LEAD GENERATION THROUGH DIGITAL COMPETITIONS AND FACTORS THAT DRIVE CONVERSION OF BACHELOR'S DEGREE STUDENTS AT AN AMERICAN UNIVERSITY

Geração de Leads por Meio de Competições Digitais e Fatores que Influenciam a Conversão de Estudantes de Bacharelado em uma Universidade Americana

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Resumo: The process of attracting and converting Brazilian students into undergraduate programs abroad requires a strategic, multi-stage sales funnel that addresses key decision-making factors and uncertainties. This research analyzed how fully digital academic competitions serve as a high-impact prospecting tool, generating qualified leads and influencing the enrollment decisions of students aged 13 to 17 considering a bachelor's degree at an American university. Using a convenience sample, data were collected through online questionnaires distributed to participants of these digital experiences. The analysis, conducted using descriptive statistics and multinomial logistic regression models, identified the most influential factors driving student conversion. The findings highlight that free participation in academic competitions, exposure to relevant information about international programs, and pre-existing familiarity with the organizing university significantly increased the likelihood of lead conversion. These insights reinforce the effectiveness of early engagement strategies in the student recruitment process, demonstrating that immersive, interactive academic experiences can accelerate decision-making and drive higher enrollment rates in international higher education institutions.
Key-words: "sales funnel"; "student recruitment"; "international student"

Abstract: O processo de atração e conversão de estudantes brasileiros em programas de graduação no exterior requer um funil de vendas estratégico e multifásico, que seja capaz de abordar fatores decisivos e incertezas ao longo da jornada de escolha. Esta pesquisa analisou como competições acadêmicas totalmente digitais funcionam como uma ferramenta de prospecção de alto impacto, gerando leads qualificados e influenciando as decisões de matrícula de estudantes de 13 a 17 anos interessados em cursar o bacharelado em uma universidade americana. Utilizando uma amostra por conveniência, os dados foram coletados por meio de questionários online aplicados a participantes dessas experiências digitais. A análise, conduzida com o uso de estatísticas descritivas e modelos de regressão logística multinomial, identificou os fatores mais influentes na conversão dos estudantes. Os resultados evidenciam que a participação gratuita nas competições acadêmicas, a exposição a informações relevantes sobre programas internacionais e a familiaridade prévia com a universidade organizadora aumentam significativamente a probabilidade de conversão dos leads. Esses insights reforçam a eficácia das estratégias de engajamento precoce no processo de recrutamento estudantil para universidades no exterior, demonstrando que experiências acadêmicas imersivas e interativas podem acelerar a tomada de decisão e elevar as taxas de matrícula em instituições internacionais de ensino superior.

Palavras-chave: **“**funil de vendas”; **“**recrutamento estudantil”; **“**estudante internacional”

INTRODUCTION

Choosing a career in today’s dynamic global landscape is increasingly complex. The job market faces rapid transformations driven by health, economic, and geopolitical challenges, alongside social and environmental pressures. According to the World Economic Forum (2023), these forces are reshaping labor markets and redefining the skills required across economies.

Generation Z, born after 1996, adds new complexity to this context. As digital natives, they value independence, diversity, and constant connectivity (Mazzoni, 2022). However, while technological change creates new careers, the slow adaptation of educational institutions and information overload hinder students’ ability to explore professional paths. Cury (2019) argues that excessive information can suppress creativity by offering pre-formulated answers instead of fostering curiosity.

For international universities offering programs in emerging fields, leveraging Gen Z’s digital fluency can be a powerful recruitment strategy. This generation is pragmatic, goal-oriented, and highly active on social media (Brancaglion, 2022). By understanding students’ career decision-making journeys, institutions can identify critical touchpoints that influence choices (Oliveira & Silva, 2020).

In this sense, digital academic competitions emerge as a key tool to connect students with innovative careers and global institutions. High-quality educational experiences, supported by effective digital marketing, enhance attraction and conversion rates (Sultan & Wong, 2019). Following Kotler’s (2007) five-stage adoption model—awareness, interest, evaluation, trial, and adoption—strategic engagement across these phases can shape student behavior. Direct interaction with professors and campus culture during academic initiatives strengthens institutional preference.

Incorporating gamification into academic competitions greatly enhances engagement and learning. Armas (2024) highlights that structured competition fosters motivation and active learning, particularly among digital natives. Such experiences not only spark curiosity but also shape educational and career decisions. This study explores how digital competitions drive student attraction and conversion to American higher education. By integrating experiential learning, gamification, and digital

engagement, universities can connect emerging professions with student awareness, fostering informed career choices and stronger global ties.

Materials and Method

About the research participants

The study surveyed Brazilian high school students (ages 13–17) enrolled in private bilingual schools across Brazil, generally serving families from higher socioeconomic backgrounds. Participants were involved in fully digital academic competitions focused on emerging career fields, including audiovisual production, 3D character creation, game development, programming, and technological prototyping. These competitions were organized by the university conducting this study, an institution specializing in emerging careers in areas such as games, filmmaking, media, technology, and digital business. Because participants were minors, informed consent was obtained from their legal guardians prior to participation. Partner schools were contacted through their internationalization departments and informed about the study. Teachers responsible for implementing the competitions distributed digital consent forms to parents, who authorized their children's participation electronically. Students with parental consent subsequently completed an online questionnaire in Portuguese, their native language. No personal or professional relationship existed between the researcher and the participants.

About the data collection methodology

According to Malhotra (2019), descriptive research identifies variables and influences within a phenomenon. Thus, a quantitative approach was adopted, using a convenience sample collected through online questionnaires. Participants were selected based on accessibility rather than probabilistic sampling, which is a convenience sampling approach, given that all respondents were affiliated with educational institutions, participants in the academic programs proposed. The questionnaire design and application strategies followed Carlomagno’s (2018) guidelines. Instructions clearly stated that responses were anonymous to ensure confidentiality and privacy. Data were collected remotely, without voice or image recording, using only participant-generated responses. In total, 130 parental authorizations were received, yielding 121 valid student responses. The remaining

nine included five cases where students did not respond and four where parents declined authorization.

Ethical considerations

The informed consent form (ICF) was sent via a link to the teachers of the schools participating in international competitions to be forwarded to the legal guardians of students aged 13 to 17 who participated in these competitions. Upon accepting the ICF, the legal guardian automatically received a link to the digital survey form to be completed by the research participant. The invitation to participate in the digital survey contained a link to a webpage informing participants that they could withdraw their consent for data use at any time, without any penalty. The research was approved by the Research Ethics Committee (CEP - 9927 - Instituto de Pesquisas e Educação Continuada em Economia e Gestão de Empresas – Pecege) on January 29th, 2024, and has the CAAE registration number 76939123.1.0000.9927.

Statistical analysis

First, a Chi-Square analysis was conducted to assess the association between the frequency of responses from students who expressed interest in studying at the university that organized the competition after participating in the event and the other variables in the questionnaire. Variables showing significant association ($p < 0.05$) were selected for inclusion in a multinomial logistic regression model.

In the first model constructed, all variables selected in the previous step were subjected to analysis of variance to identify significant effects (variables with $p < 0.05$ in the model). Those that did not show a significant effect were removed, and a new analysis of variance was performed on the model. This process was repeated until all variables in the model presented $p < 0.05$. Finally, the model's accuracy was calculated (the relationship between observed values and values predicted by the created model). All analyses were performed using the R computational environment.

Data Collection and Questionnaire Structure

The study explored how participation in university-led academic competitions affects Brazilian students' career perceptions and decision-making. Questions were organized into key themes, starting with demographics—age, grade, and gender—

which are associated with differences in adolescents' vocational interests and educational choices (De Fruyt et al., 2025). The analysis also examined how competition experiences shape academic aspirations, as such events promote engagement and motivation for higher education (Brandon, Hetherington, & Redmond, 2020). Barriers to studying abroad, including language proficiency, financial constraints, and limited access to information, were evaluated as major factors influencing students' international study decisions (Reardon et al., 2022). The research further considered how immersive academic experiences can shape students' career interests and intercultural development, as well as how exposure to the organizing university and its educational environment may strengthen students' intention to enroll (Diao & Li, 2022). Motivation and satisfaction were analyzed, as intrinsic motivation has consistently been associated with greater engagement, persistence, and learning outcomes (Ryan & Deci, 2020). Comparing schools also provided insights into how institutional contexts may influence students' access to international opportunities. Overall, the research design offered a comprehensive view of how participation in academic competitions may foster students' educational aspirations and career development, consistent with contemporary applications of Social Cognitive Career Theory (Ndlovu et al., 2024).

Results and Discussion

The research sought to examine how participation in academic competitions influences students’ consideration of the organizing university for undergraduate studies. The analysis aimed to determine how these experiences shape perceptions and drive enrollment intent. Based on Kotler’s (2007) five-stage product adoption model, the awareness stage marks when students first recognize the university through its presence in competitions. This initial exposure is essential to capture attention and generate curiosity about its programs and opportunities. The study first measured brand recall, assessing how effectively participation in competitions increased recognition of the university. Results showed that 85 of the 121 respondents did not recall participating, despite having done so, suggesting limited brand impact. This indicates that while competitions create contact points with potential students, greater emphasis on brand visibility and engagement strategies is needed to strengthen institutional awareness and connection.

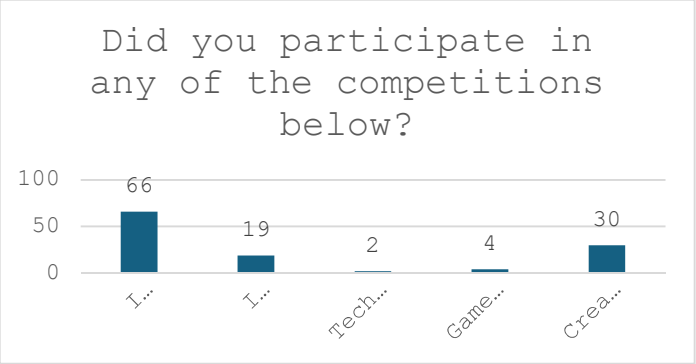

Figure 02. Students' recollection of participating in the competitions (n = 121) Source: Original research results

The second inquiry explored which factors led participants to begin considering the university as a potential option for their bachelor's degree. Based on Kotler's model, after the **Awareness** stage comes **Interest**, when students seek more information and deepen engagement; then **Evaluation**, when they assess the university's viability; and finally **Trial**, when they explore its offerings more directly. Participation in the competition—especially submitting a final project—represents a key element of this Trial phase, strengthening students' connection to the institution.

Figure 03 shows how many participants responded that they began to consider the university organizing the competition as a potential provider for their future bachelor's degrees, reflecting those who advanced through the stages of *Interest*, *Evaluation*, and *Trial*.

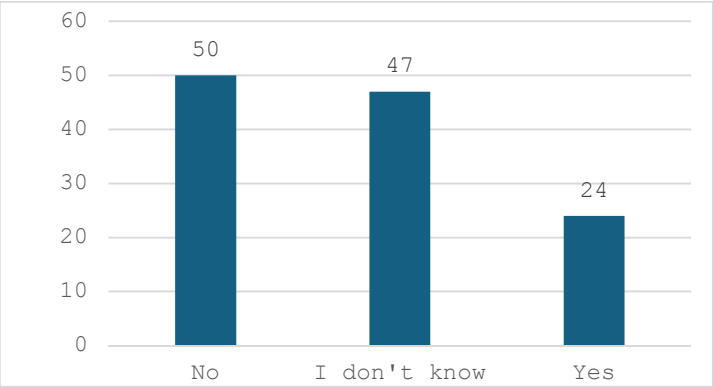

Figure 03. Students' opinions after participating in the competitions regarding whether or not to study at the university (n = 121). Source: Original research results

The third inquiry focused on examining the variables associated with the opinion of studying at the university hosting the competition and their influence on the participants who responded positively to considering the university as a potential provider for their bachelor's degree.

Table 01 presents the results of the Chi-Square analysis, showing the variables associated with the opinion about studying at the university that organized the competition after participating in the event.

Questions	**p**
Year in school	0.4511
Gender	0.4728
Age	0.0530
Interest in studying abroad before the event	**0.0002**
Interest in studying abroad after the event	**< 0.005**
Difficulty with the language to take courses abroad	0.1000
Difficulty with costs to invest in courses abroad	0.6400
Difficulty with knowledge about courses abroad	**< 0.005**
Difficulty with the application and admission process to study abroad	0.9680
Interest in Gaming degrees before the competition	0.5383
Interest in Audiovisual degrees before the competition	0.8424
Interest in Technology degrees before the competition	0.5394
Interest in Business degrees before the competition	0.6346
Interest in Gaming degrees after the competition	0.4942
Interest in Business degrees after the competition	0.1364
Interest in Technology degrees after the competition	0.1364
Interest in Audiovisual degrees after the competition	**0.0360**
Knew the university before the competition	**< 0.001**
Reason to participate in the competition	**< 0.001**
General feedback of the competition	**0.001**
Has already decided on the degree they want to pursue	**0.001**

Table 01. p-value for the association between "opinion on studying at the university" and the other variables surveyed

Source: Original research data under analysis in the R computational environment.

The analysis of the results in Table 1 shows that the variables influencing the participant's decision are: Interest in studying abroad before the event, Interest in studying abroad after the event, Difficulty with knowledge about courses abroad, Interest in Audiovisual degrees after the competition, Knew the university before the competition, Reason to participate in the competition, General feedback of the competition, and Has already decided on the degree they want to pursue.

A new analysis of variance (ANOVA) was conducted to verify whether all variables indeed showed a significant effect ($p < 0.05$). It was found that “Before taking part in the competition” and “General feedback of the competition” did not present a significant effect, as presented in Table 2 below.

Analysis of Deviance Table (Type II Test)

Response: Would study in the university	LR Chisq	Df	Pr(>Chisq)
Before taking part in the competition	1,9834	4	**0.742495**
After taking part in the competition	11,7180	4	0.019576*
Difficult with knowledge about courses abroad	8,4443	2	0.014667*
Audiovisual	12,6352	2	0.001907**
Knew the university before the competition	17,0298	4	0.001907**
Reason to participate in the competition	14,1128	6	0.028401*
General feedback of the competition	4,0231	6	**0.673556**
Has already decided the degree that wants to pursue	10,0600	4	0.039429*

*Codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1*

Table 02. New analysis of variance to confirm the significant variables for the research

Source: Original research data under analysis in the R computational environment

A second model was constructed, removing these variables. Another analysis of variance (ANOVA) was performed again to check if all the variables showed a significant effect. In this case, all variables had a p-value < 0.05, thus forming the final model.

Table 03 presents the variables that comprised the final multinomial logistic regression model.

Analysis of Deviance Table (Type II Test)

Response: Would study in the university	LR Chisq	Df	Pr(>Chisq)
After taking part in the competition	24,567	4	6.147e-05***
Difficult with knowledge about courses abroad	11,142	2	0.003807**
Audiovisual	11,793	2	0.002748**
Knew the university before the competition	20,283	4	0.000439***
Reason to participate in the competition	18,672	6	0.004755**
Has already decided the degree that wants to pursue	13,91	4	0.007587**

*Codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1*

Table 03. Analysis of variance of the multinomial logistic regression model, confirmation of the variables relevant to the model

Source: Original research data under analysis in the R computational environment

The final analysis was completed, with the Odds Ratio, Confidence Interval, and p-values of the selected model, using the opinion "Yes, I want to study at the university" as the reference. The model's accuracy was 73.55%. Table 04 presents the Odds Ratio values for the variables with a significant effect in the model.

Answer: Yes, I am interested in studying in the university			
Answer after participating in the competition	OR	CI	p
No	-	-	
I don’t know	20.7	2.65, 162	0.004
Yes	21.1	2.72, 163	0.004
Difficulty with the application and admission process to study abroad			
No	-	-	
Yes	9.25	1.28, 66.8	0.027
Interest in Audiovisual degrees before the competition			
No	-	-	
Yes	1.26	0.73, 2.18	0.4
Knew the university before the competition			
No	-	-	
I don’t know	1.06	0.04, 29.6	>0.9
Yes	11.8	2.00, 69.2	0.006
Reason to participate in the competition			
Required by the school and the student's own willingness	-	-	
Student's own willingness	2.06	0.25, 17.4	0.5
I don’t know	0.56	0.09, 3.68	0.5
Required by the school	0.10	0.01, 0.81	0.032
Has already decided on the degree they want to pursue			
Student doesn’t know yet	-	-	
Student has some options in mind	1.88	0.22, 15.8	0.6
Student knows precisely what wants to study	0.58	0.06, 5.17	0.06
OR = Odds Ratio, CI = Confidence Interval			

Table 04. Analysis of the impact of each variable on the desired response in the research

Source: Original research data under analysis in the R computational environment

The data indicates that participation in academic competitions increases the likelihood of a student considering the organizing university as a future study option

by **21.1 times**. A lack of information about international programs remains a limiting factor, but when competitions provide such knowledge, the likelihood rises by **9.25 times**. For students already aware of the university, participation raises their probability of considering it for future studies by **11.8 times**. Conversely, mandatory participation has a negative effect: when students are required by their schools to join competitions, the experience harms their perception of the university, reducing its attractiveness as a potential academic destination.

Conclusion

The research investigated how participation in university-led academic competitions influences Brazilian students' career perceptions and decision-making. Questions were grouped thematically to analyze key factors. The first block examined demographics—age, school year, and gender—as these variables shape vocational choices. The second explored how participation impacts academic aspirations, as competitions can enhance engagement and motivation for higher education (Brandon, Hetherington, & Redmond, 2020). Barriers to studying abroad, such as language, finances, and limited information, were also analyzed, since they directly affect students' international mobility decisions (Stroud, 2010). The study assessed changes in academic interests after participation, as immersive experiences often influence career paths (Eccles & Wigfield, 2002). Additionally, the research measured familiarity with the organizing university and perception changes, as institutional exposure supports enrollment intent (Chapman, 1981). Motivation and satisfaction were examined because intrinsic motivation enhances learning (Deci & Ryan, 1985). Finally, school data enabled comparison across educational contexts, recognizing how institutional settings affect access to global opportunities. The findings align with theories of career development and decision-making (Lent, Brown, & Hackett, 1994).

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