A Five-factor Structure of Soft and Hard Skills for Tourism Professionals: Analyzing the Paraná tourism industry

Uma Estrutura de Cinco Fatores de Competências e Habilidades para os Profissionais de Turismo: Analisando o setor turístico do Paraná

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ABSTRACT

This study analyzed the Paraná tourism industry's perception of the soft and hard skills required for the education of tourism professionals. The authors assessed the importance of 37 skills for tourism organizations in Paraná state. Subsequently, exploratory factor analysis resulted in a five-factor structure of skills. The results showed that the tourism industry perceived soft skills as the most important. Moreover, the hard skills factors followed a structure similar to the National Curricular Guidelines, not indicating significant changes in the curriculum. Considering the industry's inputs, educators could start developing essential skills in curricula design, improving the industry/academia relation.

Keywords: Tourism Education. Tourism Professionals. Soft Skills. Hard Skills. Paraná.

RESUMO

Este estudo analisou a percepção do setor turístico paranaense sobre as competências pessoais e as habilidades técnicas necessárias para a formação de profissionais de turismo. Os autores avaliaram a importância de 37 competências e habilidades para as organizações de turismo no estado do Paraná. Posteriormente, a análise fatorial exploratória resultou em uma estrutura de cinco fatores de competências e habilidades. Os resultados mostraram que o setor de turismo percebeu as competências pessoais como as mais importantes. Além disso, os fatores relacionados a habilidades técnicas seguiram uma estrutura semelhante às Diretrizes Curriculares Nacionais dos Cursos de Turismo, não indicando diferenças significativas. Considerando as contribuições do setor, os educadores poderiam começar incluir o desenvolvimento de competências pessoais na elaboração dos currículos, melhorando a relação entre o setor e a academia.

Palavras-chave: Educação em Turismo. Profissionais do Turismo. Competências Pessoais. Habilidades técnicas. Paraná.

1. INTRODUCTION

The tourism industry contributed to 10.3% of the global GDP and created 300 million (1 in 10) jobs around the world in 2019. It also accounted for 7.7% of Brazil's economy and over seven million job positions, representing 7.9% of total employment (World Travel & Tourism Council, 2020). However, since March 11, 2020, the COVID-19 pandemic turned this scenario upside-down. The crisis was deep for tourism since 100% of countries introduced travel restrictions, and 27% of all destinations worldwide chose to keep their borders completely closed to international tourists. The loss of more than 1 billion international arrivals in 2020 (-

74%) represented a decrease of approximately 1.3 trillion dollars in export revenue (World Tourism Organization [UNWTO], 2021).

The impact on the tourism phenomenon (i.e., travel restrictions and social isolation measures) extended to the industry and, consequently, to the labor market. Globally, 100-120 million direct tourism jobs were at risk (UNWTO, 2021), while in Brazil, the tourism industry laid off 384,000 workers by August 2020. This number corresponded to 45% of the total number of jobs closed in the country (Santos, 2020a). Among the main occupations, Santos (2020b) demonstrated that food and beverage was the most affected activity, followed by lodging, land transport, and travel agencies.

In the current scenario, the sector is recovering worldwide. In 2024, for example, Brazil broke the record for international tourist arrivals, welcoming over 6.7 million visitors (Marques, 2025) who injected US$7.341 billion into the country's economy, the highest amount since 2009 (Máximo, 2025). Nevertheless, the impact of COVID-19 still reverberates (Asia Pacific Insights, 2024) as other pandemics may be inevitable to predict. Therefore, discussions about tourism employability can help overcome future crises.

Even though tourism jobs are not a novel academic research topic, society's constant changes have been pressuring the industry's performance. Employability issues have emerged in different ways over the last decades (Paixão, 2020). Employability as a circular concept can analyze the employee's or the employer's views, in addition to what the industry needs versus what academia offers (Nakatani *et al*., 2019). Employability, from the employer's view, relates to the industry's desires (Tsai, 2017; Marneros *et al*., 2020). However, some studies also consider that the employee is responsible for his/her employability (Helal & Rocha, 2011). Overall, the industry highlights operational and strategic skills, whereas universities focus on students' self-improvement (Gardini, 2018).

The skilled workforce demanded by the industry is intrinsically linked with tourism education and training (Airey, 2005; Airey, 2008). Graduates' path from tourism degrees into a rapidly changing industry reinforces the need for connections between the employers' skills requirements and universities' curricula development (Sisson & Adams, 2013). Moreover, studies already indicated a gap between tourism curricula and the industry's needs even before the pandemic (Griffin, 2020; Marneros et al., 2020; Matriano et al., 2018; Panosso Netto et al., 2017; Silveira et al., 2012; Tsai, 2017). Therefore, considering the COVID-19 impact on the

tourism industry, this study aimed to analyze the industry's perception of the soft and hard skills required for the education of tourism professionals.

Knowledge, skills, and attitudes (KSAs) are popular subjects in tourism and hospitality research (Marneros et al., 2020) and include the viewpoint of industry experts, recent graduates, and educators (Sisson & Adams, 2013). Besides these perspectives, this study also presented discussions within the Brazilian context. Research on soft and hard skills for the Brazilian tourism industry still needs greater attention from scholars as few studies identify these skills (Bittencourt, 2023; Corrêa & Teixeira, 2014; Paula et al., 2017; Santos & Santos, 2018). Therefore, if academia seeks a closer relationship with the industry, skills should have their "roots in the mindsets of professionals working in the industry" (Marneros *et al*., 2020, p. 2).

This study adopted a quantitative approach. The authors employed a structured online survey targeting managers and employees of the tourism industry in Paraná, a state in southern Brazil. The survey involved a sample of 319 respondents. Posteriorly, the exploratory factor analysis tested three hypothesized interrelationships of the theoretical constructs (Griffin, 2020; Marneros et al., 2020; Resolução nº 13, 2006; Sisson & Adams, 2013; Tsai, 2017), which are listed below:

(1) The industry perceives soft skills as more important than hard skills for the education of tourism professionals.
(2) The hard skills evaluation shows a statistical difference between respondents with and without a tourism degree (completed or in progress).
(3) The skills evaluation shows a statistical difference depending on the respondents' work area.

The subsequent section presents the literature review on the industry-academia relationship, and the industry's soft and hard skills. Then, the methodology section explains the quantitative data collection and analysis. The article continues by presenting the results of the survey, and a discussion. Finally, the authors draw conclusions and recommendations for future studies, as well as the implications of this study.

2. THE INDUSTRY-ACADEMIA RELATIONSHIP

The creation of a close relationship between the tourism industry and academia has its roots in the first higher education degrees designed in the 1960s (Airey, 2005). Tourism education began in technical/vocational schools in Europe, emphasizing hospitality, hotel management, and business training. Education continued to grow at universities as the public and private sectors demanded a more skilled workforce (Matriano *et al*., 2018). Thus, one of the goals of tourism programs was, and still is, to enable high-caliber students to pursue future careers in the industry (Marneros *et al*., 2020; Matriano *et al*., 2018). The ongoing evolution of academic degrees also broadened what it meant to study tourism (Airey, 2008), and curricula incorporated more philosophical and liberal axes (Tribe, 2002). However, tourism knowledge creation should be realistic and have real connotations (Croy & Hall, 2003), becoming extra-disciplinary as the industry, governments, interest groups, and consultancies also produce knowledge (Tribe & Liburd, 2016).

In Brazil, the public sector shaped the development of tourism undergraduate programs. According to Ansarah (2002), in 1978, Embratur reunited with the existing degrees to discuss curricular topics. From this seminar, two educational axes emerged: one focused on the industry, led by Anhembi Morumbi University, and another more philosophical focused on epistemology, research, and tourism planning, led by the University of São Paulo. As Silveira et al. (2012) stated, this meeting was a milestone, and its effects still perpetuate to this day as industry-driven universities, especially private ones, turned their degrees into vocational, and public universities maintained their bachelor's degrees academically oriented.

However, there has been a decline in the number of degrees throughout the country since 2008, mainly in private institutions (Moscardi et al., 2020). Nowadays, Brazil's tourism higher education concentrates on public universities, which remain far from the industry (Silveira et al., 2012). According to Panosso Netto *et al*. (2017), tourism scholars focus on studying problems of academic interest without industry applicability. Not surprisingly, teaching is one of the leading tourismologist careers, indicating that graduates possibly return to academia without practical experience. Those authors also suggest that the faculty's concern is to consolidate their research areas, conducting their careers to become irreplaceable specialists. Thus, an interchange with the industry and other stakeholders remains retracted, while professors' dialogue is limited to a closed circle of peers.

One answer to the industry-academia gap may lie in the curriculum. The industry's knowledge can lead universities to integrate practical experience components to their programs (Croy & Hall, 2003) since academia and industry's interdependency typically result in employable students (Matriano et al., 2018). Beyond these components, educators must involve industry professionals in the curricula design or revision so that the programs do not fail to meet even the industry's fundamental needs (Marneros *et al*., 2020). Griffin (2020), for example, suggests that industry leaders should participate in the program evaluation because faculty should not only communicate with their peers but rather with the whole industry. In turn, Dewantara *et al*. (2025, p. 11) found that "incorporating interviews with industry professionals into the curriculum […] enriches T&H education by transcending traditional classroom boundaries".

3. INDUSTRY EMPLOTABILITY AND SOFT AND HARD SKILLS

The employability concept has evolved over the 20th and 21st centuries to indicate the condition of being employable, succeed in the career and generate work and income through qualities needed and desired by the industry (Nakatani *et al*., 2019; Paixão, 2020). To be employable means that the professional is ready to face work conditions and adapt to new labor forms (e.g., telework), having the right to study to achieve a better quality of life (Paixão, 2020). The employability component relates to internal and external factors, such as skills, the moment to seek opportunities, information access, support networks, the quality of training and education, and the supply of jobs in the region (Dhaliwal & Misra, 2020).

However, economic and unemployment cycles result in professionals asking themselves what makes them employable (Paixão, 2020). Therefore, KSAs become essential aspects of the professional's success and flexibility in crisis periods (Silveira, Medaglia, *et al*., 2020). Even though competencies and skills are terms used synonymously, competencies may comprise a range of skills that affect performance to achieve professional goals (Paixão, 2020). Consequently, skills are the ability to think critically, apply knowledge, and perform tasks (Paixão, 2020). The literature usually divides them into soft skills and hard skills (Paixão, 2020; Sisson & Adams, 2013; Vicentim, 2020).

Soft skills relate to behavioral, emotional, and personal activities (e.g., interpersonal skills, communication, ethics, and leadership), and their application differentiates human

learning from machine learning (Vicentim, 2020). According to Paixão (2020), these skills are durable because they develop realistic and satisfying career alternatives in the long term. Undoubtedly, they have gained prominence in the professional environment in the last decades (Paixão, 2020). Several studies indicate the soft domain as the most adequate for the tourism industry (Griffin, 2020; Marneros *et al*., 2020; Sisson & Adams, 2013; Tsai, 2017) and the future of work (WGSN & LinkedIn, 2018). Some companies even give preference to these skills when announcing vacancies (Silveira, Medaglia, *et al*., 2020). From the graduates' perspective, the development of soft skills during their studies provided them with solid career anchors (McKercher *et al*., 2023).

For lodging, food and beverage, and events managers, Sisson and Adams (2013) identified that from 14 essential skills, 11 were soft. The two most essential soft skills were developing positive customer relations and working effectively with peers, which can easily incorporate hospitality curricula. Notably, little difference existed between the skills demanded in the three functional work areas analyzed, indicating that students do not need to develop them separately. Tsai (2017) demonstrated that managers view generic skills (e.g., communication and teamwork) and professional attitudes (e.g., dedication to work) as considerably more essential employability criteria for travel agencies. Moreover, Marneros et al. (2020) identified three skills that are essential for professionals but underdeveloped in hospitality graduates: defining quality standards for employees and motivating employees (human resource management) and supervising others' work (leadership). By integrating industry interviews into the assessment process of tourism postgraduate courses, Dewantara et al. (2025) observed that this method facilitated the development of soft skills (communication, critical thinking, and problem-solving) by students.

Even with the prominence of soft skills, tourism degrees cannot neglect hard skills. These are the technical, operational, and management skills required for a specific occupation (Paixão, 2020). For example, operational knowledge appeared to Marneros *et al*. (2020) as the second most important competency dimension. The authors explained that these skills provide customers with top-quality services, and they are the foundation for developing innovative ways of work. However, hard skills can be transitional or renewable as they change according to the social, technological, and economic context (Paixão, 2020). Multiple papers showed that

information technology and crisis management are crucial skills nowadays (Silveira, Medaglia, et al., 2020; Sisson & Adams; 2013; Tsai, 2017).

Faculty usually develop curricula focusing on hard skills (Wilks & Hemsworth, 2011). Though, academics and practitioners have different opinions on curricular content. For Wang et al. (2010) faculty places a high value on research skills and considers employment skills areas to be the least important. On the other hand, the tourism industry highlights events management, risk crisis, and disaster management. In sum, Dhaliwal and Misra (2020) identified the most repeated skills in tourism and hospitality literature rated essentials for industry recruiters. Leadership and communication are the first ones, followed by problem-solving skills, interpersonal skills, oral and written communication, personality development, teamwork, positive attitude, customer service, professional and ethical standards, personnel management, time management, decision-making, and information technology.

In the Brazilian literature, studies did not compare the hard and soft dimensions. The work of Paula et al. (2017), for example, observed that the labor market assigns low scores to tourism planning skills, which are the focus of many tourism programs (Silveira, Medaglia, & Nakatani, 2020). Côrrea and Teixeira (2014) identified computing, languages, sales/marketing, sympathy, and good relationship as the primary skills for hotels and travel agencies. Furthermore, Santos and Santos (2018) found that tourism technical qualification does not significantly surpass sales skills, such as communication and customer service. Therefore, managers have a greater amplitude in hiring employees without a tourism degree, which is not favorable to Brazilian tourism education.

More recently, Bittencout (2023) analyzed the key KSAs expected of tourism graduates in Brazil. According to the author, the most prominent skills for professionals are socio-emotional ones, which shape how individuals interact with others (e.g., clients) in their daily routines, once again highlighting the importance of soft skills. In terms of competencies, the study showed that tourism professionals should possess strong management and planning skills for projects, public and private organizations, and future crisis.

Finally, studies have pointed out the impact of COVID-19 in tourism education. The moment university enrollments start to drop, tourism degrees may have a chance to rethink their curricula and drive a better form of higher education (Edelheim, 2020). According to Tiwari et al. (2021), this new period must reinforce some skills, such as creativity, innovation, digital

knowledge, vocational skills, crisis management, business resilience, and safety and health measures. With these skills added to curricula, tourism students might help solve the post-COVID-19 challenges. For Pinto et al. (2025), the recovery period should reinforce cross-curricular skills that are important across all disciplines, such as technology, entrepreneurship, and sustainability, while problem-solving skills represent a strength for the professional of the future. In sum, educators who design curricula must acknowledge the tourism industry's new configuration, and governments should financially support research projects to facilitate tourism education's resumption (Tiwari *et al*., 2021).

4. RESEARCH METHOD

This quantitative study presented two stages to achieve the proposed objective: the planning and operational stages (Gray, 2012), which are described below. The Ethics Committee from the authors' university approved this research on June 24, 2020.

4.1 Plannig Stage

The authors searched international and Brazilian databases for studies on the tourism labor market, its relation to higher education, and soft and hard skills. The authors also reviewed documents, reports, and statistics that provided updated data on job losses caused by the pandemic crisis. As for the bibliographic and documentary data analysis (November 1st, 2020, to November 16, 2020), the authors read papers, books, and reports, annotated the materials' information, summarized, and grouped the most relevant information, which allowed the definition of the study's main goal and hypotheses. Finally, these data enabled the writing of the literature review (February 24, 2021, to March 20, 2021).

4.2 Operation Stage

The operational stage comprised the development, application, and analysis of the skills questionnaire created from the planning stage. The authors combined five sources of references that discuss skills, encompassing several skills for the tourism industry and the labor market in general, as well as Brazilian and international perceptions. Three were tourism-specific: the

Brazilian National Curricular Guidelines for Tourism Degrees (Resolução nº 13, 2006), Sisson and Adams's (2013) definition of skills for lodging, food and beverage, and events managers, and the skills in Tsai's (2017) research with travel agencies. Additionally, some skills discussed within the authors' research group (TEEM - Tourism, Education, Employability and Market) and the Future of Work report from WGSN - a world authority on trend forecasting - and LinkedIn (2018) were included.

Table 1
Soft and hard skills

Soft Skills		Hard Skills	
1	Different forms of communities' manifestation	1	Arts, culture, and heritage
2	Experience new challenges	2	Computing and technological resources
3	Know how to adapt to changes	3	Crisis Management
4	Know how to communicate orally and in writing	4	Develop municipal and state tourism plans
5	Know how to create and innovate	5	Develop tourist inventories
6	Know how to highlight your skills	6	Different tourism markets
7	Know how to lead	7	Financial analysis and management
8	Know how to manage your emotions	8	Geography
9	Know how to solve problems and conflicts	9	Human Resources
10	Know how to work with other people	10	Know how to apply the relevant legislation
11	Obtain new knowledge throughout life	11	Know how to classify tourist services providers
12	To relate positively with the tourist/consumer	12	Languages
13	Understand the complexity of the globalized world	13	Marketing
14	Work ethically	14	Plan tourist activities through projects, plans, and programs
		15	Planning and development of tourism companies
		16	Planning, operation, and execution of tour packages
		17	Sales techniques
		18	Social Sciences (Anthropology, Sociology, Philosophy, and History)
		19	Statistics and Data Analysis
		20	Tourist Information Systems (GDS)
		21	Tourist products reservation
		22	Understand tourism national and regional policies
		23	Workplace Safety

Source. The authors (2022) based on Resolução nº 13 (2006), Sisson and Adams (2013), Tsai (2017), WGSN and Linkedin (2018), and the authors' research group (2020).

These sources helped define the first list of 103 tourism industry essential skills. After eliminating the overlapping skills (i.e., the same skill written alike or the same meaning written differently), 60 skills set the test questionnaire. Eleven tourism professionals in São Paulo evaluated the questionnaire's applicability, response time, and skills clarity (November 10,

2020, to November 18, 2020). After their feedback, the list was down to 37 skills divided into soft and hard skills according to the original sources, as shown in Table 1.

The final questionnaire presented the list of 37 skills for the respondents to evaluate on a 6-point Likert scale, being 1 - of little importance and 6 - essential. The skills were all mixed up, so two non-relevant skills (civil construction and fly a plane) were added to confirm whether the respondents were reading the skills list or not. The final questions were about demographic information, such as respondents' educational level, if they studied tourism, their work area, and their organization's location.

The authors sent the questionnaire to managers or employees from 3,056 public and private organizations of the State of Paraná (CEPATUR, 2016). These tourism organizations are officially registered with the Brazilian Ministry of Tourism (Ministério do Turismo, 2020). The researchers sent three rounds of e-mails (November 26, 2020, December 14, 2020, and January 25, 2021) and posted the questionnaire on social media. A convenience sampling of 369 questionnaires was selected on account of the responses received.

However, the final sample comprised 319 observations (5.19% margin of error) due to: i) invalid answers (four respondents who did not work in tourism organizations - e.g., professor, accountant, and individual tour guides); ii) respondents who scored 4, 5, or 6 in both non-relevant skills (12 respondents); and iii) outliers - identified using the Mahalanobis distance (D2) (34 respondents). These outliers were also excluded from the sample to give the data a tendency towards normality – even though all variables had non-normal distribution according to the Kolmogorov-Smirnov normality test ($p<0.05$).

Besides group comparisons found in the literature, the authors used exploratory factor analysis (EFA) to identify how data observations would reflect the theoretical constructs upon which the questionnaire was built. This study used IBM SPSS Statistics 22 for all statistical analyses. According to Costello and Osborne (2005), strict rules regarding sample size for EFA have mostly disappeared and depend on the strength of the data. In their study, 22.7% of the literature reviewed applied EFA using a sample size between 5:1 and 10:1 subject-to-item ratio, and 40.5% used a ratio smaller than 5:1. The present study had an 8,62:1 ratio.

The extraction method was principal components analysis since EFA mainly reduced the variables before group comparisons, and there were no previous solid theoretical assumptions regarding the factors (Hair Jr. et al., 2019). The authors applied oblique rotation

(direct Oblimin) rather than orthogonal because of the expected correlation between factors (i.e., theoretical constructs), which is a more realistic expectation (Hair Jr. et al., 2019), and generally used in social sciences (Costello & Osborne, 2005). As suggested by Costello and Osborne (2005), all coefficients below 0.32 were suppressed, and all items with factor loadings smaller than 0.5 and cross-loadings were removed one at a time from the factors.

Therefore, a combination of criteria determined the final number of factors retained in the analysis. Firstly, the authors considered eigenvalues higher than 1, followed by the observation of the scree test plot (Costello & Osborne, 2005; Hair Jr. *et al*., 2019). Secondly, the total variance explained had a minimum cumulative percentage of 50%, and the factors needed to fit the literature reviewed. After several rounds of eliminating items with low factor loadings (>0.5) and cross-loadings, five factors with 31 variables achieved a 59% total variance explanation. Thirdly, Cronbach's alpha tested each factor for internal consistency, with a minimum accepted value of 0.7 (Costello & Osborne, 2005). The mean of all variables in each factor was used to represent multiple aspects of a concept in a single measure (Hair Jr. et al., 2019). These composite measures were used to compare the skills' importance between groups and test the study's hypotheses. Finally, the authors chose the Mann-Whitney test, given the data's non-normality, to compare pairs of independent groups in three categories: i) respondents from Curitiba (Paraná's capital) and those in other cities; ii) respondents with a tourism degree (completed or in progress) and those who have never studied tourism; iii) respondents who worked in the tourism "hard nucleus" (travel agencies, lodging, and air transport) and those in other areas (events, food and beverage, public sector, and land transport). These comparisons considered the factors' composite measures, as shown in the results.

5. RESULTS

Table 2 presents the respondents' profile information.

Table 2
Respondents' profile information

Level of education	
Higher education degree	284
High school degree or other	35
Tourism degree (Completed or in progress)	
No	210
Yes	109

Work area	
Travel agency	131
Lodging	41
Land transport	39
Events	27
Public sector	20
Food and beverage	17
Other	44
Location	
Curitiba (Paraná's capital)	141
Other cities in Paraná	178

Source. The authors (2022).

For the EFA, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.905, and Bartlett's test of sphericity was significant at the level of p=0.00. According to Hair Jr. et al. (2019), these values should be p<0.05 and KMO>0.5. Except for two variables, all items presented communalities above 0.5, and there were no communalities below 0.41. Table 3 shows the variables' means and the five-factor structure.

Table 3
A Five-factor Structure of Soft an Hard Skills for Tourism Professionals

Total variance explained - Total % 59.048	Mean	Factor loading
1. Soft Skills (Cronbach's α = 0.900, variance explained: 33.471%)	**5.643**	
Know how to adapt to changes	5.740	.856
Know how to manage your emotions	5.608	.773
To relate positively with the tourist/consumer	5.784	.750
Know how to work with other people	5.759	.745
Obtain new knowledge throughout life	5.724	.723
Work ethically	5.912	.669
Know how to communicate orally and in writing	5.633	.663
Know how to solve problems and conflicts	5.382	.655
Know how to highlight your skills	5.361	.557
Know how to create and innovate	5.536	.529
2. Tourism Public Sector (Cronbach's α = 0.853, variance explained: 9.228%)	**5.100**	
Develop municipal and state tourism plans	4.602	.766
Develop tourist inventories	4.721	.744
Plan tourist activities through projects, plans, and programs	5.238	.684
Know how to classify tourist services providers	5.166	.639
Know how to apply the relevant legislation	5.442	.615
Understand tourism national and regional policies	5.436	.579
3. Applied Knowledge (Cronbach's α = 0.831, variance explained: 6.962%)	**4.585**	
Human Resources	4.207	.744
Statistics and Data Analysis	4.100	.703
Marketing	5.088	.669
Financial analysis and management	4.511	.631
Computing and technological resources	4.953	.605
Crisis Management	4.834	.600
Workplace Safety	4.404	.600
4. General Knowledge (Cronbach's α = 0.716, variance explained: 5.012%)	**4.938**	

Social Sciences (Anthropology, Sociology, Philosophy, and History)	4.414	.803
Arts, culture, and heritage	5.053	.723
Languages	5.182	.561
Geography	5.103	.549
5. Tourism Private Sector (Cronbach's α = 0.791, variance explained: 4.375%)	**5.072**	
Tourist products reservation	5.103	-.791
Sales techniques	5.000	-.639
Planning, operation, and execution of tour packages	5.223	-.638
Tourist Information Systems (GDS)	4.966	-.631

Source. The authors (2022).
Notes. a) Rotation converged in nine iterations; b) Extraction Method: Principal Component Analysis; c) Rotation Method: Oblimin with Kaiser Normalization.

All of the Cronbach's alpha values were higher than 0.7, indicating strong factor structures. The Cronbach's alpha for the first factor (Soft Skills) was higher because of its positive correlation to the number of variables (Hair Jr. *et al*., 2019), whereas one of the factors with the fewest variables (General Knowledge) had the lowest value (0.716). Furthermore, the respondents perceived Soft Skills as the most important factor (i.e., with the highest mean of 5.643), thus confirming the first hypothesis of this study: soft skills are more important than hard skills to the industry.

Concerning the rotation method for this analysis, Table 4 presents the correlation between factors from the oblique rotation.

Table 4
Component Correlation Matrix

Component	1. Soft Skills	2. Public	3. Applied	4. General	5. Private
1. Soft Skills	1.000				
2. Public	.214	1.000			
3. Applied	.379	.204	1.000		
4. General	.220	.189	.288	1.000	
5. Private	-.447	-.129	-.311	-.213	1.000

Source. The authors (2022).

The results do not show large effect correlations (>0.5) between factors. However, there are correlations of medium effect (>0.3) between factors 1 and 3, 1 and 5, and 3 and 5 (Field, 2018). Additionally, all correlations of the factor "Tourism Private Sector" (TPrS) were negative, including the strongest of all correlations in the structure between TPrS and Soft Skills (-.447). This correlation suggests that the perceived importance of TPrS grew as the perceived importance of the other skills decreased (i.e., the more importance respondents attributed to Soft Skills, the less they did to TPrS, and vice-versa).

Regarding group comparisons, a statistically significant difference (p=0.028) between groups appeared in respondents' perception of Tourism Public Sector (TPuS) skills, with medians of 5.166 and 5.333 for those living in Curitiba and other cities, respectively. The same factor (TPuS) yielded a statistically significant result (p=0.001) when comparing groups of respondents according to their work areas, with the identical medians of 5.166 and 5.333 respectively attributed to these skills by those working in the "hard nucleus" (travel agencies, lodging, and air transport) and those working in events, food and beverage, public sector, and land transport. Therefore, the third hypothesis was confirmed since the skills evaluation, depending on the respondents' work area, presented a statistical difference in one factor.

Respondents with a tourism degree (completed or in progress) and those who have never studied tourism showed significant differences in their perception of Applied Knowledge (p=0.004) and General Knowledge (p=0.007). Those without a tourism degree attributed lower medians of importance in both factors: 4.571 and 5.000 for Applied Knowledge and General Knowledge, respectively. Respondents who hold or are pursuing a degree in tourism attributed the medians 4.857 and 5.250 to these same skill sets.

The comparison of the tourism degree corresponded to this study's second hypothesis. However, the EFA showed that hard skills do not comprise only one factor or group of variables. Instead, these skills formed four different groups: TPuS, TPrS, Applied Knowledge, and General Knowledge. Therefore, the second hypothesis can be partially confirmed because the comparison of groups based on tourism higher education studies showed that respondents attributed different levels of importance to Applied and General Knowledge. The following section further discusses these hypotheses and the overall results of the study.

6. DISCUSSION

Soft skills stood out once again as the most essential for the tourism industry. According to Table 3, the soft skills' highlights are: work ethically (M=5.912), relate positively with the tourist/consumer (M=5.784), know how to work with other people (M=5.759), know how to adapt to changes (M=5.740), and obtain new knowledge throughout life (M=5.724). These skills are in line with the other studies described in the literature review. For example, positive customer relations ranked essential for the hospitality industry (Sisson & Adams, 2013), teamwork was valuable for travel agencies (Tsai, 2017), and Dhaliwal and Misra (2020)

demonstrated that ethical standard is an ordinary skill for industry recruiters. In a broader national perspective, Bittencourt (2023) also demonstrated that relating positively to coworkers and clients was one of the most prominent skills in her research. However, the Brazilian National Curricular Guidelines fail to incorporate these skills in curricula design. While the guidelines do not clearly distinguish soft skills from hard skills, they still concentrate on the disciplinary content required for the tourismologist occupation (i.e., hard skills). Considering inputs from the industry, educators should start developing soft skills in the curriculum.

When observing the hard skills (i.e., TPuS, TPrS, Applied Knowledge, and General Knowledge), the authors noticed that the EFA followed a set of contents similar to the national guidelines. Brazilian programs' curricular organization must include basic content related to societies and cultures (equivalent to the General Knowledge factor) and specific content related to tourism public and private management (equivalent to Applied Knowledge, TPuS, and TPrS factors). Moreover, Tourism Public Sector ranked as the second factor with the highest mean (M=5.100). Extrapolating beyond the context of Paraná, Bittencourt (2023) also found that skills related to public planning (e.g., understanding tourism policies, destination management, etc.) ranked high among Brazilian respondents.

It is relevant to recall that the public sector significantly shaped the tourism industry (Silveira *et al*., 2012) and, consequently, tourism undergraduate degrees (Ansarah, 2002). Public organizations also became one of the leading employers in Brazil (Silveira, Medaglia, & Nakatani, 2020). Therefore, as the tourism industry considers the TPuS hard skills as essential, it also indicates the legitimacy of the National Curricular Guidelines' structure. This configuration came to the authors as a surprise. Since most of the respondents were from the private sector, the expectation was that hard skills would better reflect the companies' needs, bringing some change to the programs' curricula. However, except for soft skills, both the current educational structure and the labor market understand the education of tourism professionals the same way. Thus, the industry also has its share of responsibility in the degrees' decline (Moscardi *et al*., 2020). The labor market struggles to absorb tourismologists, but it also does not indicate a path of change. Again, it becomes necessary to strengthen the industry/academia relation to discuss hard skills in depth.

Concerning group comparisons, a possible explanation for the higher median (Mds=5.333) in the TPuS factor by respondents outside the capital could be Paraná's strong

decentralization and regionalization structure (CEPATUR, 2016). Tourism organizations in smaller cities end up valuing public skills because they also depend more on regional public governance. In turn, the same statistical difference in the TPuS factor for the work area might have occurred because the group with the higher median had public sector respondents.

Nevertheless, there were no significant differences in the other composite measures, regardless of the area. This finding corroborates Sisson and Adams' (2013) study that identified a few skills' differences between functional work areas. Therefore, students do not need to learn a completely different set of skills for each type of employer. Additionally, respondents with a tourism degree (completed or in progress) might have attributed higher scores in General Knowledge (Mds=5.250) and Applied Knowledge (Mds=4.857) because these are theoretical contents taught in higher education. In contrast, the operational skills (TPuS and TPrS) do not present statistical differences because they are precisely the technical skills of everyday professional life.

The results also have implications for the post-pandemic scenario. Firstly, respondents rely on the soft domain for the post-COVID-19 recovery. Soft skills such as know how to adapt to changes, solve problems and conflicts, and create and innovate, could strengthen graduates' performance in the labor market during and after a pandemic since organizations need employees who are resilient to crises. Tiwari *et al*. (2021) and Pinto *et al*. (2025) also outlined the need for these skills to incorporate curricula. Furthermore, as demonstrated by the literature, information technology and crisis management are crucial skills nowadays (Bittencourt, 2023). Thus, some of this study's hard skills (e.g., crisis management, technological resources, data analysis) may provide adequate tools for the professional to solve the industry's challenges.

7. CONCLUSION

This study achieved its purpose by analyzing the Brazilian tourism industry's perception of the soft and hard skills required for the education of tourism professionals. The authors applied a questionnaire to tourism organizations in Paraná and analyzed the data using exploratory factor analysis. The EFA defined a five-factor structure (Soft Skills, TPuS, Applied Knowledge, General Knowledge, and TPrS) with 31 variables. These results answered the three hypotheses.

Hypothesis one was confirmed because soft skills were considered more important than hard skills. The Soft Skills factor obtained the highest mean among the composite measures. The second hypothesis was partially true because respondents with a tourism degree (completed or in progress) showed a higher median in only two (Applied Knowledge and General Knowledge) of the four hard skills factors. These two factors represent theoretical content taught in higher education, thus becoming more easily accessed by respondents who have attended tourism educational programs. Lastly, the third hypothesis was confirmed because there was a statistical difference in the TPuS factor between respondents working in the "hard nucleus" and other areas. However, the other composite measures did not show significant differences, possibly meaning that students do not need to learn a completely different set of skills for each type of employer.

Beyond the hypotheses, the results brought an unexpected consideration. The authors noticed that the hard skills factors followed a structure similar to the National Curricular Guidelines, and the TPuS factor ranked second with the highest mean. Even though most of the respondents were from the private sector, the industry legitimizes the national guidelines' focus on public management, not indicating significant changes in the curriculum – except for soft skills importance. Furthermore, the Brazilian National Curricular Guidelines fail to incorporate soft skills in curricula design, concentrating on the disciplinary content required for the tourismologist occupation.

Concerning this study's contributions, firstly, it brought a Brazilian perspective to the KSAs' literature since few studies identified soft and hard skills in the country. Secondly, the study considered the impact of COVID-19 on tourism employment. Tourism is a rapidly changing industry that is still recovering from the pandemic's effects. So, professionals need to adapt to changes and help solve the problems, thus reflecting the employers' required skills in tourism programs curricula. The post-pandemic scenario requires a joint and deep discussion about the skills that should incorporate Brazilian undergraduate tourism curricula, either locally at universities or on the national stage. Moreover, this study provided educators with a list of skills based on insights from the tourism industry.

To practically strengthen the industry-academia relationship, the authors suggest some actions that can be taken. First, undergraduate programs and industry stakeholders can use this list as a reference to collaboratively enhance tourism education and graduate employability.

Furthermore, the National Curricular Guidelines should be revised, particularly to incorporate soft skills. Educators can talk to industry representatives, through interviews (Dewantara *et al*., 2025) or during program evaluations (Griffin, 2020), to build the curriculum in partnership. Also, flexible and student-centered curricula, joint programs between universities and/or companies, and the involvement of business experts in the classroom to share real-life experiences (Pinto et al., 2025) can all contribute to fostering the development of the most relevant skills.

Finally, even though Paraná is a consolidated tourism region in Brazil, the results reflect the sample from this state, representing this research's limitation. Therefore, further research on soft and hard skills in the Brazilian context should expand the survey in other states or nationally, thus creating a knowledge-based foundation for educators to discuss curricula design and the national guidelines jointly with the tourism industry.

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