th century, Grandes ecoles increased among the country and varied into the fields of industry and commerce.

"Grandes Écoles," are prestigious institutions that offer specialized education in fields like engineering, business, and public administration. These institutions are known for their selectivity and high-quality education.

Quality of Life: France is an attractive destination for international students due to its high quality of life, culture, and historical significance. Many universities offer various programs in English for those students who come from abroad.

Language Education: France is renowned for its strong emphasis on teaching the French language and culture. Helot (2003) noted that in France, bilingual education is a recent phenomenon, since France is a country long known for its identity to use their native language that they inherited from the French Revolution, a nation based on the principle of "one language, one nation". The country's universities often include language and culture programs as part of their curriculum for international students.

Student Services: French universities offer a variety of services to support students, including career services, counseling, and health services. There is also a focus on improving the overall student experience. France for example, has developed policies of active guidance to potential students. Thus, as Crosier and Parvera (2013) note, these kinds of efforts also aim to develop awareness among prospective and current students of available support in terms of financial aid and guidance.

International Collaboration: France actively encourages international collaboration and partnerships with universities and research institutions around the world. Such partnerships enhance the diversity and quality of research and education.

Diversity and Inclusivity: Efforts are made to ensure diversity and inclusivity in higher education, with scholarship programs and support for underrepresented groups.

Public and Private Institutions: France has a mix of public and private higher education institutions. While public universities are known for their quality and accessibility, private institutions also offer high-quality education in numerous aereas.

Continuous Improvement: Higher education institutions in France continuously strive for improvement in their programs, curricula, and teaching methods. They often update their offerings to align with emerging trends and industry needs.

Innovation and Entrepreneurship: Initiatives and incubators in France foster innovation and entrepreneurship among students. These programs encourage students to develop their own projects and startups.

Exchange and Mobility Programs: France actively participates in various international exchange and mobility programs, such as the Erasmus+ program, enabling students and faculty to gain international exposure and experience. According to Ballatore and Federe (2013), in 2010-2011, the top three Erasmus student-sending nations of Spain, France and Germany were also the top three hosting nations. Additionally, France sent 21,561 students for Erasmus and hosted 20,519 students.

Overall, the commitment to maintaining high-quality education, strong research emphasis, internationalization, and a diverse array of programs make higher education in France attractive to students and researchers from around the world. It consistently ranks among the top study destinations globally.

3.2 Germany

Germany is known for its high-quality higher education system, which is defined by a variety of components and strategies aimed at ensuring educational excellence. Here are some key aspects that contribute to the quality of higher education in Germany:

Strong Academic Tradition: Germany has a long history of academic excellence, with a reputation for high-quality research and education. It is home to numerous world-class universities and research institutions. It is known that in 2002, a total of 345 higher educational institutions operated across the whole country (Huisman, 2023).

Free or Low-Cost Tuition: Many German states offer tuition-free or low-cost higher education to domestic and international students. This affordability makes quality education accessible to a wide range of individuals. According to Huisman (2003), in Germany, there are not applied registration, semester or examination fess for first degree courses in higher education. That applies for both German and non-German students. However, all students have to pay a small amount of money to contribute to their institution's social facilities. We can see bellow that Germany belongs to one of the countries with the lowest tuition fees globally.

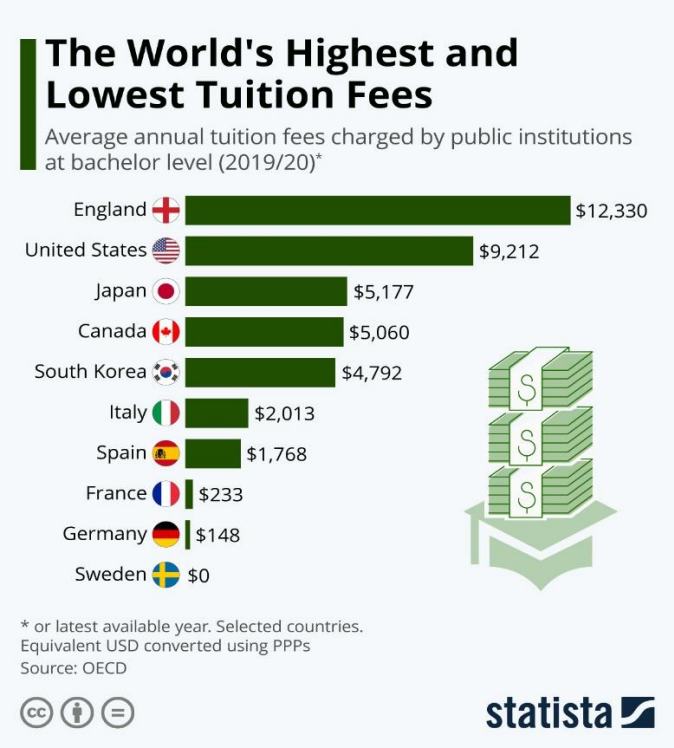

Figure 5. The World's highest and lowest Tuition Fees 2019-2020 (Armstrong, M. September 17, 2021)

Research Excellence: Germany places a strong emphasis on research and development. According to Huisman (2003), according articles 91a and 91b of the constitution, the extension and forming of higher education institutions together with university clinics, as well as the promotion of research activities and the educational planning, are now among the alleged "joint tasks" of the Federal Government and Länder. Germany is a global leader in research output and is known for its well-funded research projects, state-of-the-art laboratories, and innovative research opportunities.

Dual Education System: The dual education system in Germany combines academic learning with practical training. This system is particularly strong in vocational and technical fields, ensuring that students are well-prepared for the job market. According to Huisman (2003), in grade 11 starts the practical training usually in the first year of the school, for the whole year, four days a week.

Engineering and Technical Education: Germany is renowned for its engineering and technical programs, and many universities offer world-class engineering and technology degrees. The country's engineering graduates are highly sought after in the job market (Huisman, 2003).

International Programs: Many universities in Germany offer programs in English to cater to international students. This has made the country an attractive destination for students from around the world. About one-third of the *Fachhochschulen* (technical school providing advanced vocational training) provide international degree programs. In many of these programs, a part of the study is to spent time at a foreign institution or company. Some of these programs are supported by a program called "International degree programs" of the BMBF, which is being executed by the Hochschulrektorenkonferenz (HRK) and the Deutsche Akademischer Austauschdienst (DAAD) (Huisman 2003).

Bologna Process: Germany has also adopted the Bologna Process, which has standardized higher education across Europe. It uses a three-cycle degree system (bachelor's, master's, and doctoral degrees) and the European Credit Transfer and Accumulation System (ECTS).

Quality Assurance: Germany has a strong quality assurance system in place to ensure that universities maintain high standards in teaching and research.

Accreditation agencies like the German Council of Science and Humanities (WR) evaluate and accredit institutions and programs.

Scholarship Opportunities: Various scholarship programs are available for domestic and international students, allowing them to pursue their studies without significant financial burden. According to Huisman (2003), when completing their first degree, students who wish to continue their studies might also secure scholarships in line with the post-graduate assistance acts.

International Collaboration: German universities actively promote international collaboration, research partnerships, and student exchange programs with institutions around the world. This global perspective enhances the quality of education and research. According to Kaulisch and Huisman, 2007, the German Academic Exchange Service (Deutscher Akademischer Austauschdienst - DAAD) offers scholarships to foreign students and young academics to pursue studies of further education of limited duration at a German higher education institution. In addition to DAAD, some Länder also have special funds to assist foreign students at local higher education institutions.

Inclusivity and Diversity: Efforts are made to promote inclusivity and diversity in higher education. Germany welcomes students from diverse backgrounds and has initiatives to support underrepresented groups.

Industry Engagement: Many universities in Germany have strong connections with industry and the job market. They often offer internships, cooperative education programs, and research collaborations with companies. According to Kaulish and Huisman (2007), in Germany, the industry consists a dominant part of R&D, with universities having a performance of 16% and public non-university institutions having a 14% of all R&D.

Support Services: German universities provide various support services for students, including academic advising, career counseling, language courses, and health services. For example, according to Kaulisch and Huisman (2017), there is the Scientific staff. Scientific staff are government workers or paid employees that are responsible for academic services. This includes teaching students with practical skills and specialized knowledge and guiding them in the use of scientific methods.

Strong Economy: Germany's robust economy provides numerous job opportunities for graduates, making it an attractive destination for those seeking a high-quality education and strong career prospects as it is presented in figure 3.3.

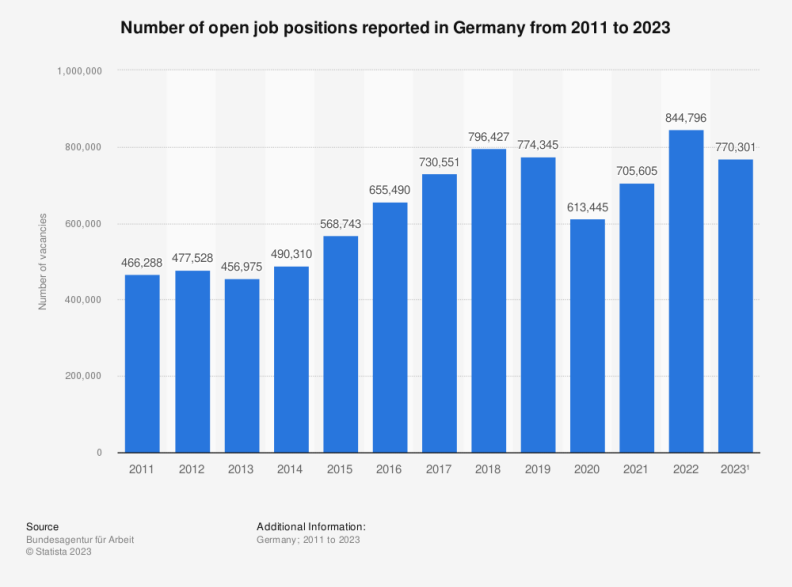

Figure 6. Number of open job positions in Germany from 2011 to 2023 (Kasia Davies , Feb 6, 2024)

Life Quality: Last but not least, Germany offers a high standard of living, safety, and quality of life, making it a desirable place for international students.

The commitment to academic excellence, research, affordability, and internationalization makes Germany a popular destination for higher education. German universities continuously rank high to the top institutions globally, attracting students and researchers from around the world.

3.3 United Kingdom

The United Kingdom is renowned for its high-quality higher education network, which is being portrayed by numerous key factors and strategies aimed at ensuring educational excellence. Here are some of the aspects that contribute to the quality of higher education in the UK:

World-Class Universities: The UK is home to many world-renowned universities. Among them are the University of Oxford, the University of Cambridge, Imperial

College London, and the London School of Economics. These institutions consistently rank among the top universities globally. More specifically, the University of Oxford ranks first amongst the highest universities in Europe with 40% followed by the LMU Munich in Germany with 20%, University of Amsterdam with another 20%, and then by ETH Zurich in Switzerland with 10%, and lastly with Karolina Institute in Sweden and KU Leuven in Belgium, both with 5%.

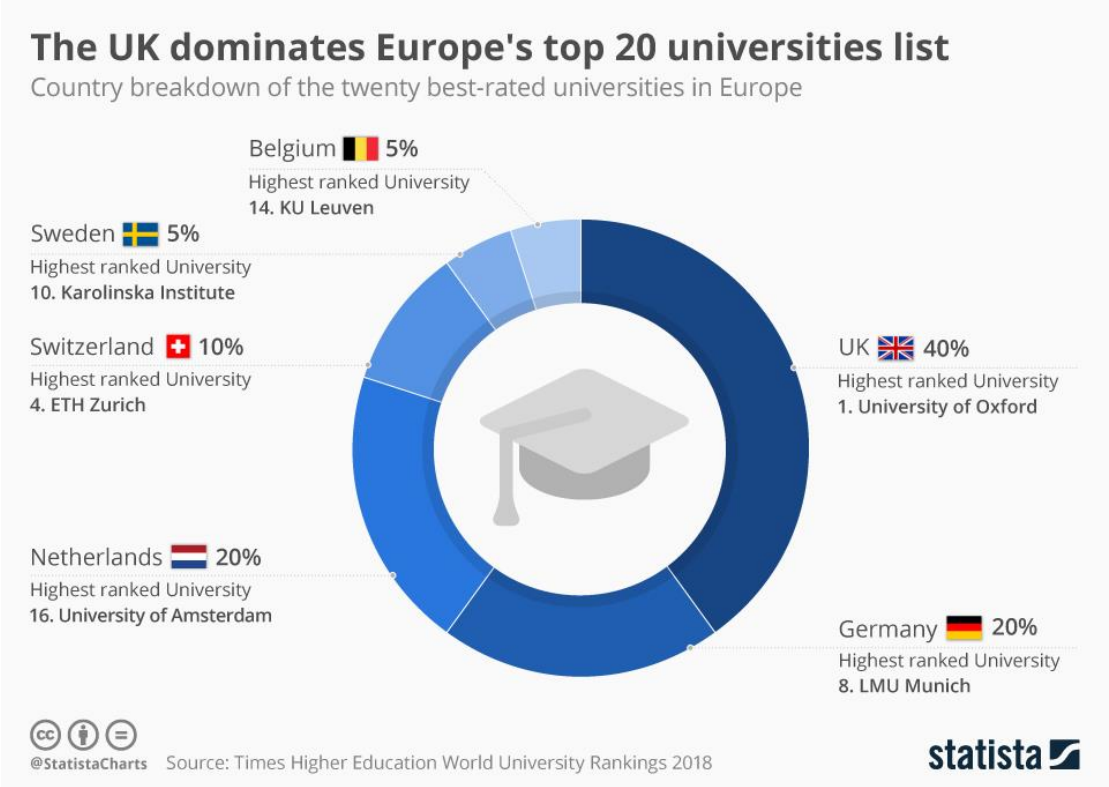

Figure 7. Country breakdown of the 20 best-rated universities in Europe (Armstrong, M., November 13, 2017).

Academic Excellence: The UK has a strong academic tradition with a reputation for rigorous academic standards, quality research, and innovative teaching methods.

Quality Assurance: The Quality Assurance Agency for Higher Education (QAA) is responsible for maintaining and enhancing the quality and standards of higher education in the UK (Kanji, Malek & Tambi, 1999). Universities and programs undergo regular reviews to ensure that they meet established quality criteria.

Bologna Process: The UK is also part of the Bologna Process, which introduced a standardized higher education system across Europe, with three-degree cycles

(bachelor's, master's, and doctoral) and the European Credit Transfer and Accumulation System (ECTS) for credit recognition.

Research Excellence: The UK is a leader in scientific research and innovation, with substantial funding for research projects and world-class facilities. Research in the UK is often at the forefront of global advancements. According to Kanji, Malek and Tambi (1999), UK higher education has long been subjected to meticulous quality evaluations to ensure that they offer the highest standards in terms of teaching and learning as well as research.

Internationalization: The UK actively encourages international students and institutions to study and work within its institutions. International collaboration is highly valued, and universities have a global perspective in their research and teaching.

Quality of Life: The UK offers a high quality of life, with diverse cultural and social opportunities. The country's rich history and vibrant cities make it an enticing destination for international students to come.

Language of Instruction: In the UK a very important factor is the language of instruction since English is their primary language, making it accessible to a wide range of international students. Many universities also offer language support for non-native English speakers.

Various Range of Programs: UK universities offer a variance of academic programs across different specialties, providing students with a range of different options for their studies.

Scholarships and Funding: Various scholarship and funding opportunities are available to both domestic and international students to help cover tuition costs and living expenses.

Student Services: UK universities provide comprehensive support services, including academic advising, career guidance, mental health support, and accommodations for students with disabilities. More specifically, according to Taylor, Turnbull, Bleasdale, Francis, and Forsyth, (2016), students with disabilities are being supported by the Disabled Student's Allowance (DSA) alongside the support provided by the student's higher education institution. Moreover, UK universities are required to return

information to the UK Higher Education Statistics Agency on the number of disabled students in specific categories enrolled on courses. The support provided by the Disabled Students' Allowance depends on individuals need and not based on their income.

Innovation and Entrepreneurship: The UK encourages innovation and entrepreneurship through research commercialization, technology transfer, and incubator programs that support students and startups. According to Bessant and Tidd (2007), the UK Treasury established the agency Partnerships (PUK) in 2020 in order to help commercialize public sector knowledge.

Work Opportunities: The UK offers opportunities to international students after their completion on their degree, allowing them to stay and work in the country.

Cultural Diversity: The UK is known for its cultural diversity and inclusivity, which creates a welcoming environment for international students.

Industry Connections: Many universities in the UK have strong ties with industry, offering opportunities for internships, cooperative education, and research collaborations with companies.

The commitment to academic excellence, research, internationalization, and support services makes the UK a top destination for higher education. Its universities consistently rank among the top universities in the world, attracting students and researchers from diverse backgrounds.

3.4 USA

Quality in higher education can differ significantly from one country to another due to differences in educational systems, resources, funding, and priorities. When comparing the quality of higher education in the United States and Greece, several key distinctions and similarities can be observed:

Diversity of Institutions: The United States is home to a wide range of institutions, including Ivy League universities, state universities, liberal arts colleges, and community colleges. This diversity allows students to choose institutions that best suit

their academic and career goals. From 2000 until 2017 there were about 4,000 thousand Institution in U.S. According to the US Department of Education, there is a total of 4,726 degree-granting institutions in the United States (as of May, 2014) (Cooley, 2015).

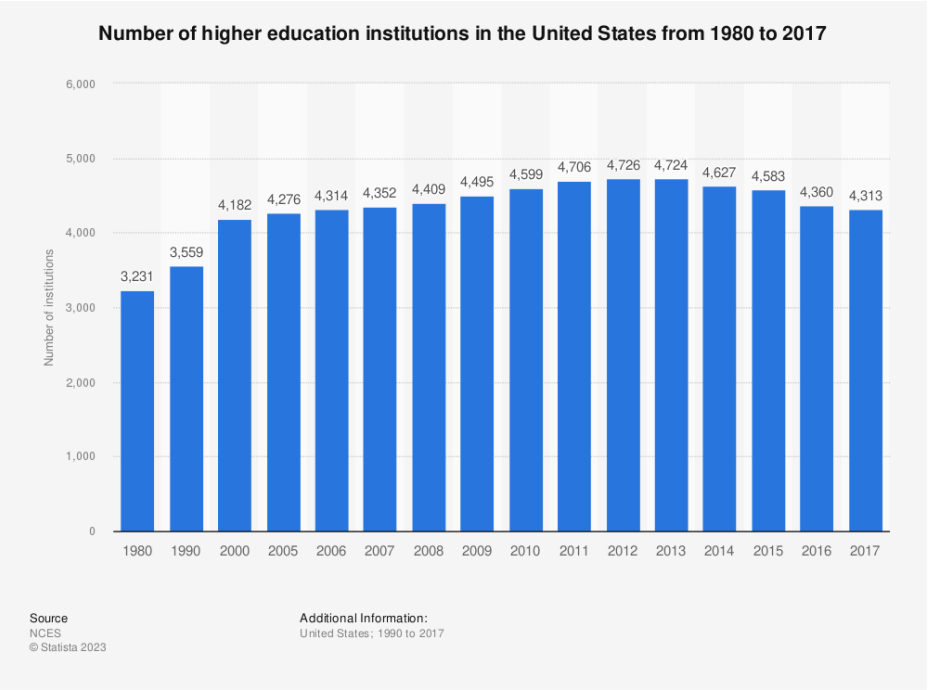

Figure 8. Number of HEIs in the USA from 1980 to 2017 (Veera Korhonen, Feb 5, 2024).

Research Excellence: U.S. universities are known for their strong emphasis on research and innovation. Many universities conduct cutting-edge research, and U.S invests heavily on research and development. In the US, institutional research as a part of an organized institutional practices and activities, was identified much earlier than in Europe. Although institutional research activities and practices were identified prior to World War II, institutional research, as a formally organized function in the U.S., emerged in the 1950s (Cowley 1959, Brumbaugh 1960).

Internationalization: The U.S. attracts plenty of international students, contributing to the global diversity of its campuses. This internationalization fosters cross-cultural experiences and perspectives. The last years in the U.S there are nearly 1 million international students.

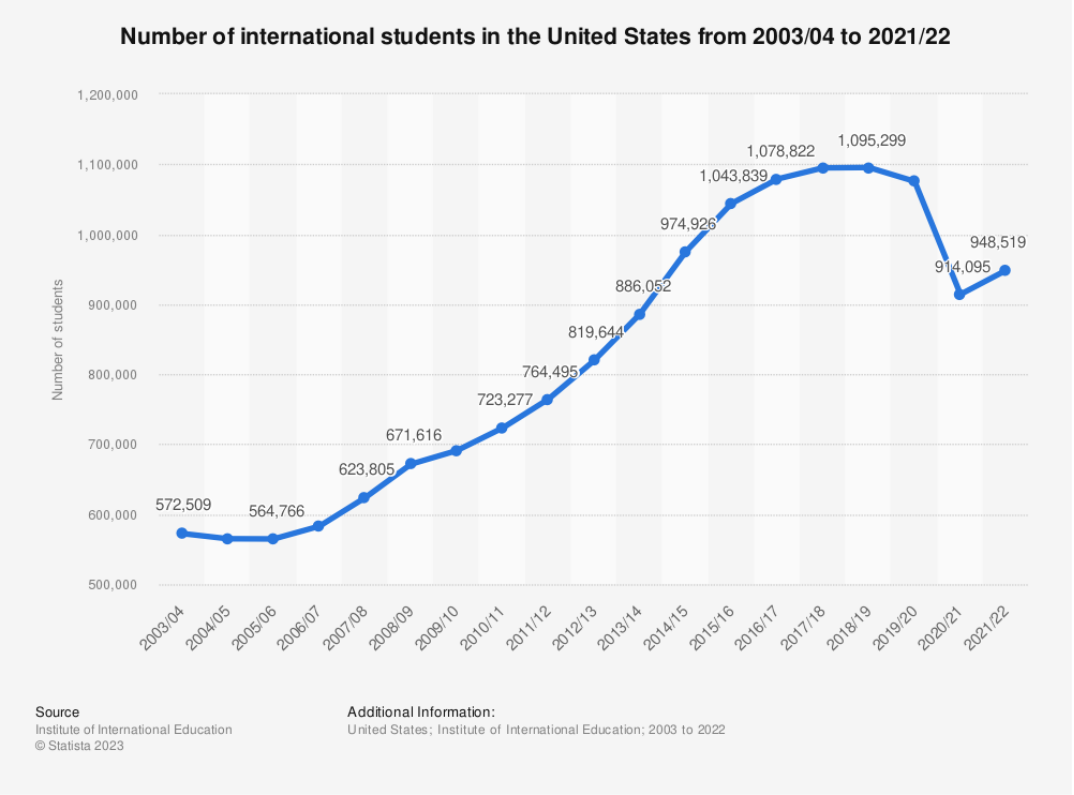

Figure 9. Number of international students in the USA (Veera Korhonen, Nov 28, 2023).

Flexible Degree Programs: American universities offer a broad spectrum of programs and degrees, including highly specialized fields. The resilience of the American higher education system gives students the opportunity to customize their education to their individual interests.

Funding: U.S. universities often have access to substantial financial resources through tuition fees, private donations, and research grants. This financial support can lead to better facilities, faculty, and research opportunities. In 2020, local and state governments spent $321 billion on higher education, or 9 percent of state and local direct general spending.

According to the Urban Institute, higher education fees include fees from dormitories, from the university cafeterias and bookstores. Other than that, except of tuition, there are fees related to teaching, such as laboratory fees. In 2020, also as mentioned in Urban Institute, higher education fees totaled $122 billion and accounted for 38 percent of total state and local higher education spending. Tuition plus other tuition-

related fees was $96 billion (30 percent), and fees related to dormitory, cafeteria, and bookstore collections were $25 billion (8 percent).

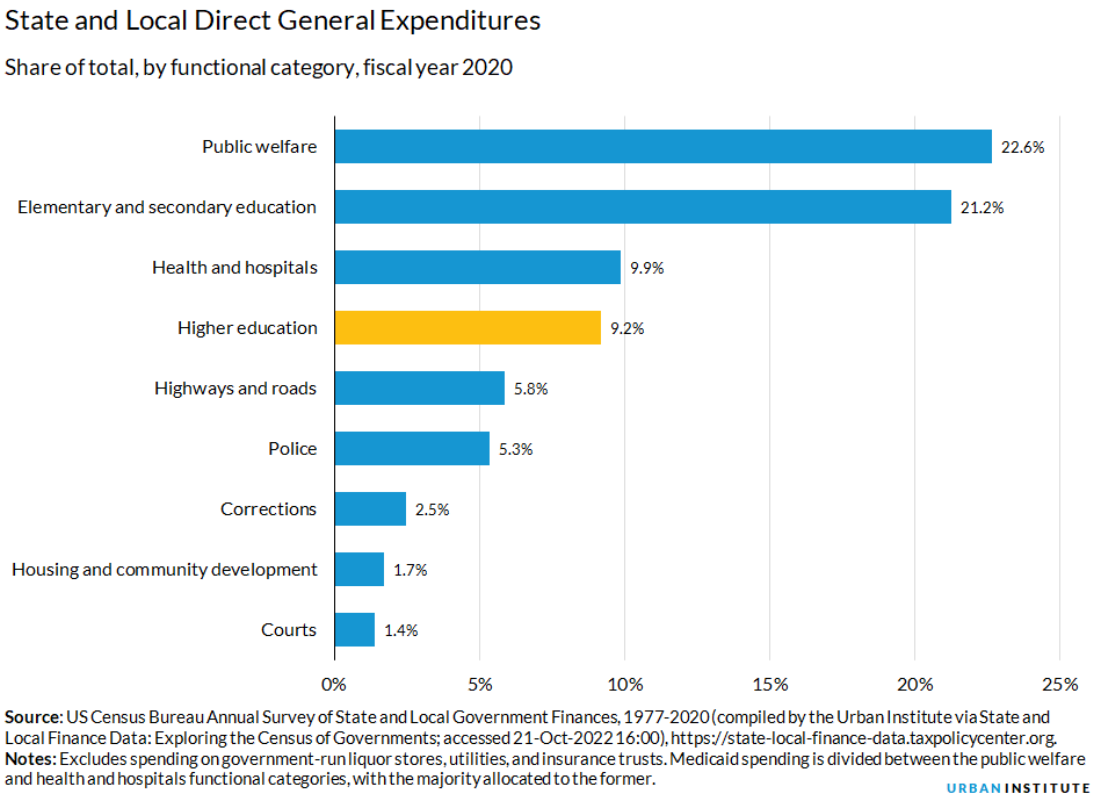

Figure 10. Expenditures for Higher Education in the USA 2020 (US Census Bureau Annual Survey of State and Local Government Finances, 2022)

Quality Assurance and Accreditation: The U.S. has a system of accreditation and quality assurance, with regional accrediting bodies responsible for evaluating institutions. These processes ensure that American universities meet established quality standards. As Sterian (1992) addresses, in the USA, accreditation is a volitional process without the involvement of the government. It attributes an important role to self-regulation and self-evaluation whilst also promotes enhancement about the quality and the successfulness of education.

Important to state is that the United States and Greece have different educational systems and priorities. The U.S. has a highly diversified HE landscape showing strong commitment on research, while Greece is working to enhance the quality and internationalization of its higher education system, which is partially shaped by economic factors. The choice of where to pursue higher education should depend on

individual academic and career goals, financial considerations, and personal preferences.

CHAPTER 4. DISCUSSION AND SUGGESTIONS

As is evident, quality is an essential part of our lives. In higher education, every country, state, organization, university tries to include it. It is a very important factor that has obvious results. From what we have mentioned in this thesis, it is clear that all countries strive for the best with all the means they have. However, it is not always the most ideal conditions.

As time goes on, these strategies must be adjusted according to the needs of the individual for the best possible result. A quality strategy should not remain the same as there are societal expectations, economic factors, political factors and technological advancements that can influence the criteria used to evaluate educational quality over time. Continuous assessment and adaptation of strategies are essential to ensure that the pursuit of quality in higher education remains dynamic and responsive to evolving needs.

Strategies employed to enhance the quality of higher education worldwide encompass a diverse array of approaches tailored to address specific challenges and goals. These strategies often include measures to strengthen faculty development, improve curriculum relevance, enhance research output, and promote innovation in teaching and learning methods. Many institutions prioritize quality assurance mechanisms, accreditation processes, and continuous improvement frameworks to uphold standards and accountability. Moreover, internationalization efforts, such as establishing partnerships with global institutions, fostering student exchange programs, and promoting cross-cultural learning experiences, contribute to enriching the educational environment and expanding opportunities for students and faculty. Furthermore, investments in technology infrastructure, online learning platforms, and digital resources facilitate access to education and support flexible learning modalities. In

conclusion, while the strategies employed in enhancing the quality of higher education vary, their common desired result is to ensure that institutions provide an enriching, equitable, and relevant educational experience that prepares students for success in a rapidly evolving global landscape.

When comparing the quality of education across different countries, it becomes evident that numerous factors contribute to varying standards. Developed countries often boast well-funded educational systems, advanced infrastructure, highly qualified teachers, and rigorous academic standards, leading to consistently high performance in international assessments. Conversely, developing nations may struggle with limited resources, inadequate infrastructure, teacher shortages, and socio-economic disparities, resulting in lower educational outcomes. However, it's essential to note that quality cannot solely be measured by academic achievement, factors such as inclusivity, equity, relevance of curriculum, and support for students' socio-emotional well-being also play significant roles. Therefore, while some countries excel in traditional metrics of educational quality, others may prioritize holistic approaches that satisfy the diverse needs of their students. Ultimately, a comprehensive understanding of educational quality requires consideration of a broad range of factors, acknowledging the unique contexts and challenges faced by different nations. Countries we mentioned are developed and therefore strive for a better quality in higher education however obstacles remain.

Quality of higher education in Greece for example, is characterized by a rich academic tradition, notable research contributions, and a diverse range of disciplines offered across universities and institutions. Greek universities are renowned for their emphasis on classical studies, humanities, and social sciences, reflecting the country's historical and cultural significance. Moreover, Greece boasts several world-class foreign language study programs, particularly in fields such as archaeology, philosophy, and engineering. For example, at the National and Kapodistrian University of Athens (https://www.uoa.gr/spoydes/xenoglossa_programmata_spoydon/), are offered a BA in Archaeology, History and Ancient Greece and a Medical Degree in English. The International University of Greece (https://www.ihu.gr/metaptychiakes-spoudes) also offers 26 English-language postgraduate programs in Humanities, Social and Economic Sciences as well as in Technological Sciences. Some of them are MSc in

Management, MSc in Energy Systems, MSc in Cybersecurity, MSc in Data Science, MA in Black Sea and Eastern Mediterranean Studies: Culture and International Relations, MSc in e-Business and Digital Marketing and many more.

However, the Greek higher education system faces challenges, including underfunding, limited resources, and bureaucratic inefficiencies, which can hinder its ability to compete on a global scale (Bazoti, 2020). As Bazoti states, the design of the Greek education system with its inherent imperfections and long-term underfunding has as a result the prevention of equal opportunities for students. Ever since, entering into higher education institutions is highly dependent on the economic background of families. This financial crisis more than anything exposed these inequalities mainly through the reduce of the disposable income and moreover it deteriorated the already inefficient abilities of the educational system due to the continuing cuts there were during this time.

Additionally, there are concerns regarding the mismatch between academic programs and labor market needs. Specifically, as Bustos (2024) noted, teachers should have more expertise in order to provide more support and career guidance and counseling. There is a flaw in communication skills, management and adaptability between graduates in Greece. Scholars believer that universities do not satisfy the quality of graduates but rather the quantity. Therefore, labor market needs to be scanned and aligned with academic programs to improve education quality. Moreover, Livanos (2010) did a research on the high graduate unemployment in the Greek labor market, ascribed to the rapid high education expansion without the consideration of the demands in labor market.

Despite these challenges, efforts are underway to enhance the quality and relevance of higher education in Greece through reforms, international collaborations, and investments in infrastructure and research. By addressing these challenges and building upon its strengths, Greece can continue to improve the quality and competitiveness of its higher education system in the global arena. Specifically, in Greece, universities make significant efforts to meet global demands. This can also be seen from the global rankings of its universities. Particularly, according to QS (Quacquarelli Symonds), for 2024, four universities were among the 550 best universities worldwide. These are the National Technical University of Athens in rank

347, the National and Kapodistrian University of Athens in rank 444, the Aristotle University of Thessaloniki in rank 530, and lastly the University of Crete in rank 534. Thus, it becomes clear that despite the difficulties the Greek universities manage to have a place in the ranking by making a lot of efforts.

In continuation of the above, some suggestions about enhancing the quality in higher education system is to clearly articulate and communicate learning outcomes for each program and for all courses. Learning outcomes ought to align with industry needs and societal expectations. As Kuh, Kinzie, Buckley, Bridges, Hayek, (2006) suggest, recommendations resulting from the proposals must be tailored to match an institution's proposals educational mission, characteristics of its students, and campus culture. They must also be aligned with key elements in the external environment, such as the local community, the state and the regional economy conditions, needs and priorities.

Moreover, effective teaching practices must be implemented. Institutions should encourage innovative and student-centered teaching methods. For example, the use of technological means (educational technology). According to Hannafin & Land (2020), computer tools often help identify, gathering and manipulating resources.

As a further matter, lessons can take place outside the classroom, welcoming outdoor lectures, since many professors welcome it as a way to become closer to their students with direct interaction using dialogue. One other method is the Experiential Learning Model. According to Villarroel, Benavente, Chuecas & Bruna (2020), experiential learning is a process in which students can interact by actually “doing” and learning while experiencing. This methodology permits students to transfer what they have learned in real situations. In this way, they achieve a comprehensive understanding of the content. Consequently, this method provides students with autonomy and responsibility with student personally being involved. The benefit of this method is that it helps students with transitioning between undergraduate education and the world of work. Additionally, one more method is project planning. Design projects typically include some student-centered activities such as student’s engagement with suggesting questions or problems, with their unique project artifacts available for public evaluation and the direct interaction by making products that represent their

knowledge. Through the public posting, students participate in social interactions aimed at deepening understanding (Hannafin & Land, 2020).

Furthermore, there should be given professional development opportunities for faculty to enhance teaching skills. For example, free seminars.

Research and scholarship must be promoted too. Resources must be allocated to support research initiatives and collaborative projects. Mechanisms could be established to recognize and reward research and teaching excellence, such as, mechanisms that will applaud research work and effort. For example, such ways are to congratulate for good work, to provide support and feedback and most importantly give time.

Although many of the countries we mentioned provide student support, this should be a given. Free tutoring, mentoring and counseling for all students through their educational journey. More qualified people must be hired, there must be wide personnel to cover more students that need help. More psychologists, more life coaches. There should also be initiatives to address the mental health and well-being of students with free seminars and lectures open to the public concerning mental health and anxiety.

One very important implementation that is needed is the investment in Infrastructure and Technology. Most of universities have older equipment which might not even function properly or is difficult to use. It should be ensured that institutions have modern and well-equipped facilities, such as labs. Invest in technology that enhances the learning experience, such as online resources and interactive platforms. Infrastructures should regularly be updated and maintained. For example, warm and clean classrooms with comfortable seating.

Promote Global Perspectives. More specifically, integrate international perspectives into the curriculum. For example, opinions from different cultures, methods used abroad. Encourage student and faculty exchanges, study abroad programs, and international collaborations. Most importantly, stay informed about global trends and best practices in higher education.

Engage with Employers and Industry. Namely, develop partnerships with industry leaders to ensure curriculum relevance. Seek input from employers on the skills and

competencies needed in the workforce. Facilitate internships, co-op programs, and other experiential learning opportunities.

Emphasize Lifelong Learning. Encourage a culture of lifelong learning by offering professional development opportunities for both faculty and staff. Provide adjustable learning options, such as part-time programs and online courses, to adapt to the diverse learner needs.

In conclusion, although many strategies are already being used, there is always the need to improve continuously. Institutions in HE need to ensure that quality is there and it is always evolving through new strategies. As higher education continues to evolve in the 21st century, universities must remain agile and responsive to emerging trends and needs, fostering innovation, creativity, and critical thinking among their students to prepare them for success in a dynamic and interconnected global society.

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Figure 3.7. State and Local direct general expenditures (US Census Bureau Annual Survey of State and Local Government Finances, 1977-2020)

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