Future Time Perspective and Academic Satisfaction: Identification and Relationships in Higher Education

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ABSTRACT

Introduction: For the Future Time Perspective, the future goals stipulated by individuals have a conscious and voluntary effect on present behavior. At the university, these behaviors are manifested in parallel with academic satisfaction or dissatisfaction. **Objective**: Therefore, the objective of this research was to analyze the relationships between the Future Time Perspective and satisfaction with the academic experience. **Methodology**: 676 university students from different undergraduate courses at two institutions in southern Brazil participated. The ZPTI – Future Time Perspective Inventory and the QSEA – Satisfaction with Academic Experience Questionnaire were applied. **Results**: The results showed good internal structure indexes for the instruments. From the descriptive and correlational analyses, it was found that present-hedonistic and present-fatalistic oriented students tend not to be future-oriented. Those oriented by the future tense feel satisfied with their own learning and with their academic performance. However, students oriented by the negative past or the fatalistic present are more dissatisfied with their learning and performance. **Conclusion**: In view of the results, there is a need for higher education institutions and their professors to appropriate knowledge related to university students and the components of academic life so that there is greater satisfaction, as well as more concise perspectives for the future.

KEYWORDS

Higher education. University students. Cognitive psychology.

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Perspectiva de Tempo Futuro e Satisfação Acadêmica: Identificação e Relações no Ensino Superior

RESUMO

Introdução: Para a Perspectiva de Tempo Futuro, as metas futuras estipuladas pelos indivíduos têm efeito consciente e voluntário nos comportamentos do presente. Na universidade, estes comportamentos se manifestam paralelamente à satisfação ou insatisfação acadêmica. **Objetivo**: Sendo assim, o objetivo desta pesquisa foi analisar as relações entre a Perspectiva de Tempo Futuro e a satisfação com a experiência acadêmica. **Metodologia**: Participaram 676 universitários de diferentes cursos da graduação de duas instituições do Sul do Brasil. Aplicou-se o ZPTI – Inventário de Perspectiva de Tempo Futuro e o QSEA – Questionário de Satisfação com a Experiência Acadêmica. **Resultados**: Os resultados evidenciaram bons índices de estrutura interna para os instrumentos. A partir das análises descritivas e correlacionais, verificou-se que os estudantes orientados pelo presente-hedonista e presente-fatalista tendem a não ser orientados para o futuro. Já aqueles orientados pelo tempo futuro se sentem satisfeitos com sua própria aprendizagem e com seu rendimento acadêmico. Entretanto, estudantes orientados pelo passado negativo ou pelo presente fatalista são mais insatisfeitos com sua aprendizagem e seu rendimento. **Conclusão**: Diante dos resultados, verifica-se a necessidade das Instituições de ensino superior e seus docentes se apropriarem dos saberes relacionados aos universitários e aos componentes da vida acadêmica para que haja maior satisfação, bem como, perspectivas mais concisas de futuro.

PALAVRAS-CHAVE

Ensino superior. Estudantes universitários. Psicologia cognitiva.

Perspectiva de Tiempo Futuro y Satisfacción Académica: Identificación y Relaciones en la Educación Superior

RESUMEN

Introducción: Para la Perspectiva del Tiempo Futuro, las metas futuras estipuladas por los individuos tienen un efecto consciente y voluntario sobre el comportamiento presente. En la universidad, estos comportamientos se manifiestan en paralelo con la satisfacción o insatisfacción académica. **Objetivo**: Por lo tanto, el objetivo de esta investigación fue analizar las relaciones entre la Perspectiva del Tiempo Futuro y la satisfacción con la experiencia académica. **Metodología**: participaron 676 estudiantes universitarios de diferentes carreras de dos instituciones del sur de Brasil. Se aplicaron el ZPTI – Future Time Perspective Inventory y el QSEA – Cuestionario de Satisfacción con la Experiencia Académica. **Resultados**: Los resultados mostraron buenos índices de estructura interna para los instrumentos. A partir de los análisis descriptivos y correlacionales, se encontró que los estudiantes orientados al presente hedonista y al presente fatalista tienden a no estar orientados al futuro. Los orientados por el futuro se sienten satisfechos con su propio aprendizaje y con su rendimiento académico. Sin embargo, los estudiantes orientados por el pasado negativo o el presente fatalista están más insatisfechos con su aprendizaje y desempeño. **Conclusión**: Ante los resultados, existe la necesidad de que las instituciones de educación superior y sus profesores se apropien de los conocimientos relacionados con los estudiantes universitarios y los componentes de la vida académica para que haya mayor satisfacción, así como perspectivas más concisas para el futuro.

PALABRAS CLAVE

Educación superior. Estudiantes universitarios. Psicología cognitiva.

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Introduction

Since the end of the 20th century, there have been changes in Brazilian higher education. A more strategic way of outlining higher education in the country was implemented and began to have a more incisive and widespread impact on the country's economic, social and scientific development. From this perspective, the Temporal Perspective of University Students and Academic Satisfaction are justified as the focus of this research. Along with this importance, there are data that show the expansion of this level of education, providing better conditions of access, pointed out by Almeida *at al*. (2020) as a democratization movement that incorporated social spheres without access to the university until then. Therefore, the university context presents itself as a field of new research possibilities.

The basic construct of this study is the Future Time Perspective (FTP), a cognitivist epistemological theory that has been the focus of several international studies in recent decades (Lens, 1993; Husman *at al*., 2016; Nuttin, 2014; Simons *at al*. 2004). Zimbardo and Boyd (2014) state that in PTF, the present tense is an integration between the other tenses, past and future.

For Lens (1993), it consists of the perspective or mental representation in relation to something more or less distant, but it does not coincide with the real time shared by everyone. According to the author, it includes future personal needs that are linked to planning actions in the present. In order to investigate PTF, this study adopted the PTF model developed by Zimbardo and Boyd (2014). This is an approach that includes five temporal dimensions: Past-Negative, Past-Positive, Present-Hedonistic, Present-Fatalistic, and Time-Future.

In this context of relevance and challenges related to higher education, recent authors have highlighted the need to also study the construct of satisfaction with the academic experience (Almeida *at al*., 2020; Osti *at al*., 2020). According to Suehiro and Andrade (2018), academic experiences resulting from variables related to the institution, the course, interpersonal relationships and career prospects determine students' satisfaction with their university life.

Other authors have defined the construct as subjective well-being or not, or even a psychological state resulting from the confirmation or denial of the student's expectations with the reality they experience in the academic context (Almeida, *at al*, 2020; Suehiro; Andrade, 2018) which involves the perception, engagement and personal and professional fulfillment of students. Thus, it can influence the quality of the student experience in terms of intensity and frequency (Almeida, *at al*, 2020).

As a guiding hypothesis, it was considered that PTF could be related to the academic satisfaction of university students in the current context. In view of the above, the aim of this research was to analyze the relationship between Future Time Perspective and satisfaction with the academic experience. To this end, a descriptive study was carried out, using survey and correlational designs, as well as psychometric procedures for validating psychoeducational measures. The key constructs of this study will be presented below, as well as the methodology,

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the results and discussions and the final considerations about the psychoeducational implications.

Future Perspectives and Academic Satisfaction in Higher Education

The search for admission to higher education courses has grown significantly in recent decades in Brazil, as it has come to be considered necessary in the lives of individuals as a means for development and also indispensable for the country's growth (SANTOS *at al*, 2013). According to Vargas and Heringer (2017), there has never been so much individual investment in education and the search for a more highly educated society as there is today.

According to census data on higher education, at the end of the 1990s, Brazil had just over 1,000 HEIs and approximately 2.3 million students enrolled. By 2005, there were a total of 2,165 institutions, 89.3% of which were private (IBGE, 2016). Ten years later, in 2015, there were 2,364 HEIs, of which 2,069 were private, and more than 8.2 million students, an increase of approximately 73% compared to 2005 (IBGE, 2016).

The changes that resulted in this expansion took place mainly since 2003 with public policies for this level (De Barros Torres; Almeida, 2021; OSTI, *at al*, 2020). The increased supply of places, the greater number of scholarships for private institutions and the advances in the permanence policies of the Federal Higher Education Institutions (IFES) are pointed out by Heringer and Paiva (2010), Vargas and Heringer (2017) as justifications for expansion and democratization. Another factor concerns the forms of admission, such as the University for All Program - Prouni, from 2004, and the Unified Selection System - Sisu, created in 2009.

Building on the concept developed by Lewin, Zimbardo and Boyd (2014) argued that events that have already occurred or are yet to occur influence current behavior to the extent that they are real in current cognitive thinking. This is an unconscious process in which continuous streams of personal and social experiences are assigned to temporal categories or time frames that help the individual assign coherence and meaning to these events. The authors developed their own conceptual model for thinking about time perspective, which includes five temporal perspectives: Past-Positive, Past-Negative, Present-Hedonistic, Present-Fatalistic, and Future Time.

For Zimbardo and Boyd (2014), the Past-Negative dimension reflects a negative and pessimistic view of the past, which can even be aversive. It can be characterized as traumatic consequences or the negative reconstruction of past events, or both, whereas Past-Positive is characterized by contentment and a positive view of situations already experienced. The Present-Fatalistic dimension is characterized by a predominantly unprepared and hopeless attitude toward future life, and there is no perception that present attitudes have future consequences. They are usually immediate and believe they are in control.

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The Present-Hedonistic dimension is characterized by people who live for the moment, even taking risks and engaging in hedonistic behaviors in pursuit of pleasure. Finally, the Time-Future dimension is defined by a belief in future goals and rewards and is therefore associated with a focus on the future and the consequences of present behaviors. Subjects who are guided by this dimension believe that their current behaviors increase the likelihood that a future goal will be achieved, resulting in a value of the goals.

The other construct addressed in this study is academic satisfaction. It can be concluded that this is a multidimensional construct, as it includes personal, institutional, professional, academic, interpersonal and personal variables (Casanova *at al*, 2021; De Barros Torres; Almeida, 2021). According to Osti *at al*. (2020), the institutional dimension assesses the quantity and quality of the university's equipment, as well as the structures offered to students, both in terms of staff service and classroom furniture, for example. The professional dimension refers to students' expectations about the job market and their careers after graduation. The interpersonal dimension consists of relationships with classmates, course mates and/or other ties established at the institution.

Another dimension is Economic Resources, which deals with student spending during the academic period, whether on materials, food or even parties and out-of-class activities related to academic life. Finally, the sixth dimension is Teaching, which consists of the student's perception of the pedagogical quality of their teachers, such as the way they teach and the materials (OSTI *at al*, 2020). According to Campira *at al* (2021), investigating academic satisfaction provides ways to identify and reflect on relevant aspects of academic life. That said, the aim of this study was to analyze the relationships and differences between Future Time Perspective and satisfaction with the academic experience.

Methodology

The sample consisted of 676 university students from two institutions in the city of Londrina (Paraná), one public (31.1%, *n*=210) and one private (68.9%, *n*=466). The mean age was 24.64 years, with a minimum of 18 and a maximum of 61 years. Females accounted for 76.9% (*n*=520) and males for 23.1% (*n*=156). Participants came from the following fields: administration, systems analysis and development, biomedicine, accountancy, law, nursing, civil engineering, nutrition, education, psychology, and dentistry. In total, there were *n*=210 students from the public university and *n*=466 from the private university. In both institutions, students are enrolled in different semesters of the course, so the sample ranges from beginners to graduates, with 17.6% from the 1st semester, 16.7% from the 2nd, 7.2% from the 3rd, 3.4% from the 4th, 17.8% from the 5th, 9% from the 6th, 22.8% from the 7th, 3.1% from the 8th and 2.4% from the 9th semester.

Two instruments were used, the ZTPI - Time Perspective Inventory by Zimbardo and Body (2014) and the QSEA - Satisfaction with Academic Experience Questionnaire by Osti and

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Almeida (2019). The ZTPI consists of 56 questions on a 5-point Likert scale: (1) very untrue, (2) somewhat untrue, (3) neutral, (4) somewhat true, and (5) very true, with Zimbardo and Boyd's (2014) five dimensions: past-negative, past-positive, present-hedonistic, future-time, past-negative, and present-fatalistic. Osti and Almeida's (2019) QSEA had 34 questions, also on a 5-point Likert scale: (1) very dissatisfied, (2) dissatisfied, (3) neither dissatisfied nor satisfied, (4) satisfied, and (5) very satisfied, which included the six satisfaction dimensions: Institutional, Professional, Interpersonal, Economic Resources, Learning and Performance, and Teaching.

Data collection was carried out by one of the authors and lasted approximately 40 days. The instruments were applied after approval by the Research Ethics Committee, in accordance with the requirements of Resolution 510/2016. Each collection lasted approximately 30 minutes, and all participants answered the instruments after signing the Informed Consent Form (ICF).

The data were processed without identifying the participants or the institutions, which were only distinguished as public and private. Descriptive statistics (means, standard deviations and percentages) and inferential statistics (confirmatory factor analysis, Pearson's correlation and ANOVA) were used. This choice was made because the data had a normal distribution (Gaussian curve). The programs used were IMB SPSS Statistics for Windows®, JASP for Windows and Mplus software (version 7). Confirmatory factor analysis (CFA) was used for the Time Perspective Inventory, Student's t-test for descriptive analyses to measure M and SD in binary descriptions, and ANOVA for comparative and inferential analyses between groups. Pearson's correlations were used for correlational analyses. The results of the analyses are presented in the following section.

Results

Reliability indices were obtained by examining the internal consistency of the scales. The proposed ZTPI model was confirmed with some reservations. The original structure of the scale contained 56 items divided into 5 dimensions, and in the structure tested with this sample, 39 items remained, and the Past-Positive dimension was not confirmed, as all items were negatively loaded. The results showed a model with Past-Negative with 10 items and $\alpha=0.80$, Present-Hedonistic with 12 items and $\alpha=0.73$, Time-Future with 8 items and $\alpha=0.61$, and Present-Fatalistic with 9 items and $\alpha=0.68$.

For the QSEA scale, the results showed satisfactory indices, consolidating the good psychometric qualities of the scale: Institutional, with 5 items and $\alpha=0.70$, the Professional dimension with 5 items and $\alpha=0.78$. As for the interpersonal dimension, the 7 items were confirmed with $\alpha=0.75$. The Economic dimension had the highest alpha with $\alpha=0.84$ and 6 items. The learning and performance dimension had $\alpha=0.79$ with 6 items. Finally, the Teaching dimension had 4 items and $\alpha=0.70$.

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In order to determine the quality of the participants' PTF, descriptive and comparative analyses were carried out with the ZTPI, as shown in Table 1.

Table 1. Descriptive analysis by dimension of the ZTPI scale.

Dimensions Of PTF	*M*	*DP*	Min	Max
Hedonistic Present	38,26	7,26	16	58
Future Time	28,83	4,81	8	40
Negative Past	30,51	7,53	11	49
Fatalistic Present	22,68	5,79	9	45

Source: the authors

When comparing PTF between males and females, it was observed that male participants had higher mean scores in the future time and Past-Negative dimensions, while females had higher scores in the Present-Hedonistic and Present-Fatalistic dimensions. The ANOVA test was applied in order to investigate any differences between semesters, from the 1st to the 9th.

The results showed that the highest mean in the Past-Negative dimension was for students in the 8th semester, and the lowest for the 9th semester. For the Present-Hedonistic dimension, the results showed the highest average for university students in the 5th semester, and the lowest for the 2nd. With regard to the Time-Future dimension, the highest average was indicated for students in the 8th semester and the lowest for the 9th semester.

Finally, in the Present-Fatalistic dimension, the results showed that 5th semester university students also felt more oriented by this PTF and 9th semester students had a lower score. However, no significant differences were found in these results. There were also no significant differences between public and private institutions and between genders. With regard to identifying satisfaction with the academic experience, the results can be seen in Table 2.

Table 2. Descriptive analysis by dimension of the QSEA scale

Dimensions Academic Satisfaction	*M*	*DP*	Min	Max
Institutional	18,02	3,58	7	25
Professional	23,69	3,81	6	30
Interpersonal	25,47	4,71	10	35
Economic	18,37	4,93	6	30
Learning and performance	21,75	3,74	6	30
Teaching	14,93	2,67	4	20

Source: the authors

Comparative analyses using the Student's t-test revealed a significant difference in the Economic Resources dimension (p=0.000), with students from private universities being more satisfied than those from public universities. Significant differences were also found between the genders in terms of satisfaction with the Professional dimension (p=0.004), with men being more satisfied than women, and also more satisfied in the Economic Resources dimension (p=0.000).

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When comparing satisfaction by semester, there were significant differences in the Institutional dimension (F(8.666)=5.46; p=0.000); p=0.000, in the Professional dimension p=0.000, Economic Resources p=0.000 and Teaching p=0.000. These results show that in the Institutional satisfaction dimension, as university students progress through their degree, their satisfaction with the institution fluctuates, but with a tendency to reach the end of the course at a lower level.

The same trend was identified in the Professional dimension (F(8.667)=4.88; p=0.000). The average for university entrants was higher than the others, M=25.10 (SD=3.16), followed by 2nd semester students with M=24.04 (SD=3.43), 8th semester students M=22.83 (SD=4.04) and final semester students M=21.44 (SD=3.82). The Economic Resources dimension (F(8.667)=7.22; p=0.000), (withdraw) did not show a tendency to decrease according to the semester, but continued to fluctuate.

In the teaching dimension (F(8,667)=7.45; p=0.000), the highest means were observed in the semesters in the first half of the program. For example, the first semester had a mean of 15.40 (SD=2.38), the second semester M=15.56 (SD=2.12), the seventh semester M=14.76 (SD=2.71), the eighth semester M=13.76 (SD=2.16), and the ninth semester M=12.38 (SD=3.61).

Significant differences were also found when comparing groups. In the institutional dimension, the results showed a significant difference between the 6th semester and the others. Between the 1st and 6th semesters (p=0.000), the 1st had an average of 19.02 and the 6th had 15.84; between the 2nd and 6th semesters p=0.000, the 2nd had an average of 18.35 while the 6th had 15.84 points; and between the 6th and 5th semesters (M=18.52) with p=0.000 and between the 6th and 7th semesters, which had an average of 17.99 and p=0.002.

With regard to academic satisfaction in the Professional dimension, significant differences were found between the 1st and 6th semesters (p=0.001), with the 1st obtaining an average of 25.10 and the 6th 22.54; between the 1st and 7th (*p*=0.004), the 7th was 23.33 and the 1st 25.10. No significant differences were found in the Interpersonal dimension. In the Economic Resources dimension, there was a significant difference between university students in the 1st (*M*=20.13) and 2nd (*M*=17.43) semesters, *p*=0.001; between the 6th and 1st semesters (p=0.000), with the average for the 6th being M=15.16 and for the 1st *M*=20.13; also between the 5th (*M*=19.22) and 6th, p=0.000; and between the 6th and 7th (*M*=18.79), *p*=0.00. In the Learning and Performance dimension, the difference was significant between the 1st (*M*=22.33) and 9th semesters (*M*=18.56) *p*=0.005. The second significant difference identified was between the 1st semester (*M*=15.40) and the 9th semester (*M*=12.38), *p*=0.000 for the same dimension.

Significant differences were also found for the teaching dimension between the 2nd semester (*M*=15.56) and the 6th semester (*M*=13.30), p=0.000; and between the 2nd semester and the 9th semester (*M*=12.38), *p*=0.000. The results also showed a significant difference between the 3rd semester (*M*=15.27) and the 9th semester (*M*=12.38), *p*=0.001. The mean of the 5th

semester students was 15.28 and had a significant difference when compared to the 6th semester ($M=23.30$) $p=0.000$ and the 9th semester ($M=12.38$) $p=0.001$.

In order to identify possible correlations between PTF and academic satisfaction, we considered the same degrees of the correlation coefficients indicated by Dancey and Reidy (2018). We considered 0.10 to 0.3 for a weak degree, 0.30 to 0.60 for a moderate degree, and above 6.0 for a strong degree. Table 3 shows the identified correlations.

Table 3. Pearson correlation coefficients between PTF and satisfaction N=676

		Dimensions PTF				Satisfaction Dimensions (QSEA)				
		PN	PH	TF	PF	IN	PR	IP	RE	AR	EN
PTF dimensions	PN		0,3770 ,000	-0,101 0,008	0,392* 0,000	-0,014 0,713	-0,070 0,068	-0,080 0,038	-0,089 0,020	-0,120* 0,002	-0,033 0,389
	PH			-0,127* 0,001	0,439* 0,000	0,027 0,489	0,023 0,556	0,061 0,112	0,005 0,906	-0,055 0,153	0,025 0,509
	TF				-0,257* 0,000	0,074 0,055	0,056 0,143	0,019 0,630	0,043 0,206	0,283* 0,000	0,027 0,483
Satisfaction Dimensions (QSEA)	PF					-0,080 0,038	-0,058 0,135	-0,095 0,014	-0103 0,007	-0,145* 0,000	-0,025 0,512
	IN						0,389* 0,000	0,333* 0,000	0,353* 0,000	0,283* 0,000	0,525* 0,000
	PR							0,405* 0,000	0,332* 0,000	0,438* 0,000	0,501* 0,000
	IP	,							0,450* 0,000	0,381* 0,000	0,402* 0,000
	RE									0,354* 0,000	0,338* 0,000
	AR										0,373* 0,000

*Values with statistically significant differences ($p<0.05$).
Source: the authors

From the results obtained through Pearson's correlation, significant weak and moderate correlations were identified. The results will be discussed in the following section.

Discussion

With regard to the stage of verifying the psychometric validity of the instrument, a 39-item model with 4 dimensions for the PTF was designed for this sample, since the Past-Positive dimension did not obtain an alpha above 0.30. The internal consistency analysis of the QSEA showed that it was a valid and reliable instrument for measuring academic satisfaction in its dimensions. This result shows the relevance of using the instruments with Brazilian samples and, at the same time, the need to reapply them in different contexts.

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Regarding the descriptive analysis of PTF, it was found that the participants in the sample tended to be more oriented towards the Present-Hedonistic and less towards the Present-Fatalistic. When comparing the PTF between the male and female genders, the results are in line with the data obtained by Daura (2017), who found that women were less oriented by the future dimension than men.

In the comparative analysis between semesters, the highest score for past-negative was found in the 8th semester. These results are contrary to those found in the literature. In the study by Usart and Romero (2014), the authors found that Past-Negative orientation decreases significantly with age, since in the study younger students obtained higher scores for this dimension.

Luyckx *at al*. (2010), Ortuño *at al*. (2011), and Usart and Romero (2014) concluded in their studies that Present-Hedonism decreases with age. In the present study, no regularity was found between an increase or decrease in this dimension, which suggests further research in the Brazilian scenario.

With regard to Future-Time, the highest average was given to students in their 8th semester and the lowest to those in their 9th semester, i.e. older students. This result is similar to what the literature states, when it is verified that at the end of the course TF tends to be more consistent, however, when checking the average for the last semester, the same data contradicts itself. Luyckx *at al* (2010) and Ortuño *at al* (2011) state that as university students progress through the course and get older, the Time-Future dimension tends to increase. Usart and Romero (2014) make an interesting point about this. According to the authors, it is coherent that the perspective of future time decreases for students at the end of their degree, since as they get older, they tend to focus their actions on the present and immediate applications of their learning, while younger students need time to think about and plan for the future.

With regard to Present-Fatalistic, the results showed the highest average for the 5th semester and the lowest for the 9th semester. The literature indicates that this dimension tends to be more present in younger and first-year students and that they are less guided by it at the end of their courses (Luyckx *at al*., 2010). It can be deduced that fatalistic behavior is a behavior more expected or declared by younger subjects, due to their lower orientation towards the future in the long term, which confirms these results.

Regarding academic satisfaction, the descriptive results indicated that the participants considered themselves most satisfied in the interpersonal dimension, followed by the professional dimension, while the lowest scores were obtained in the teaching dimension and then in the economic resources. According to Arantes *at al*. (2018), interpersonal satisfaction is necessary for university life, since adapting to this context means being socially integrated with other people. In this sense, the authors add the relevance of these relationships, considering that they are articulated with other elements of university life, such as performance, forming a network of choices, stories and projections.

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The results of the comparative analysis using the t-test in relation to the public or private institution showed that students at the public university feel less satisfied than those at the private university. This factor is related to the cost of university life, such as attending course events, cultural activities, daily expenses at the institution, and attending parties or socializing with peers. According to Osti *at al*. (2020), the economic dimension explains dissatisfaction and even dropout in some courses, along with other factors not specifically related to learning.

Male students are more satisfied with the possibilities offered by the course for their professional life than female students. This is a possible indication of women's concern about their chances in the labour market, regardless of the field, since this study covers students from different fields of knowledge. The same trend was found in the economic dimension, another finding that shows a possible difference between the genders in the current context in terms of financial autonomy or availability of resources. These results are different from those found in the studies of De Aragão *at al*. (2018) and Suehiro and Andrade (2018), as these authors did not find significant differences between genders in any dimension of academic satisfaction.

Satisfaction with the university tended to be lower towards the end of the undergraduate course. The study by Aragão *at al*. (2018) found similar data. Based on these findings, it can be inferred that those entering higher education do not initially recognize the institutional challenges and limitations they will have to deal with, not least because there are positive expectations and aspirations about being at university. However, as the years go by, new demands arise where students need the institution to resolve bureaucracy related to, for example, mandatory internships or the education itself. In this context, new challenges arise that can influence satisfaction with the university.

Another result when comparing each semester with the others, the significant differences indicate that students in the 6th semester feel less satisfied than those in the 1st, 2nd, 5th and 7th semesters, both in the institutional dimension and in the economic resources dimension. This is a semester that is the intermediate stage in most courses and, according to Santos *at al*. (2013), institutions see and act for beginners as well as graduates. However, the intermediate stages often end up not receiving as much support or due importance. The same trend was observed in the professional, learning and performance, and teaching dimensions.

In the analysis of variance, when comparing the semesters, significant differences indicated that university students in the 1st semester felt more satisfied than those in the 6th and 7th. The same was observed for satisfaction with learning and performance; there was a significant difference between the 1st and 9th semesters, showing a decrease in satisfaction with the learning process itself during the course of the degree. These results are in line with those obtained in the study by Ramos *at al* (2015). According to the authors, younger university students have not only responsibilities but also leisure activities in their daily lives, which is why they may feel more satisfied at the start of their degree. As for satisfaction with the teaching provided by professors, the trend is the opposite, i.e. it decreases with the passing years of study (Pereira *at al*, 2018; Suehiro; Andrade, 2018).

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In the correlational analyses, Past-Negative correlated moderately with Present-Hedonistic and Present-Fatalistic, and negatively, though weakly, with Future-Time. The Future-Time dimension was weakly and significantly negatively correlated with the Present-Fatalistic dimension. A significant correlation was also found between Present-Fatalistic and Present-Hedonistic. These results are consistent with those obtained in the studies of Daura (2017) and Luyckx *at al*. (2010). According to Zimbardo and Boyd (2014), the Present-Hedonistic and Present-Fatalistic dimensions are opposed to the Future Time dimension, as PTF shows a balance, as individuals are able to establish relationships between their present behaviors and the long-term consequences.

Regarding academic satisfaction, significant correlations were found at moderate levels between all dimensions of the construct, indicating that students in the sample who are satisfied with one dimension, for example, the institution, tend to be satisfied with teaching, economic resources, learning, and interpersonal relationships. And this trend is repeated across all dimensions.

It was found that academic satisfaction with learning and performance was significantly and weakly related to the Future-Time dimension, and negatively related to the Negative-Past and Fatalistic-Present dimensions. These data are relevant because they show that students who are oriented towards the future tense feel satisfied with their own learning and academic performance, while those who are oriented towards the Past-Negative or Present-Fatalistic tend not to be so satisfied with this variable.

These results make it possible to reflect on the relevance of future-oriented PTF. Nuttin (2014) asserts that a robust future perspective is extremely important for individuals to carry out their present tasks, not only for the sake of engagement, but also because of the value they attribute to them in relation to the future. It was not the aim of this study to measure the value of instrumentality and motivation, however, according to Zimbardo and Boyd (2014), Time-Future oriented subjects believe that their present behaviors increase the likelihood of a future goal being achieved, resulting in a value of the objectives. For Simons *at al* (2004), an individual tends to be more motivated towards a future goal when there is a combination of the variables of valuing and perceiving the link between the goal and their present behaviors.

On the other hand, students in this study who were oriented toward the Past-Negative and Present-Fatalistic perspectives tended to be less satisfied with their learning and performance. These findings are consistent with others obtained in King's (2016) study with Filipino college students, which showed that the negative past and fatalistic present perspectives were associated with dissatisfaction and lack of engagement, while the fatalistic present was also associated with dissatisfaction.

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Thus, it can be seen that students oriented towards the Fatalistic and Hedonistic dimensions are not satisfied with their learning. In the literature, the characteristics of each dimension (Zimbardo; Boyd, 2014), it is observed that these students, according to these studies, can act

without planning, without organization, in an immediate way, aimed at some momentary pleasure without measuring future consequences, therefore, these factors can cause dissatisfaction with learning and with their performance.

Final considerations

The aim of this study was to investigate the relationship between Future Time Perspective and academic satisfaction among university students. Based on the analysis, important results should be highlighted, such as the highest scores in the general sample for the present-hedonistic, and the lowest for the future-hedonistic. These findings indicate the need for further research in the university environment, since these are opposing dimensions which, according to the literature, can have an impact on learning and academic performance.

Given the data on academic satisfaction, which showed the dissatisfaction of university students at public HEIs with the economic dimension, it is important for public universities to think about strategies and implement public policies that ensure not only access to higher education, but also permanence, since dissatisfaction with this dimension is one of the factors in dropout.

From the correlational analyses, it can be concluded that in the case of PTF, the hedonistic and fatalistic present is contrary to the perspective of the future, and that having a negative view or aversion to the past (past-negative) presupposes hedonistic and fatalistic attitudes in the present. As for the dimensions of academic satisfaction, they were found to be positively correlated, showing that there can be satisfaction in different dimensions at the same time, such as satisfaction with teaching, with the institution, and with learning and performance.

The correlation between PTF and academic satisfaction showed that future-oriented students are satisfied with their own learning and academic performance. On the other hand, students oriented towards the negative past or the fatalistic present tend to be less satisfied with their learning and performance.

Since this study found correlations between satisfaction with learning and performance and future-oriented behaviors, there is a need for universities and their teachers to take ownership of the knowledge related to the target group, the components of the university experience from the perspective of the specificities of university students. In this sense, the importance of interventions aimed at all periods - initial, intermediate and final - of undergraduate studies is emphasized, in order to contribute to academic satisfaction and the construction of the present as a perspective of the past-positive in the future. These assumptions envision a higher education that goes beyond access to university, but also consists of quality learning, satisfying and engaging experiences, with a view to establishing and achieving future goals for university students.

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