

## Article

# Lessons Learned from Online Teaching and Their Implications for Students' Future Careers: Combined PLS-SEM and IPA Approach

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**Abstract:** As far as students are concerned, there is a well-founded relationship between academic performance and career management from which a special professional path can result, based on the multitude of knowledge, skills, and experiences acquired during the years of study. To this end, the presence and help of teachers participating in the learning process, the teaching activities they are involved in, and their own participation are determinant factors. This research aims to highlight the impact that the above factors have on the professional future of students. For this purpose, 395 respondents, including students in the bachelor's and master's cycles, were involved in the research process, to whom a questionnaire was given in electronic format during two stages: one where the didactic activity was carried out in online format and the other carried out face-to-face. Hypotheses testing was performed using partial least squares structural equation modeling. The present study focuses on two main directions regarding the results obtained. Thus, with respect to the acquisition of knowledge and the development of student skills, it emerged that the effect of the content in the didactic activities on student skills and the development of competencies is strengthened by the skills and degree of involvement of the teaching staff from the university environment. Related to the management of students' careers, the analysis showed that the effect of the content in didactic activities is complemented by the accumulation of knowledge and the formation of student skills. The rigorous economic training resulting from didactic activities constitutes a main pillar in the students' future, even more so depending on how much they perceive that the topics covered in the university courses are of interest to them. The results of this study can serve as theoretical support for future research that addresses the topic of student career management and the implications of university activities on knowledge and skills. In addition, the results can support decisions for the management of higher education institutions regarding the development and implementation of university programs and educational strategies with the aim of increasing the involvement of teachers and students in the teaching–learning process.

**Keywords:** online teaching; career; knowledge; skills; didactic activities; PLS-SEM; IPA



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## 1. Introduction

Recently, humanity has faced several challenges caused by the COVID-19 pandemic, which caused disruptions in areas of interest for the entire population. In addition to other major domains, the education sector experienced various fluctuations and a great need to adapt to new conditions to achieve specific objectives. Therefore, the characteristics of the digital age were felt more than ever, and the entire educational system had to adapt to the new environment in order to carry out its specific activities. Moreover, to maintain their competitiveness, universities had to react quickly and wisely to the main trends using proactive, consistent, intelligent, and continuous processes of organizational change based on internal and external change drivers [1], as well as addressing unforeseen situations with flexible, just-in-time adaptations [2].

In the specialized literature, several studies [3–6] emphasize the determinants of students' career choices in addition to those studies [7,8] that analyze the effects of academic majors on career paths, all of which highlight student perception of these matters. Therefore, following the documentation carried out for this research, it was observed that the subject related to the influence of university courses on the career choices of students was not approached so far as to emphasize the mediation relationships between the main actors and the factors characteristic of the educational process. Therefore, for this study, the decision was made to use a research process that highlights the relationship between the main concepts related to the two participants in the teaching–learning activity in higher education: the teaching staff and the students. The purpose of this study is to determine the extent to which students perceive that the skills and participation of teachers in teaching and learning activities carried out online and in the physical environment contribute to an increase in their own knowledge and skills and, implicitly, to their ability to make decisions about their future career.

The paper is structured as follows. It starts with introductory aspects followed by a theoretical background that served as support for the research hypotheses. Next, it describes the materials and methods used during this study followed by the results obtained using econometric analyses. The relationships between the main concepts and the theoretical and practical implications of this study are also discussed, as well as the concluding aspects, limitations in the research process, and directions for future research.

## 2. Theoretical Background and Research Hypotheses

The theoretical part of this paper aims to present the current state of knowledge on the topic addressed by outlining the main research directions, namely: leveraging university results on the labor market; the content of teaching activities; the skills and involvement of teaching staff in academic activity; the interest and the involvement of students in university courses; the acquisition of knowledge and the development of student skills; and the impact of online courses.

### 2.1. Leveraging University Results on the Labor Market

The dynamics of the labor market has undergone major changes over time due to major events in history, but also from the previous period that had a huge economic impact, namely the Industrial Revolution, the Great Economic Crisis [4], the Great Recession, the COVID-19 pandemic, and the various political and military conflicts around the world.

Considering that the economy is one of the pillars of the labor market, jobs and, by extension, the career field have been affected by its growth, the evolution of technology, demographic changes, and consumer preferences [4]. In addition, the field of economics and business is among the five most attractive areas of interest and is the field of activity that is targeted by students who want to become prepared to scientifically apply its concepts in future work [9].

In contemporary times, in the context of globalization, participants in educational processes, i.e., teachers and students, encounter a multitude of challenges caused by the uncertainty and increasing complexity of the environment, a fact that requires a flexible, creative, rigorously prepared approach, especially in the field of economic sciences [10]. The study conducted by Ahmed, Sharif and Ahmad [3] highlights the fact that interest in a field of study prevails among the factors that influence a person's career, and the existence of a correlation between interest and the personality traits of the individual lead to performance results and increase the level of motivation and dedication. Indeed, academic specialization is one of the key points on which students build their career goals [8]. In addition, among the factors that play a determining role in choosing a career, the work of teachers is known to motivate and inspire students [6].

Regarding the academic results of students, it is known that they do not only think about obtaining grades in exam sessions or participating in teaching activities to complete their studies. All these stages are carried out with the objective of understanding theoretical

concepts and acquiring some training skills necessary for their transition into the labor market and continuous evolution within it to ensure a successful professional path.

Knowledge can be analyzed and conceptualized in two ways [11]: (1) declarative knowledge, which refers to the description of facts, rules, definitions, and procedural knowledge that arise from practical experience, and (2) procedural knowledge, which is a necessary condition in the formation of skills and, based on them, expertise. Students can acquire procedural knowledge by participating in practical exercises and projects carried out individually or in teams, where continuous training is the basis of their training. Education for sustainable development aims to direct learning processes in order to develop a suitable way of thinking and acquire favorable knowledge, skills, and behaviors with the goal of transforming society for a sustainable future [10].

To signal the quality of the educational activities offered and to be considered trustworthy by the public, university education institutions aim to achieve high-performance results and recognition of those results through national and international rankings [12], thus ensuring their prestige. At the same time, they aim to attract numerous participants in admission contests who are willing to be part of the respective institutions and identify with the values they promote. In addition, to support their prestige among employers, universities are deeply interested in providing the most solid and extensive theoretical and practical training to students that are in line with companies' expectations, thus allowing an easy transition into the labor market and the fruition of their potential. Regarding the responsibility of academic institutions, the emphasis falls on appropriate and up-to-date educational programs aimed at facilitating knowledge acquisition and skills training, which are indispensable to a field of study.

In the business environment, knowledge and skills in human resources represent an essential asset that determines the competitive advantage of companies [11]. Therefore, companies seek to employ people with solid training, adaptability, creativity, continuous learning capacity, and a focus on results, which are qualities that those individuals, more often than not, also exercised during their studies based on their potential. Hence, both educational institutions and individuals are interested in increasing the employability of graduates [13]. Continuous changes in society have led to the increased relevance of employability, which is influenced by numerous factors including, decisively, the education received. Therefore, understanding the perspective of students on their academic needs is crucial to improving employability. Increasing the employability of students and graduates requires a proactive involvement in the promotion of their knowledge, skills, and personal characteristics, and they must also have a flexible, malleable attitude at work [14]. Furthermore, higher education providers must design and implement strategies to develop students' employability, taking into account the development of their career management skills, which will help them set their career goals, understand the labor market, and identify relevant educational and professional opportunities [15].

## *2.2. Content of the Teaching Activities*

Generally, in educational contexts, the concept of "knowledge" is associated with "knowing" or "being informed". According to Dexonline [16], knowledge represents the set of ideas, notions, and information that someone has in a certain field. Specialized knowledge accumulates thanks to carrying out activities aimed at obtaining that knowledge, such as reading books or scientific papers, having discussions with people active in the field of interest, or most often, participating in university programs in which various courses are held that aim to teach most of the field's perspectives and to provide rigorous training. Despite the fact that knowledge can be accumulated in many different ways, school and university programs provide a precise, productive, and, above all, complete way to obtain knowledge. This is one of the main reasons why people choose to study at universities, being aware that a university education gives them the chance to form extensive and complex perspectives on their field of interest.

Competence involves the use of a set of knowledge, skills, values, and attitudes, seen as the result of the learning process, to solve professional problems [17]. It is noted that those who incorporate and put into practice their acquired knowledge are the most competent. Therefore, skills can be formed on the basis of accumulated knowledge, indicating their practical side, which means that the university context also supports the acquisition of skills in addition to the accumulation of knowledge.

This acquisition of knowledge and skills by students becomes much easier with the help of teachers who participate in facilitating the learning process. Here, the role of teachers is to use their skills and abilities to support students. Therefore, the quality of the educational activities carried out by the teachers is paramount as it influences the performance of students [18]. Student success is based on an ability to adapt to the learning environment, which is often complex, where one is educated with scientific content, practical activities, and social interactions [19].

**Hypothesis 1 (H1).** *The content of teaching activities has a positive effect on the acquisition of knowledge and the development of student skills.*

**Hypothesis 2 (H2).** *Teacher skills and involvement will strengthen the effect of the content of teaching activities on the acquisition and development of student knowledge.*

In higher education, several didactic and pedagogic approaches have been introduced that consider the acquisition and development of students' generic skills, such as obtaining work experience through participation in internships. In this way, the transition process of students from school to work is supported. Similarly, for this experience to contribute to the acquisition and development of skills, it is essential that students receive guidance and instruction from teachers. It is important that the "coach" provides psychological, emotional, psychosocial, and career support to the coachee. By providing career support, students are encouraged and stimulated to reflect on their own learning experiences [20].

A significant trend that has emerged in education is the objective of universities to provide students with specific skills for the work environment. Today, organizations are looking for candidates who possess much more than knowledge and have the ability to use information in many ways [21]. University programs are adapting to these demands and placing an increasing emphasis on teaching skills that are applicable in the workplace [21], especially because many young people have been employed part-time or even full-time since their study period.

According to Dexonline [22], the term "career" is associated with a profession, occupation, or position in the social and professional hierarchy. The concept of a career describes an individual's continuous, lifetime acquisition of a multitude of knowledge and a profession [23]. The first step to choosing a career involves exploring oneself (one's own interests, values, and experiences) and the environment of career options by gathering information about jobs, organizations, occupations, and industries, all of which enable one to make very well-founded decisions [24].

One of the main goals of career exploration is to have a meaningful and successful professional life by accumulating outstanding work and psychological results from workplace experiences [24]. Most of the time, the accumulation of these experiences is possible due to a foundation of educational processes, especially those specific to the university framework.

The decision about a future career is crucial for graduates of any university institution, especially because it occurs after the last stage of study [25] and aims to capitalize on the set of knowledge and skills acquired in the previous period. To choose the right career option, it is particularly important that students have a clear direction toward their career goals [25]. In this sense, young people decide which field they want to carry out their professional activity and then choose to study that field, where university studies are the basis of career decisions.

**Hypothesis 3 (H3).** *The content of teaching activities has a positive effect on the future management of a student's career.*

**Hypothesis 4 (H4).** *The acquisition of knowledge and development of skills positively mediate the effect of the content of teaching activities on the management of a student's future career.*

### 2.3. Teachers' Skills and Involvement

The quality of teachers is decisive for the success of students [26]. Teachers shape the experiences of students in a significant way [27], and a good teacher can influence the development of students by making a difference in their progress [28]. Academic involvement of the teaching staff involves participating in the specific activities of a course program with thoroughness, seriousness, emotions, and well-defined goals. Furthermore, the successful involvement of learners in activities can play an extremely important role in increasing the quality of educational activities. Professionals emphasize the need for teachers to learn how to use new tools in online learning environments to support students [29]. Leadership perspectives, teacher commitment, and school culture (the beliefs and expectations about how an educational institution works and the product of the beliefs, values, and traits of participants in the act of learning—teachers and students) determine changes in education [30].

In both face-to-face, distance, and even online learning, teachers need effective ways to measure student attendance and performance. Therefore, they often assign homework, tests, exams, quizzes, and points of active participation [31] to reward learners for their interest, correct answers, and approach to creativity. More often than not, these types of rewards are the key elements that increase student interest in learning activities, thus being recognized as positive experiences that they will want to continue to participate in.

In general, the teaching staff has certain particularities based on a multitude of factors, among which the following can be found: personal traits, teaching skills, the ability to represent a model or example to follow, in-depth knowledge of the discipline, and dedication to the educational activity and the institution where they work [18].

The human profile and, above all, the pedagogical style of teachers along with their degree of involvement, unique ways they perform the act of teaching, and the moods they convey to students become fundamental features in the image they create for themselves in relation to the teacher. This determines a teacher's framing as a human, educational, and professional example. If students perceive a teacher as positive, they will want to take on certain characteristics and behaviors that seem interesting and beneficial to their development, which is possible when there are multiple interactions between students and the teacher. Likewise, the discipline taught by the teacher in question will become much more attractive to students once they notice the teacher's qualities and abilities to teach it. Thus, the decisive factors in the accumulation of student knowledge and training skills include repeated active participation in courses, the interest given to the subject materialized in the performance of work tasks, open discussions and debates in the classroom on certain topics related to the studied field, and carrying out subject projects.

From another perspective, according to Romar and Ferry [32], the practical knowledge of teachers is used in modeling and directing the act of teaching. This integrates formal, theoretical, and experiential knowledge in addition to personal beliefs that reflect the personal imprint of teachers, their backgrounds, and experiences. These can have a significant impact on the actions and decisions that the teaching activity involves.

**Hypothesis 5 (H5).** *Teacher skills and involvement have a positive effect on student interest and participation in teaching activities.*

**Hypothesis 6 (H6).** *The skills and participation of teachers in the teaching activity have a positive effect on the acquisition of knowledge and the development of student skills.*

**Hypothesis 7 (H7).** *The interest and participation of students in teaching activities positively mediate the effect of teacher skills and involvement on the acquisition and development of student knowledge and skills.*

In practice, there are multiple examples supporting the fact that teachers are the ones who inspire students and pupils to follow studies of a certain field and then practice within that field. Most likely, it is the skills and dedication that learners observe in their teachers over time that stand out as key elements in shaping their careers. This includes the field of activity, professionalism, and human qualities that students would like to take with them from their model. Once the degree of involvement and the skills of the teaching staff have facilitated the process of student knowledge accumulation and skill formation, it becomes clear that the next step is for them to play an important role in the management of the students' careers. This includes a student's conscious decision to follow their role model's advice and put into practice what they have been taught.

Other studies have observed that there are a number of different factors that influence career choices, such as [33]: (1) the impact of professionals; (2) the influence of parents and friends; (3) teachers; (4) educational cost; (5) the number of years of study; (6) skills; (7) work experience and satisfaction; and (8) potential earnings and job availability. Furthermore, another study revealed that teachers are considered significant individuals who are agents of development and could affect students' career decisions, and it also discovered that students could have a greater dependence on teachers followed by peers and less so on parents [34].

Therefore, it can be concluded that teachers occupy a primary place in the ranking of factors that directly influence career choices. This influence is manifested through their adopted pedagogical style, causing an increase in a student's interest in the field of learning.

**Hypothesis 8 (H8).** *Teacher skills and involvement have a positive effect on student career management.*

**Hypothesis 9 (H9).** *Knowledge acquisition and development of skills in students mediate the effect of teacher skills and involvement in their future career management.*

**Hypothesis 10 (H10).** *Student interest and participation in teaching activities, their acquisition of knowledge, and development of competencies jointly mediate the effect of teacher skills and participation on a student's future career management.*

#### 2.4. Student Interest and Involvement

The involvement of students in the teaching–learning process increases their motivation and degree of interest, maintains a dynamic approach, and helps to increase self-confidence. There are several means to involve students in learning activities. Conventional methods include tasks, projects, case studies, and presentations, whereas less conventional methods mainly involve access to the Internet [35]. Teachers must encourage student participation and provide all participants with the opportunity to learn by limiting time, promoting an activity-friendly environment [35], and developing and planning interesting activities that capture and maintain their attention throughout.

The study by Al-Natour et al. [36] shows that interactive learning activities lead students to become more cognitively engaged and effectively address more topics. The authors recommend the integration of modern, updated learning policies and methods to improve courses. The academic results of the students are closely related both to the level of their personal development and to their acquired knowledge and skills, where the learning activity is characterized by a high degree of complexity, considering the participation of students in multiple processes using multiple resources and modalities [19].

There are several perspectives on the evaluation of student participation in courses, but in general, they are based on the existence of three categories of student attitudes [35]: (1) those who strongly believe in the positive effects of attending classes; (2) those who participate because of university standards; and (3) those who are not at all interested in

it, citing lack of importance. Therefore, it becomes a constant challenge for teachers to arouse the interest of all students and make them participate in classes, especially since it is necessary to adopt an attitude intended for various categories, which implies fair treatment but differentiated according to the characteristics of each.

**Hypothesis 11 (H11).** *Student interest and participation in teaching activities have a positive effect on their acquisition of knowledge and the development of skills.*

**Hypothesis 12 (H12).** *Student interest and participation in teaching activities have a positive effect on future career management.*

**Hypothesis 13 (H13).** *The acquisition of knowledge and the development of student skills positively mediates the effect of their interest and participation in teaching activities on the future management of careers.*

### 2.5. Acquisition of Knowledge and Development of Student Skills

In the lives of young people, the college years are a significant time as they try to identify and determine their priorities, career goals, and the path to professional success. This can be challenging, especially since there are numerous career options [37].

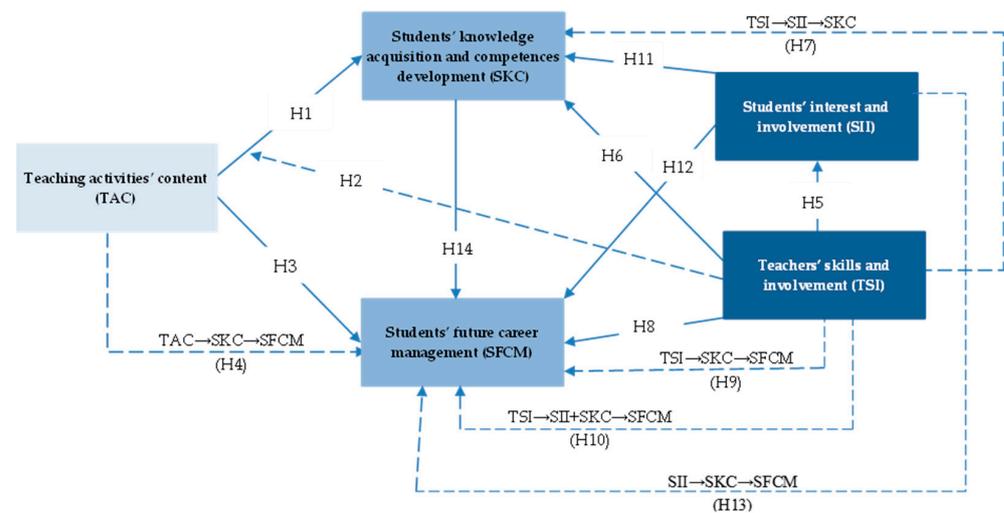
There are several key skills that allow graduates to enter the labor market, namely gathering and analyzing information, planning and organizing activities, working in teams, using technology, and solving problems. Those who argue that these skills provide a foundation for lifelong learning and are essential to achieving career success in today's labor market include teachers, employers, and even governments [38]. In terms of the acquisition of knowledge and skill formation during a student's study period, it can be argued that they have an influence on career success. A more informed and competent graduate is very likely to perform better in the workplace. Therefore, a connection is established between the level of knowledge obtained and a successful career path. Career success has more to do with the actual skills developed and knowledge learned than with educational attainment, and these can also play a key role in how graduates meet and manage challenges as they attempt to launch their careers [39].

Therefore, educational acts carried out both at a theoretical level (transmission of knowledge) and at a practical level (realization of work tasks and projects) end up materializing in a stock of theoretical concepts and skills that students will be able to capitalize on in the market workforce. They do so by demonstrating the skills they have formed, which facilitate their access to various jobs according to their educational level, and with a multitude of benefits.

According to [40], the importance of academic achievements comes from the fact that they are the foundation for completing higher studies, entering the workforce, and building a career. There is a high probability that in the absence of favorable academic results, young people will not be able to qualify for various internships or jobs in the labor market. Higher education graduates who have the necessary skills, representing a skilled workforce, are sought after and valued by employers and can represent a competitive advantage for their businesses [41].

**Hypothesis 14 (H14).** *Knowledge acquisition and development of student skills have a positive effect on a student's future career management.*

Figure 1 highlights the direct effects between the concepts investigated in this study, with continuous arrows, and the mediating and moderating effects, with dotted arrows.



**Figure 1.** Conceptual model.

## 2.6. The Impact of Online Courses

The educational system has been affected by many trends, one of the most important being the use of modern technologies. Modern technologies have had a transformative impact on the entire system, directly influencing the way students accumulate, share information, and learn [21]. By 2020, the entire learning experience was revolutionized due to the absolute necessity of being converted to an online format as a result of the COVID-19 pandemic. Basically, development in this digital context has transformed from an option into an obligation.

Over time, the European Union became more and more interested in supporting the digital revolution, mainly through [42]: (1) defining specific European norms for the field of telecommunications; (2) establishing technical standards; and (3) protecting consumer rights. At this level, an attempt was made to facilitate access and encourage the use of quality Internet safely, quickly, and cheaply in addition to making a financial and material investment in order to train people in digital literacy and to support the accumulation of specific knowledge. Then, Romania, in an attempt to align itself with the general standards, made efforts to develop in this direction.

The evolution of technology and the Internet has given higher education institutions the opportunity to design and develop convenient and flexible educational programs [43], which play a fundamental role in the training of students and in the acquisition of knowledge and skills specific to the field in which they study and want to develop in the future. Learning in the online environment has gained popularity among students due to the flexibility of the program and the comfort it provides [43], allowing each student to develop under the desired conditions. At the same time, teaching staff appreciated the benefits brought about by this learning format, which is characterized by conditions with a greater degree of tolerance, implying easier adaptation.

Furthermore, the online format made it possible to carry out many projects, workshops, and internships in which the physical distance between teachers, trainers, and other people who are active in the field that the students are interested in was no longer considered an impediment. The online format also offered the capability to efficiently use time, allowing one to carry out several activities simultaneously and quickly switch between them. Although, apparently, the degree of online interactivity is considered to be an increasingly low one, it is appreciated that in practice, things are totally different due to the multitude of information, applications, and programs, which are only a click away for both students and teachers. In this way, there is the possibility of staging several scenarios and applications in a jovial but also scientific way using interactive visual support.

Obviously, the contribution that both online and face-to-face courses make to increasing knowledge and skills, in addition to making choices regarding the future career of

students, is achieved with the help of determinants from the direction of the main actors involved in this process, i.e., the student and the teacher.

**Hypothesis 15 (H15).** *Online teaching conditions will increase the importance of teaching activities content on academic outcomes (student knowledge acquisition and competence development and their future career management), while teacher skills and participation will be highly valued in the face-to-face context.*

### 3. Materials and Methods

The Materials and Methods section is structured as follows: an explanation of the procedure used and the selection of the sample participating in this study, a presentation of the survey using an electronic questionnaire, and the methods used for the purpose of analyzing the obtained data.

#### 3.1. Procedure and Sampling

The purpose of this study was to explain how the skills and involvement of university teaching staff and students and the content of the teaching–learning activity carried out online and face-to-face contributes to an increase in students' knowledge and skills and, implicitly, in their ability to make decisions about their future career. Therefore, the target population included undergraduate and master's students, regardless of gender or other demographic characteristics, from major Romanian universities, such as the Bucharest University of Economic Studies, the 'Ovidius' University in Constanța, and other higher education institutions.

Since we also wanted to determine how the face-to-face and online format could impact the considered relationships, this study used a pseudo-longitudinal approach, conducted at two distinctive points of time: (1) the first stage took place between March and April 2022 when most of the teaching activities in Romanian universities were carried out online and (2) the second stage between October 2022 and January 2023 when teaching activities had returned to face-to-face format. The collection of data necessary for the analysis was carried out using an electronic questionnaire produced using Google Forms, which was distributed in the previously mentioned periods, resulting in a total of 395 respondents (197 in the first stage and 198 in the second stage).

#### 3.2. Measures

This study was carried out using an electronic questionnaire developed by authors, after they studied the specialized literature. The questionnaire was distributed to undergraduate and master's students at various universities in Romania in two stages. The first stage was during online university courses, and the second stage was during face-to-face courses.

The questionnaire included five scales measured using a 5-step scale (where 1—To a very small extent and 5—To a very large extent) including: teaching activity content (TAC), teacher skills and involvement (TSI), statements regarding the knowledge acquisition and competence development (SKC) of students, the future career management of students (SFCM), and student interest and involvement (SII). The items in each scale, along with their reliability statistics, are included in the following section. Furthermore, demographic characteristics of the respondents were considered, such as age, sex, the university education institution in which they are enrolled, the form of funding for their study program, whether they benefit from any scholarship within the faculty, and whether they presently have a job.

#### 3.3. Data Analysis

PLS-SEM structural equation modeling was used to evaluate the proposed relationships. This method was selected considering that [44] the purpose of this study is to explain how students acquire and develop knowledge and competencies and how they are able to

manage their future career and identify their relevant antecedents. Furthermore, PLS-SEM allows the evaluation of complex models (as in this case), while also making it possible to use latent construct scores for subsequent analyzes (IPA). The PLS-SEM model was specified including three endogenous constructs (SSI, SKC, and SFCM), their antecedents (TAC and TSI), and the structural relationships to reflect our research hypotheses.

Furthermore, through the importance-performance analysis (IPA) [45] for each of the academic results considered, respectively: (1) acquisition of student knowledge and development of competencies and (2) management of future student careers, by combining the total unstandardized effects (importance) and the rescaled predictor scores (performance), possible intervention areas with high importance and performance that could be improved were highlighted.

To estimate the PLS-SEM model, the SmartPLS 4 [46] application was used, which allowed highlighting the direct, indirect, and mediated relationships between the constructs of interest as well as the moderating effects predicted with our research hypotheses.

#### 4. Results

Regarding the results obtained from the analyses carried out, this section presents the structure of the sample that participated in this investigation, an evaluation of the model used, tests of the research hypotheses, and the importance–performance analysis.

##### 4.1. Structure of the Sample

A sample of 395 respondents participated in this study including students in bachelor's and master's programs at various Romanian higher education institutions. Table 1 shows the structure of the sample according to the main characteristics of the respondents considered, as well as the two stages during which the research process was carried out.

**Table 1.** Structure of the sample.

Characteristics			Phase I—Online Courses (N = 197)		Phase II—Face-to-Face Courses (N = 198)		Total (N = 395)	
			Frequency	%	Frequency	%	Frequency	%
Educational attainment	Bachelor's program	Year 1	15	7.61%	50	25.25%	65	16.46%
		Year 2	36	18.27%	18	9.09%	54	13.67%
		Year 3	130	65.99%	51	25.76%	181	45.82%
	Master's program	Year 1	4	2.03%	62	31.31%	66	16.71%
		Year 2	12	6.09%	17	8.59%	29	7.34%
Form of funding for the study program	Budget	128	64.97%	134	67.68%	262	66.33%	
	Tax	69	35.03%	64	32.32%	133	33.67%	
Scholarship	Yes	67	34.01%	64	32.32%	131	33.16%	
	No	130	65.99%	134	67.68%	264	66.84%	
Work Market Status	Full-time	51	25.89%	56	28.28%	107	27.09%	
	Part-time	21	10.66%	30	15.15%	51	12.91%	
	Entrepreneur	5	2.54%	8	4.04%	13	3.29%	
	No	120	60.91%	104	52.53%	224	56.71%	
Gender	Men	46	23.35%	50	25.25%	96	24.30%	
	Women	151	76.65%	145	73.23%	296	74.94%	
	I do not want to mention	0	0.00%	3	1.52%	3	0.76%	
Age		22.30	4.73	22.35	4.52	22.33	4.62	

##### 4.2. Model Evaluation

To test the proposed hypotheses with the PLS-SEM model, the model must first be proven as reliable, valid, and having predictive power. Therefore, the measurement model was first evaluated, as suggested by Hair, Risher, Sarstedt and Ringle [47], by looking

at the external loadings of the indicators, the internal reliability, and the convergent and discriminant validity of the reflective constructs.

After dropping two variables with lower loadings, all indicator loadings (presented in Table 2) ranged between 0.707 and 0.899, which is above the threshold of 0.7 suggested by Sarstedt, Ringle, and Hair [44], thus indicating satisfactory indicator reliability. Furthermore, in terms of construct reliability, in addition to the Cronbach Alpha and rho\_c values, the approximately exact measure of construct reliability rho\_a was considered. As can be seen in Table 2, the values of rho\_a were between 0.865 and 0.930, which is above the recommended value of 0.7 [47].

**Table 2.** Indicator and construct reliability.

Indicators	Items	Loadings
<b>Content of teaching activities content (<math>\alpha = 0.866</math>; rho_a = 0.880; rho_c = 0.903; AVE = 0.652)</b>		
TAC1	The lectures include topics of interest to me.	0.830
TAC2	In the seminar, we are involved in applications related to the concepts covered in lectures.	0.707
TAC3	Most of the topics covered in the lectures are a solid pillar of my training.	0.879
TAC4	The knowledge gained during the lectures will help me in the future.	0.843
TAC5	Seminars and projects add value to theoretical information from courses.	0.768
<b>Teacher skills and involvement (<math>\alpha = 0.892</math>; rho_a = 0.905; rho_c = 0.921; AVE = 0.670)</b>		
TSI1	I believe that my teachers are very involved in the teaching activity.	0.840
TSI2	Lectures are conducted in an interactive manner.	0.872
TSI3	I can easily ask questions during the lectures.	0.805
TSI4	I believe that teachers can easily adjust to the online/face-to-face format of learning.	0.778
TSI5	During the classes, the teachers managed to capture my attention.	0.883
<b>Student interest and involvement (<math>\alpha = 0.856</math>; rho_a = 865; rho_c = 0.902; AVE = 0.697)</b>		
SII2	It is important to me to attend lectures and seminars.	0.854
SII3	I like to actively participate in lectures and seminars.	0.817
SII4	I consider it important to complete my projects.	0.808
SII5	The fact that I am involved in solving the applications in the seminars helps me better understand the concepts taught.	0.860
<b>Knowledge acquisition and development(<math>\alpha = 0.872</math>; rho_a = 873; rho_c = 0.904; AVE = 0.612)</b>		
SKC1	Basic knowledge in the field in which I want to practice.	0.722
SKC2	Economic knowledge.	0.801
SKC3	Specific management knowledge.	0.831
SKC4	Entrepreneurial skills.	0.820
SKC5	Teamwork skills.	0.732
SKC6	Leadership skills.	0.781
<b>Future career management(<math>\alpha = 0.913</math>; rho_a = 0.930; rho_c = 0.935; AVE = 0.741)</b>		
SFCM1	I have a clear vision of career development opportunities.	0.860
SFCM2	I think I know what I want in the future.	0.882
SFCM3	I am very confident in my career decisions.	0.899
SFCM4	I know how to take advantage of career opportunities that arise.	0.804
SFCM5	For me, deciding what I want to do is easy.	0.856

Note:  $\alpha$ —Cronbach's Alpha; AVE—Average variance extracted. Source: authors with SmartPls 4 [46].

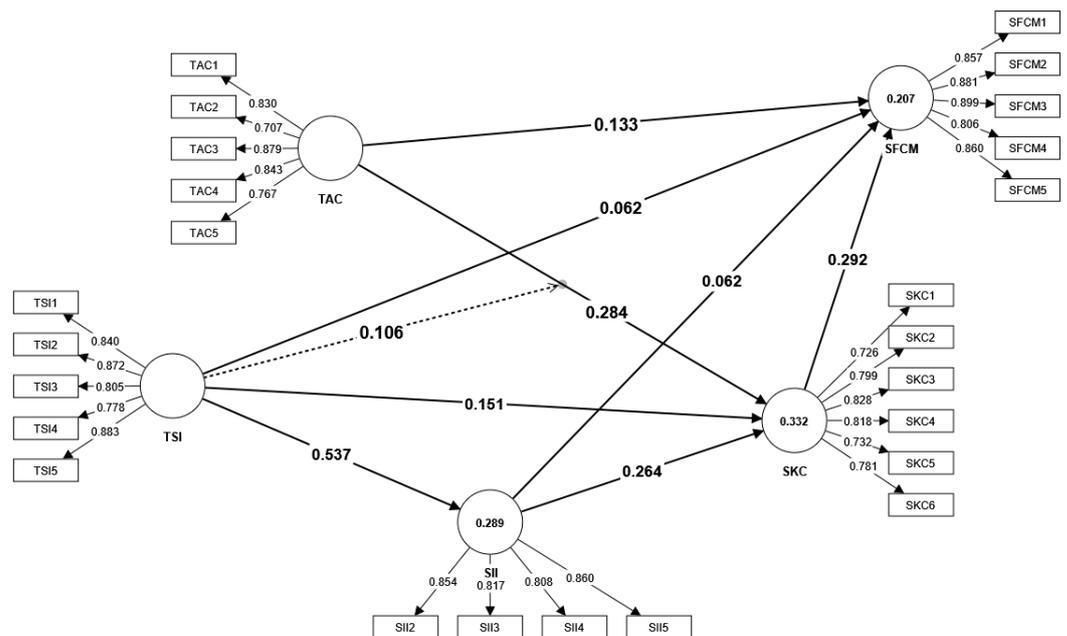
Convergent validity was assessed using AVE. The AVE values (presented in Table 2) ranged between 0.612 and 0.741, which exceeds the recommended value of 0.5. Furthermore, in terms of discriminant validity, both the Fornell–Larcker criterion and the HTMT ratio [48] were considered (see Table 3). According to the Fornell–Larcker criterion, the AVE values of each construct (displayed in gray) were higher than the shared variance with all others. Furthermore, in terms of the HTMT ratio, all values were lower than the 0.85 cutoff [49], both supporting the discriminant validity of the reflective content within the PLS-SEM model.

**Table 3.** Discriminant validity.

Constructs	Fornell–Larcker Criterion					HTMT Ratio				
	TAC	TSI	SII	SKC	SFCM	TAC	TSI	SII	SKC	SFCM
TAC	0.808									
TSI	0.635	0.836				0.712				
SII	0.579	0.537	0.835			0.670	0.599			
SKC	0.505	0.443	0.478	0.782		0.569	0.489	0.543		
SFCM	0.357	0.309	0.313	0.415	0.861	0.383	0.326	0.341	0.448	

Source: authors with SmartPLs 4 [46].

Taking into account the structural model, possible collinearity issues and prediction power were assessed. Since all the inner VIF values were much below 3, any collinearity issues were excluded from the model. Furthermore, the  $R^2$  coefficients (Figure 2) indicated that TSI can explain 28.9% of the variance in SSI ( $R^2 = 0.289$ ), that those two and TAC are responsible for 33.2% of the SKC ( $R^2 = 0.332$ ), and that all the predictors of SFCM contribute 20.7% of the SFCM variance ( $R^2 = 0.207$ ). Furthermore, except for two cases, all path coefficients were statistically significant, supporting the predictive power of the structural model.



**Figure 2.** Structural model. Source: authors with SmartPLs 4 [46].

### 4.3. Testing the Research Hypotheses

In terms of our research hypotheses, direct (Table 4) and indirect (Table 5) effects were examined. As can be seen in Table 4, TAC has a positive effect on SKC ( $\beta = 0.284, p < 0.001$ ) and SFCM ( $\beta = 0.133, p < 0.05$ ), providing support for H1 and H3. Furthermore, the interaction term  $TSI * TAC$  has a positive effect on SKC, supporting H2. Therefore, skills and involvement will strengthen the effect of the content of the teaching activities on the acquisition and development of student knowledge, i.e., the more students perceive that their teachers are involved in the didactic activity, that the courses are conducted more interactively, and that the teachers manage to capture their attention, the more positive the effect that the content of the didactic activities has on the knowledge and skills acquired by the students. In Figure 3, a simple slope analysis is presented, which illustrates the interaction effect of TSI on the  $TAC \rightarrow SKC$  relationship.

**Table 4.** Direct effects.

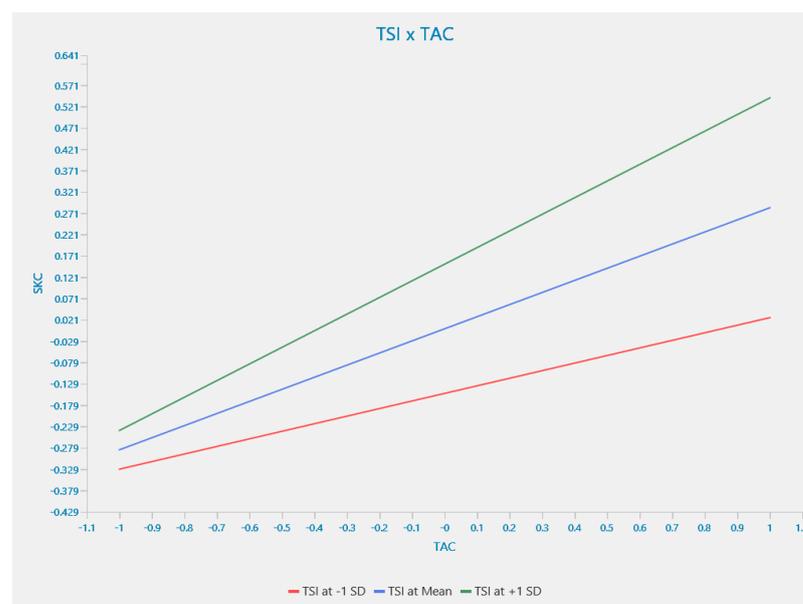
Hypotheses	Relationships	Beta Coef.	SE	Effect Size	Decision
<b>Direct Effects</b>					
H1 (+)	TAC → SKC	0.284 ***	0.060	0.062	Supported
H3 (+)	TAC → SFCM	0.133 *	0.078	0.011	Supported
H5 (+)	TSI → SII	0.537 ***	0.039	0.406	Supported
H6 (+)	TSI → SKC	0.151 **	0.064	0.019	Supported
H8 (+)	TSI → SFCM	0.062	0.071	0.003	Not supported
H11 (+)	SII → SKC	0.264 ***	0.059	0.063	Supported
H12 (+)	SII → SFCM	0.062	0.070	0.003	Not supported
H14 (+)	SKC → SFCM	0.292 ***	0.063	0.073	Supported
<b>Moderated effect</b>					
H2 (+)	TSI * TAC → SKC	0.106 **	0.040		Supported

Note: \*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$ ; SE, standard error. Source: authors with SmartPLS 4 [46].

**Table 5.** Indirect effects.

Hypotheses	Relationships	Beta Coef.	SE	BCCI		Decision	Type of Mediation
				Lower	Upper		
H4 (+)	TAC → SKC <sup>de</sup>	0.284 ***	0.060				Complementary partial mediation
	TAC → SKC → SFCM <sup>ie</sup>	0.083 ***	0.024	0.049	0.129	Supported	
H7 (+)	TSI → SKC <sup>de</sup>	0.151 **	0.064				Complementary partial mediation
	TSI → SII → SKC <sup>ie</sup>	0.142 ***	0.034	0.087	0.200	Supported	
H9 (+)	TSI → SFCM <sup>de</sup>	0.062	0.071				Full complex mediation
	TSI → SII → SFCM <sup>ie</sup>	0.033	0.038	−0.029	0.095		
	TSI → SKC → SFCM <sup>ie</sup>	0.044 *	0.021	0.015	0.086	Supported	
H10 (+)	TSI → SII → SKC → SFCM <sup>ie</sup>	0.041 **	0.014	0.022	0.069	Supported	
H13 (+)	SII → SFCM <sup>de</sup>	0.062	0.070				Full mediation
	SII → SKC → SFCM <sup>ie</sup>	0.077 **	0.025	0.041	0.125	Supported	

Note: \*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$ ; <sup>de</sup>—direct effect, <sup>ie</sup>—indirect effect; SE—Standard error; BCCI—bias corrected confidence interval. Source: authors with SmartPLS 4 [46].



**Figure 3.** Moderation effect. Source: authors with SmartPLS 4 [46].

The bootstrap procedure with 5000 sub-samples indicated that TAC has a positive and significant indirect effect on SFCM ( $\beta = 0.083$ , 95%BCCI[0.049, 0.129]), therefore supporting H4. Furthermore, considering the direct positive effect, it can be concluded that the acquisition of knowledge and the development of skills of students complement the effect of the content of the teaching activities on the future management of a student's career [50,51]. Therefore, the more students perceive that the subjects studied are of interest to them, that the topics covered in the courses represent a solid pillar in their academic development, and that the information accumulated during the courses will help them in the future, the more knowledge and skills (such as economic, managerial, and entrepreneurial) they will acquire. In turn, acquiring these knowledge and skills will allow students to have a clearer vision of their career development possibilities, to be more confident about their future career decisions, and to take greater advantage of the opportunities presented to them.

Furthermore, considering the effects of TSI, the results revealed that it has a positive effect on SII ( $\beta = 0.537$ ,  $p < 0.001$ ), SKC ( $\beta = 0.151$ ,  $p < 0.01$ ), while the direct effect on SFCM is positive, but not statistically significant ( $\beta = 0.062$ , *ns*). These results support H5 and H6.

In terms of mediation, the indirect effect of TSI on SKC ( $\beta = 0.142$ , 95%BCCI[0.187, 0.200]), which supports H7, was first analyzed. Furthermore, considering that TSI also has a direct positive effect on SKC, it can be confirmed that students' interest and participation in teaching activities mediate the effect of teachers' skills and involvement on the acquisition and development of student knowledge. Therefore, the more students perceive that their teachers are more involved in didactic activities, involving them in interactive activities, thus managing to capture their attention, the more involved they become, through active participation in courses and seminars, carrying out projects, and better understanding of the concepts taught. In turn, as students are more involved in teaching activities, they will acquire more knowledge and economic, managerial, and entrepreneurial skills.

Furthermore, TSI has positive indirect effects on SFCM, mediated by SKC ( $\beta = 0.044$ , 95%BCCI[0.015, 0.086]) and jointly by SII and SKC ( $\beta = 0.041$ , 95%BCCI[0.022, 0.069]), thus supporting H9 and H10. Furthermore, the direct and indirect effects mediated by SII are not statistically significant (see Table 5). Therefore, considering both direct and indirect effects, it can be concluded that teacher skills and participation do not have a direct effect on the future career management of students, as the effect is fully mediated by knowledge acquisition and development of student skills and jointly by student interest and participation.

Considering the effects of SII, it positively influences SKC ( $\beta = 0.264$ ,  $p < 0.001$ ), providing support for H11, while the direct effect on SFCM is not statistically significant ( $\beta = 0.062$ , *ns*). Furthermore, SII has an indirect effect on SFCM ( $\beta = 0.077$ , 95%BCCI [0.041, 0.125]), thus supporting H13. Therefore, the acquisition and development of student knowledge positively and fully mediates the effect of their interest and participation in teaching activities on future career management.

Finally, it was assumed that online teaching conditions will increase the importance of teaching activities content on academic outcomes (student knowledge and development of student skills and their future career management), while teacher skills and participation will be highly valued in a face-to-face environment. To highlight the hypothesized differences between the online and face-to-face conditions in terms of the total effects of TAC and TSI, a multigroup analysis (MGA) was performed. As can be seen in Table 6, TAC has a greater effect on SKC in online conditions ( $\Delta\beta_{(O-FF)} = 0.236$ ,  $p < 0.05$ ), while the effect of TSI increased in the face-to-face environment ( $\Delta\beta_{(O-FF)} = -0.219$ ,  $p < 0.05$ ). However, in terms of SFCM, both TAC and TSI had a comparable impact regardless of teaching conditions. Therefore, H14 was partially supported.

**Table 6.** Multigroup analysis.

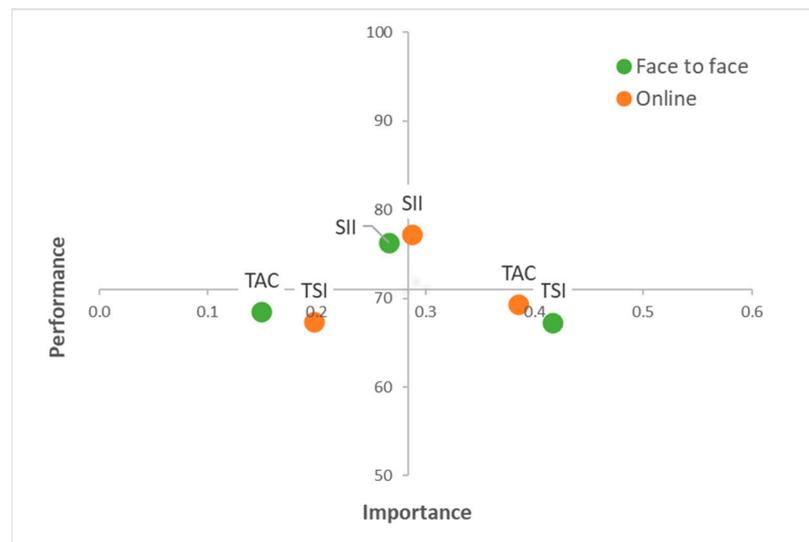
Relationships	$\beta_{(FF)}$	$\beta_{(O)}$	$\Delta\beta_{(O-FF)}$	Bootstrap MGA	Parametric Test	Welch–Satterthwait Test
TAC → SKC	0.149	0.385	0.236	0.022	0.022	0.022
TAC → SFCM	0.181	0.250	0.069	0.333	0.328	0.329
TSI → SKC	0.417	0.198	−0.219	0.044	0.043	0.044
TSI → SFCM	0.153	0.213	0.060	0.345	0.345	0.345

Source: authors with SmartPLs 4 [46].

**4.4. Importance–Performance Analysis**

The above results provided important inside information on the mechanism that explains academic outcomes (i.e., student knowledge and student skills and their ability to manage their future career). Furthermore, using IPA [45], we wanted to deepen our understanding by highlighting specific areas of improvement to increase the performance of each target. Furthermore, since we assumed that there are differences between face-to-face and online teaching conditions, the IPA results are provided for both.

*Acquisition of knowledge and development of student skills.* In Figure 4, on the horizontal axis, the total standardized effects of all predictors for the SKC construct (importance) are presented, while on the vertical axis, their rescaled scores (performance) are presented. As can be seen, the results of the IPA suggest that to improve the acquisition and development of student knowledge, actions should be taken primarily to improve the content of teaching activities, the interest and participation of students in the online environment, and the skills and participation of teachers in the face-to-face environment.



**Figure 4.** IPA for the SKC target construct (construct level). Source: authors with SmartPLs 4 [46].

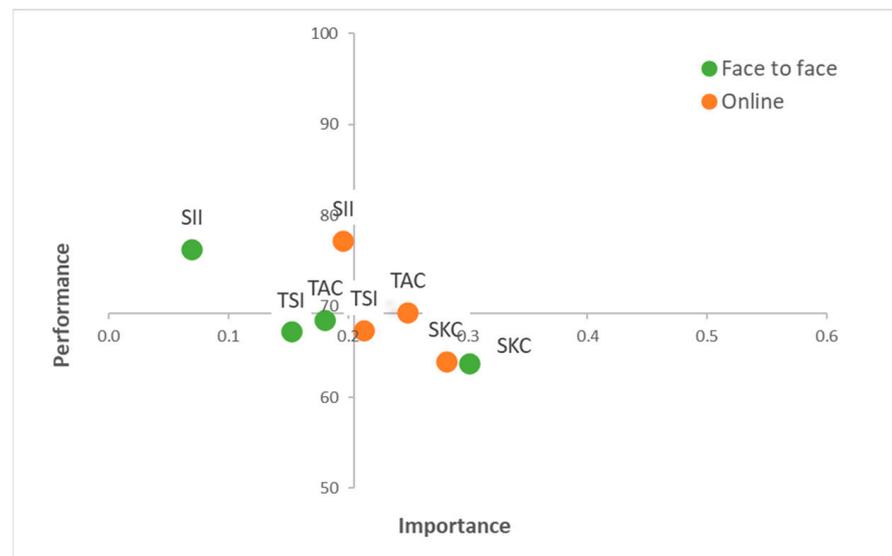
Furthermore, at the indicator level, the IPA can continue to suggest more specific areas for improvement (Table 7). Therefore, to increase the acquisition of student knowledge and skill development, courses should include more disciplines of interest for students (TAC1) and subjects that represent a pillar in student training (TAC3), and the information taught should be useful to them in their future careers (TAC4). In face-to-face environments, a different set of steps should be taken including: increasing involvement of teachers in teaching activities (TS1), more interactive lectures (TS2), and looking for innovative means to capture students’ attention (TS5). On the other hand, it can be noted that more active participation of students in courses and seminars (SII3) is a prerequisite for their acquisition of necessary knowledge and skills, both in the online environment and in the case of courses conducted with physical presence.

**Table 7.** IPA for the target construct SKC (indicator level).

Indicator	Face-to-Face			Online		
	Importance	Performance	IPA Quadrant	Importance	Performance	IPA Quadrant
SII2	0.080	78.157	I	0.069	79.822	IV
SII3	0.075	70.328	II	0.086	67.259	II
SII4	0.067	81.944	IV	0.084	80.838	I
SII5	0.105	74.242	I	0.094	79.569	I
TAC1	0.038	70.581	III	0.103	70.051	II
TAC2	0.027	71.086	IV	0.076	75.254	I
TAC3	0.046	64.141	III	0.109	64.467	II
TAC4	0.038	65.025	III	0.089	63.706	II
TAC5	0.036	73.106	IV	0.095	73.604	I
TSI1	0.107	69.444	II	0.049	70.431	III
TSI2	0.092	61.869	II	0.044	63.452	III
TSI3	0.101	71.970	I	0.048	73.731	IV
TSI4	0.077	72.727	I	0.038	69.416	III
TSI5	0.115	60.985	II	0.059	59.518	III

Source: authors with SmartPLS 4 [46].

*Future career management of students.* IPA could also be a focus area of intervention, as it is capable of facilitating better future career management (Figure 5). The results suggest that for students to have a clear vision of their future career and be more prepared for it, first steps must be taken to improve their knowledge acquisition and skills development process. This was found in both online and face-to-face environments. Furthermore, in particular, if classes are conducted online, special attention should be paid to the content of teaching activities and the skills and participation of teachers.



**Figure 5.** IPA for the SFCM target construct (construct level). Source: authors with SmartPLS 4 [46].

In more detail, at the indicator level, the IPA (Table 8) suggests that for better future career management of students under online conditions, students should consider participating more actively in lectures and seminars (SII3), as there is a better connection between the content of lectures and the demands of the business environment (TAC3 and TAC4). At the same time, in both the case of online and face-to-face courses, the acquisition of a set of knowledge and skills specific to the field of the future job (SKC1), in addition to management (SKC3) and entrepreneurial knowledge (SKC4), could be considered a priority for the better management of a student’s future career.

**Table 8.** IPA for the target construct SFCM (indicator level).

Indicator	Face-to-Face			Online		
	Importance	Performance	IPA Quadrant	Importance	Performance	IPA Quadrant
SII2	0.021	78.157	IV	0.047	79.822	IV
SII3	0.019	70.328	IV	0.059	67.259	II
SII4	0.017	81.944	IV	0.057	80.838	I
SII5	0.027	74.242	IV	0.064	79.569	I
SKC1	0.073	67.929	II	0.073	67.766	II
SKC2	0.065	60.227	II	0.049	58.629	III
SKC3	0.062	59.470	II	0.051	59.898	II
SKC4	0.066	53.788	II	0.058	55.584	II
SKC5	0.068	72.475	I	0.064	72.716	I
SKC6	0.058	65.404	II	0.062	63.452	II
TAC1	0.046	70.581	IV	0.066	70.051	I
TAC2	0.033	71.086	IV	0.049	75.254	IV
TAC3	0.055	64.141	II	0.071	64.467	II
TAC4	0.046	65.025	III	0.058	63.706	II
TAC5	0.043	73.106	IV	0.062	73.604	I
TSI1	0.039	69.444	III	0.053	70.431	I
TSI2	0.034	61.869	III	0.047	63.452	III
TSI3	0.037	71.970	IV	0.051	73.731	IV
TSI4	0.028	72.727	IV	0.041	69.416	III
TSI5	0.042	60.985	III	0.063	59.518	II

Source: authors with SmartPls 4 [46].

### 5. Discussion

The results of the present study can be highlighted using a two-stage perspective: student skills and career management. Thus, with regard to student knowledge acquisition and development of skills, based on the analyses carried out, the effect of the content of didactic activities on student skills and knowledge development is reinforced by the skills and participation of the teaching staff. This result was explained by a direct proportional relationship between student perception of a teacher’s participation in educational activity, courses conducted more interactively, a teacher’s ability to maintain student attention, and the content of didactic activities on knowledge and skills acquired. These results are in line with other studies that have found that: (1) the quality of the educational process (i.e., the teaching activities, content of the educational process, and the teaching staff) positively influence the knowledge, skills, and skills of the students [19,52]; (2) the development of occupational competencies of a student is influenced by a variety of factors including well-designed curriculum, as well as other elements such as content delivery, student assessment methods (curriculum implementation), instructional quality, and the quality of learning and teaching materials and methods [32,53]; (3) student achievement is related to teacher skills [54–56]; (4) academic success and long-term development of students are both significantly affected by teachers’ professional competence [18,57]; and (5) competent teachers who possess knowledge on the subject and convey it to students contribute to student development and stimulate their critical thinking skills [58]. Similarly, the effect of teacher competence and involvement on student skill and knowledge development is fully mediated by student interest and participation in teaching activities. Thus, the more the students perceive the increased involvement of teachers in the teaching–learning activity and the more teachers involve students in activities with a high degree of interactivity, thus managing to capture their interest, the more they will be involved and actively participate in the courses, thereby understanding the concepts taught and completing their work tasks. Furthermore, the more students are involved in educational activities, the more knowledge and skills are acquired specific to the economic and administrative field.

Regarding the differences between the teaching–learning activity carried out online and face-to-face, based on the importance–performance analysis, it was observed that to improve student accumulation of knowledge and acquisition of skills in the online environment, it is necessary to improve the content of teaching activities by undertaking actions with positive effects on increasing the interest and participation of teaching staff and stu-

dents. Therefore, to increase the acquisition of knowledge and the development of student skills, it is essential that topics of interest to them are addressed during didactic activities, which constitute a solid pillar in their training. Regarding the learning activity carried out in the physical environment, the analyses carried out suggest that the interactive dimension is particularly important, as well as capturing student attention using innovative methods. For both online and face-to-face environments, increasing student active participation is a prerequisite for their knowledge acquisition and skill development.

Analyses regarding student career management support the fact that the effect of the content of teaching activities is complemented by the accumulation of knowledge and the formation of student skills. Thus, students will become more capable of forming a clearer vision of their career opportunities and more confident in the career decisions they will make when they perceive that the ideas and concepts addressed in university courses are of interest to them, that they represent a significant part of their academic performance, and that the rigorous economic theoretical training resulting from the courses constitute a support point for their future. Even if teacher skills and involvement do not have a direct effect on a student's future career management, the effect of this relationship is fully mediated by the accumulation of knowledge, the acquisition of skills, and the manifestation of student interest in the learning activity. Therefore, it is noted that the interest and involvement of students in the didactic activity on the management of their future career is completely mediated by the acquisition of knowledge and the development of their skills. These results reinforce the findings of other studies that have shown that a student's chances of employment in the labor market are positively influenced by the quality of the educational process (i.e., the teaching activities, content of the educational process, and the teaching staff) [52]. In addition, a student's interests have been shown to motivate them to participate more in activities in which they were personally interested, and this interest affects the career choice of students and is a critical factor in stimulating the ability and developing the capacity for students meet job requirements [59].

Regarding student career management, the importance–performance analysis emphasizes that, in both environments, actions taken to improve the process of acquiring knowledge and developing student skills are paramount to forming a clear vision of a future career and achieving rigorous preparations for this regard. Therefore, acquiring a set of knowledge and skills specific to the field in which a student wants to work in the future is a key point in better managing their future career. These results are supported by previous evidence suggesting that a person's employment options in the labor market are significantly influenced by the knowledge, skills, and competencies they have obtained [60], and a student's career choice must be based on solid knowledge, complete information, and guidance that are suitable for their specific personality types and other intrinsic and extrinsic elements [3]. Furthermore, these findings are in line with another study highlighting that in recent years, universities have focused on proposing actions to improve the skills and personal capital of graduates, thus increasing their ability to 'be employable' [61].

## 6. Theoretical and Practical Implications

*Theoretical implications.* Considering the numerous studies on student career choices, this is the first to consider the previously described determinants of academic outcomes, which makes the understanding of student knowledge and skills and their career management decisions an easier and more accessible topic in the specialized literature for the general public. Moreover, the proposed structural model emphasizes not only the direct effects but also the mediating relationships between them, which shows the insides of the subject as well as certain influences manifested between concepts that were not highlighted until now. Another theoretical implication of this study is the fact that the research design includes the two stages: the results of online and face-to-face learning and an aspect that allowed a comparative analysis of both perspectives. *Practical implications.* The practical implications of this study build on the theoretical ones. The results obtained can be of interest for high school graduates who want to enroll in higher education. In addition,

this study may be of interest to students as they can become aware of the importance of permanent active involvement in university activities for the accumulation of knowledge, the formation of skills, and, based on them, a favorable professional path. As for the teaching staff, the present study gives them a chance to identify the most suitable approach to capture and maintain student attention and interest, as well as to approach teaching activities in an interactive, attractive way for students and facilitate their learning process using a method corresponding to what they want and what is most suitable for their situation.

Additionally, higher education institutions can use the results of this study in the stage of drafting and issuing decisions aimed at implementing the most suitable university programs and transposing them into the most suitable format. The results of this study can also support the development of educational strategies aimed at increasing the participation of teaching staff in teaching activities and increasing the degree of interactivity in university courses in order to attract and maintain the interest of student. The actions of such strategies can be based on teacher training programs and implicit counseling and self-knowledge sessions for students so that they can identify the subjects for which they have an increased interest. These methods can also identify how each student can learn effectively and pleasantly at the same time given one's mental and intellectual traits. Moreover, the results can be used to consider e-Learning as a viable strategic option for adapting higher education institutions to the needs of learners, in terms of flexible scheduling, geographical access, and availability of learning resources [62], in addition to preparing unexpected and disruptive events, such as the COVID-19 pandemic, while maintaining or increasing quality standards and expected results [1].

## 7. Conclusions

The present study considered an analysis on how students accumulate knowledge and develop skills based on didactic activities in the university environment, as well as how they will be able to manage their future career, capitalizing on their training facilitated by skills and the level of involvement of university professors. A total of 395 students enrolled in bachelor and master programs at Romanian universities participated in the research, which was conducted in two stages: during educational activities given in the online format and during the return to the physical format of learning.

The main conclusions of this research highlight the positive relationships between the content of universalization courses, the knowledge and skills of students, and the management of their future careers. These factors are strengthened by an increase in the interest and degree of involvement of the teaching staff and students in the teaching-learning activity, both online and face-to-face. Thus, it was observed that once students perceive an increase in the level of participation of the teachers in the didactic activity, and when the courses are conducted in an interactive manner, their interest and degree of participation will increase. This aspect will facilitate the accumulation of knowledge and the acquisition of skills, which will further serve as support in their future career.

The limits of the present research can be represented by the fact that, considering the two stages in which the research was carried out, the transition from one stage to the other was made suddenly in both cases, respectively, from the physical learning environment to the online format in the beginning period of the COVID-19 pandemic and vice versa in March 2022, when the implications of the pandemic decreased significantly compared to the previous period, the context being the one that explains the lack of prior preparation. Additionally, another limitation that can lead to a future direction of research refers to the fact that this paper is based on a survey in which only the student's perception related to the totality of the concepts addressed, such as the content of didactic activities, skills, and the involvement of teaching staff, without considering the perception of other stakeholders on the educational process. In addition, the generalizability of our results are limited by the fact that the participants in this study were approximately 75% female and more than 45% third-year undergraduate students. Furthermore, although this study considers

a significant number of students, a longitudinal study could provide a more in-depth perspective on the topic, focusing on the right contexts in which the relationships between the main concepts addressed are more beneficially established.

Similarly, future research that can be carried out on the basis of this study may include topics such as career success of higher education graduates and the extent to which they consider that the skills and knowledge acquired during their university years have contributed to their professional success. Furthermore, another interesting direction could involve the perception of graduates regarding the way in which they were influenced by university professors and which part of their own success they consider to be due to them and, implicitly, to the training provided during the years of study. Furthermore, future studies can consider the degree to which university training was the most important factor in adapting to the labor market due to the knowledge and skills acquired as a result. Another direction of research on future career management for students may be their perception of the need for career counseling and guidance activities.

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## References

1. Pop, M.D.; Lacurezeanu, R.; Nistor, R.L. A Study Regarding Change Management in Romanian Higher Education Institutions: An Internal Stakeholder's Perspective. *Transform. Bus. Econ.* **2009**, *8*, 194–216.
2. Cramarenco, R.E.; Burcă-Voicu, M.I.; Dabija, D.C. Student Perceptions of Online Education and Digital Technologies during the COVID-19 Pandemic: A Systematic Review. *Electronics* **2023**, *12*, 319. [CrossRef]
3. Ahmed, K.A.; Sharif, N.; Ahmad, N. Factors Influencing Students' Career Choices: Empirical Evidence from Business Students. *J. Southeast Asian Res.* **2017**, *2017*, 718849. [CrossRef]
4. Fizer, D. Factors Affecting Career Choices of College Students Enrolled in Agriculture. Master's Thesis, The University of Tennessee, Knoxville, TN, USA, 2013.
5. Singaravelu, H.D.; White, L.J.; Bringaze, T.B. Factors Influencing International Students' Career Choice: A Comparative Study. *J. Career Dev.* **2005**, *32*, 46–59. [CrossRef]
6. Kazi, A.S.; Akhlaq, A. Factors Affecting Students' Career Choice. *J. Res. Reflect. Educ.* **2017**, *2*, 187–196.
7. Dobre, A.N.; Breazu, A.; Ștefan, S.C. The Influence of Romanian Students' Choices in Higher Education on Employment Rate and Job Satisfaction. In Proceedings of the 15th International Management Conference "Managing People and Organizations in a Global Crisis", Bucharest, Romania, 18 February 2022; Popa, I., Dobrin, C., Ciocoiu, C.N., Eds.; pp. 735–746.
8. Chuang, N.; Walker, K.; Caine-Bish, N. Student Perceptions of Career Choices: The Impact of Academic Major. *J. Fam. Consum.* **2009**, *27*, 18–29.
9. The Princeton Review Top 10 College Majors. Available online: <https://www.princetonreview.com/college-advice/top-ten-college-majors> (accessed on 15 March 2023).
10. Granado-Alcón, M.D.C.; Gómez-Baya, D.; Herrera-Gutiérrez, E.; Vélez-Toral, M.; Alonso-Martín, P.; Martínez-Frutos, M.T. Project-Based Learning and the Acquisition of Competencies and Knowledge Transfer in Higher Education. *Sustainability* **2020**, *12*, 10062. [CrossRef]
11. Boulianne, E. Impact of Accounting Software Utilization on Students' Knowledge Acquisition. *J. Account. Organ. Chang.* **2014**, *10*, 22–48. [CrossRef]
12. Gribling, M.; Duberley, J. Global Competitive Pressures and Career Ecosystems: Contrasting the Performance Management Systems in UK and French Business Schools. *Pers. Rev.* **2021**, *50*, 1409–1425. [CrossRef]
13. Donald, W.E.; Baruch, Y.; Ashleigh, M. The Undergraduate Self-Perception of Employability: Human Capital, Careers Advice, and Career Ownership. *Stud. High. Educ.* **2019**, *44*, 599–614. [CrossRef]
14. Donald, W.E.; Ashleigh, M.J.; Baruch, Y. Students' Perceptions of Education and Employability: Facilitating Career Transition from Higher Education into the Labor Market. *Career Dev. Int.* **2018**, *23*, 513–540. [CrossRef]
15. Jackson, D.; Wilton, N. Developing Career Management Competencies among Undergraduates and the Role of Work-Integrated Learning. *Teach. High. Educ.* **2016**, *21*, 266–286. [CrossRef]

16. Dexonline Cunoștințe. Available online: <https://dexonline.ro> (accessed on 15 March 2023).
17. Cabac, V. Definiția “duală” a Competenței Si Etapele de Formare a Ei. In Proceedings of the Use of Modern Educational and Informational Technologies for the Training of Professional Competences of the Students in Higher Education Institutions, Bălți, Moldova, 6–7 December 2019; pp. 67–70.
18. Lalitpasan, U.; Wongwanich, S.; Suwanmonka, S. Career Preparation: Identification of Student Teachers’ Needs in the School-to-Work Transition. *Procedia Soc. Behav. Sci.* **2014**, *116*, 3405–3409. [[CrossRef](#)]
19. Neșțian, S.A.; Vodă, A.I.; Tiță, S.M.; Guță, A.L.; Turnea, E.S. Does Individual Knowledge Management in Online Education Prepare Business Students for Employability in Online Businesses? *Sustainability* **2021**, *13*, 2091. [[CrossRef](#)]
20. van der Baan, N.; Gast, I.; Gijsselaers, W.; Beausaert, S. Coaching to Prepare Students for Their School-to-Work Transition: Conceptualizing Core Coaching Competences. *Educ. Train.* **2022**, *64*, 398–415. [[CrossRef](#)]
21. Germain, M.-L. Distance Education. In *Integrating Service-Learning and Consulting in Distance Education*; Emerald Publishing Limited: Bingley, UK, 2019; pp. 9–43.
22. Dexonline Carieră. Available online: <https://dexonline.ro/> (accessed on 15 March 2023).
23. Ayodele, T.O. Career Choice of Real Estate Students in Nigeria. *Prop. Manag.* **2019**, *37*, 154–176. [[CrossRef](#)]
24. Ng, E.S.W.; Burke, R.J.; Fiksenbaum, L. Career Choice in Management: Findings from US MBA Students. *Career Dev. Int.* **2008**, *13*, 346–361. [[CrossRef](#)]
25. Purohit, D.; Jayswal, M.; Muduli, A. Factors Influencing Graduate Job Choice—A Systematic Literature Review. *Eur. J. Train. Dev.* **2021**, *45*, 381–401. [[CrossRef](#)]
26. Omar, R.; Ahmad, N.A.; Hassam, S.A.; Roslan, S. Importance of Teachers’ Competency through Students’ Perception in Relationships between Parental Involvement and Motivation with Students’ Achievement. *Sains Humanika* **2018**, *10*, 17–23. [[CrossRef](#)]
27. Hallinan, M.T. Teacher Influences on Students’ Attachment to School. *Sociol. Educ.* **2008**, *81*, 271–283. [[CrossRef](#)]
28. Fauth, B.; Decristan, J.; Decker, A.-T.; Büttner, G.; Hardy, I.; Klieme, E.; Kunter, M. The Effects of Teacher Competence on Student Outcomes in Elementary Science Education: The Mediating Role of Teaching Quality. *Teach. Teach. Educ.* **2019**, *86*, 102882. [[CrossRef](#)]
29. Tsai, C. The Role of Teacher’s Initiation in Online Pedagogy. *Educ. Train.* **2012**, *54*, 456–471. [[CrossRef](#)]
30. Ng, S.W. Managing Teacher Balkanization in Times of Implementing Change. *Int. J. Educ. Manag.* **2011**, *25*, 654–670. [[CrossRef](#)]
31. Jacques, S.; Ouahabi, A.; Lequeu, T. Remote Knowledge Acquisition and Assessment during the COVID-19 Pandemic. *Int. J. Eng. Pedagog.* **2021**, *10*, 120–138. [[CrossRef](#)]
32. Romar, J.E.; Ferry, M. The Influence of a Methods Course in Physical Education on Preservice Classroom Teachers’ Acquisition of Practical Knowledge. *J. Teach. Phys. Educ.* **2020**, *39*, 374–383. [[CrossRef](#)]
33. van Zyl, C.; de Villiers, C. Why Some Students Choose to Become Chartered Accountants (and Others Do Not). *Meditari Account. Res.* **2011**, *19*, 56–74. [[CrossRef](#)]
34. Akosah-Twumasi, P.; Emeto, T.I.; Lindsay, D.; Tsey, K.; Malau-Aduli, B.S. A Systematic Review of Factors That Influence Youths Career Choices—The Role of Culture. *Front. Educ.* **2018**, *3*, 58. [[CrossRef](#)]
35. Abuid, B.A. A Student Participation Assessment Scheme for Effective Teaching and Learning. *Learn. Teach. High. Educ. Gulf Perspect.* **2014**, *11*, 71–97. [[CrossRef](#)]
36. Al-Natour, A.; AlNatour, A.; Ali, R.A.; Alzoubi, F.; Almomani, H.M.; AlBashtawy, M. Students’ Perceptions and Experiences in a Health Promotion Course Using Interactive Learning. *Heliyon* **2021**, *7*, e07192. [[CrossRef](#)]
37. Kleine, A.K.; Schmitt, A.; Wisse, B. Students’ Career Exploration: A Meta-Analysis. *J. Vocat. Behav.* **2021**, *131*, 103645. [[CrossRef](#)]
38. Clarke, M. Understanding and Managing Employability in Changing Career Contexts. *J. Eur. Ind. Train.* **2008**, *32*, 258–284. [[CrossRef](#)]
39. van Dierendonck, D.; van der Gaast, E. Goal Orientation, Academic Competences and Early Career Success. *Career Dev. Int.* **2013**, *18*, 694–711. [[CrossRef](#)]
40. Turner, S.L.; Lee, H.; Jackson, A.P.; Smith, S.; Mason-Chagil, G.; Jacobs, S.C. Examining the Career Self-Management Model Among Native American Students With STEM Career Goals. *J. Career Dev.* **2022**, *49*, 616–631. [[CrossRef](#)]
41. Darko, D.F.; He, Z.; Boadi, E.A.; Asante, I.O. African International Students’ Career and Job Satisfaction: The Case of China. *J. Psychol. Afr.* **2020**, *30*, 315–322. [[CrossRef](#)]
42. Boeru, I.; Dalu, A.M.; Iftode, O.; Manu, M.; Mitulescu, S.; Neacșu-Dalu, C.-C.; Plăeșu, A.; Ștefănescu, I. *Internetul Și Mediile de Socializare Virtuale În Viața Liceenilor*; Institut of Education Sciences: Bucharest, Romania, 2017.
43. Ilyas, A.; Zaman, M.K. An Evaluation of Online Students’ Persistence Intentions. *Asian Assoc. Open Univ. J.* **2020**, *15*, 207–222. [[CrossRef](#)]
44. Sarstedt, M.; Ringle, C.M.; Hair, J.F. Partial Least Squares Structural Equation Modeling. In *Handbook of Market Research*; Homburg, C., Klarmann, M., Vomberg, A., Eds.; Springer International Publishing: Cham, Switzerland, 2020; ISBN 978-3-319-05542-8.
45. Ringle, C.M.; Sarstedt, M. Gain More Insight from Your PLS-SEM Results the Importance-Performance Map Analysis. *Ind. Manag. Data Syst.* **2016**, *116*, 1865–1886. [[CrossRef](#)]
46. Ringle, C.M.; Wende, S.; Becker, J.-M. SmartPLS 4. 2022. Available online: <https://www.smartpls.com/> (accessed on 29 January 2023).
47. Hair, J.F.; Risher, J.J.; Sarstedt, M.; Ringle, C.M. When to Use and How to Report the Results of PLS-SEM. *Eur. Bus. Rev.* **2019**, *31*, 2–24. [[CrossRef](#)]

48. Henseler, J.; Ringle, C.M.; Sarstedt, M. A New Criterion for Assessing Discriminant Validity in Variance-Based Structural Equation Modeling. *J. Acad. Mark. Sci.* **2015**, *43*, 115–135. [[CrossRef](#)]
49. Hair, J.F.; Astrachan, C.B.; Moisesescu, O.I.; Radomir, L.; Sarstedt, M.; Vaithilingam, S.; Ringle, C.M. Executing and Interpreting Applications of PLS-SEM: Updates for Family Business Researchers. *J. Fam. Bus. Strateg.* **2021**, *12*, 100392. [[CrossRef](#)]
50. Nitzl, C.; Roldan, J.L.; Cepeda, G. Mediation Analysis in Partial Least Squares Path Modeling: Helping Researchers Discuss More Sophisticated Models. *Ind. Manag. Data Syst.* **2016**, *116*, 1849–1864. [[CrossRef](#)]
51. Cepeda Carrión, G.; Nitzl, C.; Roldán, J.L. Mediation Analyses in Partial Least Squares Structural Equation Modeling: Guidelines and Empirical Examples. In *Partial Least Squares Path Modeling*; Latan, H., Noonan, R., Eds.; Springer International Publishing: Cham, Switzerland, 2017; pp. 173–195.
52. Gora, A.A.; Ştefan, S.C.; Popa, Ş.C.; Albu, C.F. Students' Perspective on Quality Assurance in Higher Education in the Context of Sustainability: A PLS-SEM Approach. *Sustainability* **2019**, *11*, 4793. [[CrossRef](#)]
53. Haolader, F.A.; Ali, M.R.; Foyso, K.M. The Taxonomy for Learning, Teaching and Assessing: Current Practices at Polytechnics in Bangladesh and Its Effects in Developing Students' Competences. *Int. J. Res. Vocat. Educ. Train.* **2015**, *2*, 99–118. [[CrossRef](#)]
54. Naz, K. *Effects of Teachers' Professional Competence on Students' Academic Achievements at Secondary School Level in Muzaffarabad District*; GRIN Verlag: Munich, Germany, 2017.
55. Prasertcharoensuk, T.; Somprach, K.; Ngang, T.K. Influence of Teacher Competency Factors and Students' Life Skills on Learning Achievement. *Procedia Soc. Behav. Sci.* **2015**, *186*, 566–572. [[CrossRef](#)]
56. Sultan, S.; Shafi, M. Impact of Perceived Teachers' Competence on Students' Performance: Evidence for Mediating/ Moderating Role of Class Environment. *I-Manag. J. Educ. Psychol.* **2014**, *8*, 10–18. [[CrossRef](#)]
57. Liu, Y.; Zhao, L.; Su, Y.-S. The Impact of Teacher Competence in Online Teaching on Perceived Online Learning Outcomes during the COVID-19 Outbreak: A Moderated-Mediation Model of Teacher Resilience and Age. *Int. J. Environ. Res. Public Health* **2022**, *19*, 6282. [[CrossRef](#)]
58. Anwer, F. Activity-Based Teaching, Student Motivation and Academic Achievement. *J. Educ. Educ. Dev.* **2019**, *6*, 154–170. [[CrossRef](#)]
59. Nguyen, T.L.; Nguyen, H.T.; Nguyen, N.H.; Nguyen, D.L.; Nguyen, T.T.D.; Le, D.L. Factors Affecting Students' Career Choice in Economics Majors in the COVID-19 Post-Pandemic Period: A Case Study of a Private University in Vietnam. *J. Innov. Knowl.* **2023**, *8*, 100338. [[CrossRef](#)]
60. Igrę, R.S.; Marinaş, C.V.; Olariu, A.A.; Roman, M. Internships, Skills and Employability: Mapping the Field through a Bibliometric Analysis. *Econ. Comput. Econ. Cybern. Stud. Res.* **2022**, *56*, 331–348. [[CrossRef](#)]
61. García-Álvarez, J.; Vázquez-Rodríguez, A.; Quiroga-Carrillo, A.; Priegue Caamaño, D. Transversal Competencies for Employability in University Graduates: A Systematic Review from the Employers' Perspective. *Educ. Sci.* **2022**, *12*, 204. [[CrossRef](#)]
62. Banciu, D.; Florea, M. Contributions to the Evaluation of E-Learning Processes in Higher Education. In *Challenges, Performances and Tendencies in Organisation Management*; Nicolescu, O., Lloyd-Reason, L., Eds.; World Scientific: Singapore, 2016; pp. 117–123. [[CrossRef](#)]

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