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CONSTRUCTING ACADEMIC AND PERSONAL EXPERIENCES THROUGH LANGUAGE: TRANSITIVITY ANALYSIS OF PHD STUDENTS' SPOKEN NARRATIVES ON YOUTUBE

CONSTRUINDO EXPERIÊNCIAS ACADÊMICAS E PESSOAIS POR MEIO DA LINGUAGEM: ANÁLISE DE TRANSITIVIDADE DE NARRATIVAS ORAIS DE DOUTORANDOS NO YOUTUBE

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Abstract

This study explored the construction of academic identity among PhD students through a transitivity analysis of spontaneous spoken narratives posted on YouTube. Language is a fundamental and dynamic resource through which individuals express their experiences, articulate their emotions, and, crucially, construct their evolving identities. While prior research has largely focused on exploring the experiences of students in academic writing, this study addressed the underexplored domain of spoken self-representations. Employing a qualitative approach grounded in Halliday's Systemic Functional Linguistics, particularly the transitivity system, the study analyzed a corpus of 10,258 words drawn from four PhD student narratives. Manual clause segmentation and process-type annotation were employed to ensure analytical precision. The study contributes to a more thorough understanding of how academic identity is dynamically performed, challenged, and reshaped through everyday language use. The findings revealed that Material processes dominate the narratives, highlighting students' emphasis on action, achievement, and academic engagement. Relational and Mental processes also featured prominently, reflecting self-definition, internal reflection, and emotional negotiation.

Verbal, Existential, and Behavioral processes, though less frequent, contribute to expressions of resilience and evolving agency. The study highlights the dynamic interplay between action, emotion, and reflection in academic identity development, advocating for greater recognition of spoken narratives as a critical source of data for understanding the doctoral experience.

Keywords: Systemic Functional Linguistics (SFL). Transitivity system. Academic identity. Doctoral studies. Spoken language.

Resumo

Este estudo explorou a construção da identidade acadêmica entre doutorandos por meio de uma análise de transitividade de narrativas orais espontâneas publicadas no YouTube. A linguagem é um recurso fundamental e dinâmico por meio do qual os indivíduos expressam suas experiências, articulam suas emoções e, de forma crucial, constroem suas identidades em transformação. Embora pesquisas anteriores tenham se concentrado amplamente na exploração das experiências dos estudantes na escrita acadêmica, este estudo abordou o domínio ainda pouco explorado das autorrepresentações orais. Adotando uma abordagem qualitativa fundamentada na Linguística Sistêmico-Funcional de Halliday, particularmente no sistema de transitividade, o estudo analisou um corpus de 10.258 palavras extraídas de quatro narrativas de doutorandos. Para garantir precisão analítica, foram realizadas segmentação manual de orações e anotação por tipo de processo. O estudo contribui para uma compreensão mais aprofundada de como a identidade acadêmica é dinamicamente performada, questionada e ressignificada por meio do uso cotidiano da linguagem. Os resultados revelaram que os processos Materiais dominam as narrativas, destacando a ênfase dos estudantes na ação, na conquista e no engajamento acadêmico. Processos Relacionais e Mentais também apareceram de forma significativa, refletindo autodefinição, reflexão interna e negociação emocional. Processos Verbais, Existenciais e Comportamentais, embora menos frequentes, contribuem para expressões de resiliência e agência em desenvolvimento. O estudo ressalta a interação dinâmica entre ação, emoção e reflexão no desenvolvimento da identidade acadêmica, defendendo um maior reconhecimento das narrativas orais como fonte crítica de dados para compreender a experiência doutoral.

Palavras-chave: Linguística Sistêmico-Funcional (LSF). Sistema de transitividade. Identidade acadêmica. Estudos de doutorado. Linguagem oral.

1. Introduction

Language is not merely a means of communication; it is a fundamental and dynamic resource through which individuals express their experiences, articulate their emotions, and, crucially, construct their evolving identities. For PhD students and candidates, the journey toward developing an academic identity is particularly complex, multifaceted, and deeply personal. Intellectual challenges, emotional struggles, institutional expectations, and the continuous negotiation of self within the broader academic environment shape this process. In other words, pursuing a PhD is far more than simply achieving an advanced academic qualification; it represents a transformative life stage during which students forge, reshape, and affirm their identities as scholars through sustained engagement with their disciplines and academic communities.

Over the past two decades, there has been growing scholarly interest in how academic identities are formed, maintained, and contested during the doctoral journey. Much of this research, such as Inouye and McAlpine's (2019) review of doctoral writing and feedback, has emphasized the central role of academic writing in identity development. Writing is seen not only as a skill to be mastered but also as a critical site where doctoral students negotiate scholarly voice, respond to feedback, align with disciplinary norms, and perform academic belonging. Through writing, students position themselves in relation to the academic community and demonstrate the competencies expected of emerging scholars.

However, while writing has been extensively examined as a medium of academic identity construction (e.g., Caskey et al., 2020; Cutri et al., 2021; Langum & Sullivan, 2020; Othman & Lo, 2023; Subedi et al., 2022), the role of spoken narratives—that is, the everyday, spontaneous recounting of personal experiences—remains relatively underexplored. Spoken language, rich in emotional depth and personal expression, offers a different, and arguably more intimate, lens through which to understand the complexities of identity formation. Through spoken narratives, PhD students reveal how they perceive their struggles, successes, doubts, and transformations, often in ways that written texts cannot fully capture. The language choices embedded in these narratives expose how students see themselves at various points of their journey: as overwhelmed novices, emerging authorities, or reflective thinkers dealing with the demands of academia. Thus, focusing on spoken narratives provides an opportunity to uncover dimensions of academic identity that may otherwise remain hidden in more formal, polished writing.

Despite the richness of spoken narratives, there is a notable gap in rese-

arch systematically analyzing the linguistic features of doctoral students' speech, particularly using robust linguistic frameworks such as Halliday's (2014) Systemic Functional Linguistics (SFL). While studies in applied linguistics and education have highlighted the importance of discourse in identity construction, the application of detailed linguistic analysis tools—especially the transitivity system—has not been sufficiently extended to the spontaneous spoken accounts of PhD students. This gap is significant because the transitivity system, focusing on process types (material, mental, verbal, relational, behavioral, existential) and their associated participants and circumstances (Halliday, 2014), offers deep insight into how experiences, emotions, and agency are linguistically constructed. It allows researchers to see not only what is being said, but also how speakers position themselves as actors, experiencers, or thinkers within their narratives.

To date, most research has privileged written artifacts such as dissertations, theses, and scientific articles as data sources for exploring academic identity (Asadolahi & Nushi, 2021; Caskey et al., 2020; Inouye & McAlpine, 2019; Mula-Falcón et al., 2022; Subedi et al., 2022). Far less attention has been paid to naturally occurring spoken data, such as personal vlogs, interviews, and casual storytelling, where students discuss their academic journeys in their own voices and terms. This is a significant oversight, considering that platforms like YouTube have become important spaces for doctoral students to share their experiences publicly and authentically. In these contexts, the narratives are less constrained by academic conventions and therefore offer a more candid and diverse range of identity expressions.

Thus, this study sought to address this underexplored area by examining spontaneous spoken narratives produced by PhD students, specifically focusing on YouTube videos where students reflect informally on their doctoral experiences. By employing Transitivity Analysis within the framework of SFL, this research aimed to uncover the linguistic patterns through which doctoral students construct and negotiate their academic identities in real-world, self-represented contexts. In doing so, it contributes to a more thorough understanding of how academic identity is dynamically performed, challenged, and reshaped through everyday language use.

Accordingly, this study is guided by the following research questions:

1. What are the most commonly used transitivity elements in the PhD students' narratives?

2. How do these elements contribute to the construction of academic identity?

Through this inquiry, the study aimed to broaden current perspectives on academic identity development, emphasizing the value of spontaneous spoken discourse and detailed linguistic analysis in uncovering the multifaceted realities of the

PhD journey.

2. Literature Review

2.1 Overview of Systemic-Functional Linguistics (SFL)

Halliday's (1978) SFL offers a comprehensive framework for understanding language as a social semiotic system that people use to accomplish goals within specific contexts. Unlike formal linguistic approaches that focus primarily on structure, SFL emphasizes how language functions as a meaning-making resource within society. The framework is organized around three fundamental metafunctions that operate simultaneously in language: ideational, interpersonal, and textual. These metafunctions represent different modes of meaning that are realized through grammatical systems. The ideational metafunction concerns how language construes human experience. It deals with how speakers perceive, conceptualize, and linguistically represent the world around them. This metafunction is further divided into two components: experiential (representing discrete experiences) and logical (representing relationships between experiences). The interpersonal metafunction concerns how language establishes, maintains, and negotiates social relationships between participants. It focuses on the interactive aspect of language, highlighting the way speakers express attitudes, judgments, and stance while engaging with others. This metafunction is realized through several grammatical systems, including MOOD, modality, and Appraisal. On the other hand, the textual metafunction organizes language into coherent, unified texts that function effectively in their context. It provides resources for managing information flow and creating cohesive messages. This includes using systems such as Cohesion, Theme, and Rheme.

2.1.1 Transitivity System

The transitivity system, a core component of the ideational metafunction in SFL (2014), provides a powerful framework for analyzing how experiences are linguistically constructed through various types of processes. Specifically, the transitivity system consists of three interconnected elements: the process (realized typically by verbs), the participants involved in the event (realized by nouns or noun groups), and the circumstances surrounding the process (realized by adverbial and prepositional groups). Capturing actions, participants, and settings, the transitivity system

closely aligns with the field of discourse, which reflects the experiential content and subject matter of a text.

From an experiential perspective, language is conceptualized as a set of resources that enable individuals to represent entities, actions, and relationships within the world around them. As Thompson (2014) explains, at its most fundamental level, language functions to capture "goings-on" (verbs) by deploying nouns to denote entities, adjectives to describe their attributes, and adverbials to situate these actions against the contextual backdrops of place, time, and manner. Through these grammatical resources, language not only mirrors external reality but also structures human experience into coherent, understandable meanings.

Halliday (2014) distinguishes between six primary types of processes within the transitivity system: material processes (actions and physical events, e.g., "write", "publish"), mental processes (cognition, emotion, perception, e.g., "understand", "like"), relational processes (states of being and having, e.g., "become", "have"), verbal processes (acts of communication, e.g., "state", "announce"), behavioral processes (physiological or psychological behaviors, e.g., "smile", "listen"), and existential processes (expressions of existence, e.g., "exist", "there is"). Analyzing how these processes are deployed in discourse enables researchers to uncover how speakers or writers construct versions of reality and position themselves within it. As illustrated in Figure 1, Halliday (2014) categorizes these processes according to different domains of experience.

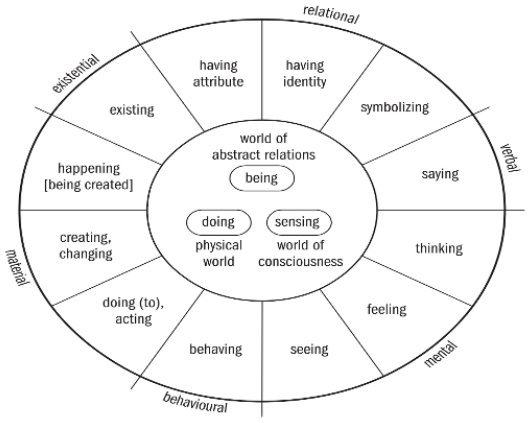

Figura 1: The grammar of experience: types of process in English (Halliday, 2014)

Halliday (2014) emphasizes that "the transitivity system construes the world of experience into a manageable set of process types. Each process type provides its model or schema for construing a particular domain of experience as a figure of a particular kind" (p. 170), making them indispensable tools for understanding identity construction. For instance, the prominence of material processes may indicate

agency, while mental processes may highlight internal reflections, verbal processes interaction, relational processes self-definition, and existential processes the portrayal of the surrounding academic environment. In short, the systematic analysis of transitivity offers an in-depth lens to examine how PhD students, for example, linguistically construct their academic identities in their narratives.

2.2 Review of related studies

While the transitivity system offers rich analytical potential, research into academic identity has traditionally relied on broader frameworks, especially Critical Discourse Analysis (CDA). CDA, as pioneered by Fairclough (1993), has played a key role in examining how language both reflects and shapes social identities, relationships, and systems of knowledge. Fairclough's three-dimensional model emphasizes that linguistic practices are inherently constitutive of social identities, social relations, and ideologies (Fairclough, 1993; Xing, 2024).

In the context of higher education, several studies have explored how graduate students construct academic and researcher identities. For instance, Davis and Lester (2016) analyzed 93 online discussion posts from a research methods course and found that students often minimized their expertise. Instead of asserting authoritative knowledge claims, they often justified their perspectives by drawing on personal or professional experiences. These findings highlight the insecure nature of identity work in academic settings, where students must continually negotiate their credibility and position themselves within evolving disciplinary expectations.

Similarly, Van Rensburg (2004) employed a triangulated methodological approach—combining narrative analysis, appraisal theory, and mediated discourse analysis—to investigate how nine multicultural and multilingual Master's students constructed their academic identities within a university writing center. Her findings revealed that students actively resisted deficit-oriented labels often imposed by institutional discourses and instead strategically used both interactions and written texts to assert an authorial presence. This highlights the significant role of institutional contexts and student agency in shaping identity performances in academic spaces. More recently, scholars have continued to build on these insights, emphasizing the dynamic and negotiated nature of academic identity. For example, Morton and Storch (2019) explored the development of L2 doctoral students' writer identities through collaborative writing projects and found that peer interaction provided critical opportunities for students to renegotiate authority and expertise.

Ren (2023) extended the investigation of doctoral student identity by focu-

sing on writer identity among L2 PhD students in the U.S. Using Ivanič's (1998) conceptualization of writer identity in combination with Hyland's (2005a, 2005b) interactional and metadiscourse models, she analyzed interviews and writing samples to reveal how students systematically used metadiscourse strategies to organize texts, establish coherence, and project credible academic selves. Interestingly, Ren found that metadiscourse usage was more pronounced among students from "soft" disciplines, where rhetorical elaboration is more critical. The study also pointed to the influence of disciplinary cultures and mentor guidance in shaping students' linguistic strategies, though individual agency still played a meaningful role.

Although these studies significantly advanced understanding of academic identity construction, they primarily drew upon CDA, narrative inquiry, and metadiscourse models. The potential of transitivity analysis remains relatively underexplored, particularly in spoken narratives of doctoral students. Nevertheless, a few notable exceptions exist. Rahimpour et al. (2018) combined CDA, Halliday's transitivity system, and Hyland's metadiscourse framework to examine how qualitative researchers in applied linguistics constructed professional identities in their published articles. Their findings highlighted the frequent use of mental and relational processes, alongside personal pronouns and hedging devices, to assert subjectivity while aligning with disciplinary norms.

In addition, Irayanti et al. (2025) employed Halliday's (2014) transitivity framework to analyze narratives from international students in Indonesia, focusing on how students linguistically constructed agency and responsibility during ethical decision-making encounters. Their study demonstrated how different process types—particularly material, mental, and relational processes—were crucial in shaping students' portrayals of intercultural experiences.

Despite these advances, it remains evident that few studies have systematically employed transitivity analysis to explore the construction of the academic identity of doctoral students through spoken narratives. Given that spoken narratives often allow for greater spontaneity, emotional expressiveness, and reflexivity than written texts, a transitivity-focused analysis of such narratives can yield deeper insights into how PhD students linguistically negotiate their evolving academic selves. Therefore, this study aimed to address this gap by adopting a transitivity-centered approach to investigate how PhD students construct and perform their academic identities through spoken storytelling.

3. Methodology

Grounded in Halliday's SFL, particularly the transitivity framework, this study employed qualitative textual analysis of publicly available YouTube narratives. The research process involved four main components: data collection, data cleaning, data analysis, and ethical considerations. Together, these stages provided a systematic, transparent, and ethically responsible pathway for exploring the experiential meanings encoded in doctoral students' reflections.

3.1 Data Collection

The data for this study were sourced from publicly accessible YouTube videos featuring PhD students sharing their academic journeys. All participants were enrolled in universities in the United Kingdom, and their narratives represent a range of academic disciplines and cultural backgrounds within the UK higher education context.

A total of four video clips were selected, yielding a corpus of approximately 10,258 words of transcribed student speech. To protect the anonymity of the speakers, neither specific video titles nor usernames are disclosed. Instead, Table 1 summarizes the narrative focus, speaker IDs, durations, and word counts for each clip.

Tabela 1: Overview of the YouTube data sample

Clip	Narrative Focus	ID	Duration (min)	Word Count
1	A story of overcoming hardship during a solo PhD, emphasizing mindset, gratitude, and public engagement in academic identity formation.	A1	15:07	2,906
2	Balancing enjoyment and isolation in an experimental PhD: reflections on productivity, academic expectations, and life after submission	A2	21:13	3,829
3	A personal account of isolation, self-doubt, and reclaiming academic identity through vulnerability and connection	A3	14:27	2,245
4	A reflective account of overcoming psychological pressure and redefining academic engagement during a PhD	A4	8:43	1,278
Total			59:30	10,258

The videos were chosen based on criteria of relevance (i.e., focus on personal and academic experiences), clarity of audio quality, and the presence of spontaneous, reflective storytelling. Following selection, each video was carefully listened to multiple times to ensure accurate transcription and to familiarize myself with the context and delivery style of each narrative. The transcription process prioritized the preservation of natural speech features while ensuring sufficient linguistic clarity for subsequent analysis.

3.2 Data Cleaning

To focus solely on the voices of the PhD students, all interviewer prompts, questions, and background interactions were removed from the transcripts. Only the students' statements were kept. This approach ensured that the analysis focused entirely on how the students linguistically built their academic identities through their storytelling, without external framing or influence.

3.3 Data Analysis Procedures

The data were analyzed using the transitivity system within Halliday's SFL framework. Although the UAM Corpus Tool offers semi-automatic annotation capabilities, it was not used for this study due to concerns about annotation reliability, as identified by Leyang and Zhaoxia (2022). Reported issues with subjectivity and inconsistency in both semi-automatic and manual annotation led to the decision to develop a custom Excel-based annotation tool, which provides greater control and transparency in the analysis process.

The analytical procedure involved a structured three-step process:

(1) Clause Segmentation

Each narrative was manually segmented into individual clauses, since transitivity operates at the clause level (Eggins, 2004). Manual segmentation ensured greater precision and internal consistency.

(2) Identification of Process Types:

All verbal groups in the clauses were examined and categorized according to Halliday's six process types: material, mental, relational, verbal, behavioral, and existential processes. This classification captured how students represented their actions, thoughts, emotions, relationships, and experiences.

(3) Participant and Circumstance Annotation:

Following process type identification, nominal groups associated with the processes were labeled according to their functional roles (e.g., Actor, Goal, Senser, Phenomenon, Carrier, Attribute, Sayer, Verbiage). Circumstances—typically realized through adverbials or prepositional phrases—were also annotated to capture the contextual framing of actions and experiences, including elements such as time, place, manner, and cause.

This approach provided a detailed linguistic mapping of how students positioned themselves within their narratives, enabling insights into how agency, emotion, and identity were grammatically encoded through transitivity choices.

3.4 Ethical Considerations

The study was conducted following ethical guidelines for research involving publicly available digital content (Burnett, 2011). Since the data consisted of voluntarily posted YouTube videos intended for public viewing, no direct interaction with participants occurred, and formal consent was not required. Nevertheless, an ethical approach was maintained by anonymizing speaker identities, omitting iden-

tifying details, and using the content solely for academic research purposes. This approach aligns with ethical standards for digital humanities and social media research, respecting both the public nature of the material and the autonomy of the individuals who shared their narratives.

3.5 Reliability

To enhance coding reliability, intra-rater reliability was assessed. After a two-week interval, the researcher re-analyzed the annotated data. The high level of agreement between the initial and subsequent coding confirmed the stability and consistency of the analytical process.

4. Results

4.1 Transitivity Analysis: Process Types, Participants, and Circumstances

The results revealed a clear pattern in the distribution of process types used by the PhD students across their narratives (Table 2). Material processes emerged as the most dominant, with a total of 352 instances, accounting for 39.77% of all the identified processes. This high frequency suggests that students frequently represented their experiences through actions and events, emphasizing what they did or experienced in their academic journeys. Relational processes also featured prominently, with a total of 282 instances, divided into Attributive relational processes (161 instances, 18.20%) and Identifying relational processes (128 instances, 14.46%). These processes illustrate how students described states of being, ownership, and identity formation, further underlining the importance of self-definition in their narratives. Following Relational processes, Mental processes were the third most commonly employed, with 155 instances (17.51%), reflecting the significant role of internal experiences such as thinking, feeling, and perceiving in the construction of their academic identities.

Tabela 2: Distribution of process types in PhD students' academic narratives

Process Type	**Frequency**	**%**
Material	352	39.77
Relational (Attributive)	161	18.20
Relational (Identifying)	128	14.46
Mental	155	17.51
Verbal	61	6.89
Existential	22	2.49
Behavioral	6	0.68
Total	**885**	**100**

In contrast, Verbal processes (61 instances, 6.89%) were used less frequently, suggesting that while communication and dialogue were present, they were not the primary focus of the students' reflections. Existential processes appeared even more rarely, with only 22 instances (2.49%), indicating that stating the mere existence of events or phenomena was not a dominant strategy in their storytelling. Lastly, Behavioral processes were the least represented, with just 6 instances (0.68%), highlighting those descriptions of semi-conscious or habitual behaviors played a very minor role in the way these students constructed their academic stories.

In addition to analyzing the types of processes used, it is equally important to examine the participant roles and circumstantial elements that accompany these processes, as they play a crucial role in shaping how PhD students construct and contextualize their academic experiences. Participants represent the entities involved in the processes—such as the students themselves, their supervisors, peers, or broader institutional structures—while circumstances provide the background details regarding when, where, how, and why the processes take place.

By exploring who is involved in each process (participants) and the specific conditions or contexts in which the actions unfold (circumstances), we gain a much richer and deeper understanding of how students position themselves within the academic environment. These elements reveal how they express agency, attribute responsibility, manage interpersonal relationships, and articulate the emotional and intellectual dimensions of their doctoral journeys. Through the careful selection and linguistic encoding of participants and circumstances, the students highlight not only their achievements and challenges but also the broader social and institutional factors that shape their academic identities.

Table 3 provides a detailed overview of the frequency of participant roles and circumstantial elements identified across the four narratives. This information complements the process type analysis by offering further insight into the ways PhD students linguistically frame their experiences, negotiations, and transformations throughout their doctoral studies.

Tabela 3: Distribution of Participant Roles and Circumstantial Elements in PhD Students' Academic Narratives

Participant Role	**Freq.**	**%**
Actor	280	17.14
Goal	268	16.40
Range	5	0.31
Beneficiary	11	0.67
Senser	191	11.69
Phenomenon	185	11.32
Token	119	7.28
Value	122	7.47
Carrier	180	11.02
Attribute	175	10.71
Behaver	6	0.36
Sayer	17	1.04
Receiver	3	0.18
Verbiage	50	3.06
Existent	22	1.35
Total	**1634**	**100.00**

(a) Participant Roles

Circumstance	**Freq.**	**%**
Extent	21	5.29
Location (time)	75	18.89
Location (place)	80	20.15
Manner	109	27.46
Cause	55	13.85
Contingency	35	8.82
Accompaniment	5	1.26
Role	3	0.76
Matter	14	3.52
Total	**397**	**100.00**

(b) Circumstantial Elements

As displayed in Table 3, the results reveal that the most frequently occurring participant role across the narratives was the Actor, with a total of 280 instances (17.14%), indicating the significance of agency and action in how PhD students narrated their academic experiences. This was closely followed by the Goal (268 instances, 16.40%), reflecting the importance of outcomes and objects affected by the students' actions. Other commonly observed participant roles included the Senser (11.69%) and the Phenomenon (11.32%), highlighting the significant presence of mental processes such as feeling, perceiving, and thinking within the students' storytelling. Additionally, the roles of Carrier (11.02%) and Attribute (10.71%) were

notable, highlighting relational meanings that describe states of being and identity constructions.

Less frequently occurring participant roles included Token (7.28%) and Value (7.47%), typically associated with identifying relational processes, and Sayer (1.04%), linked to verbal processes such as reporting or reflecting. Roles such as Verbiage and Existent appeared even less frequently, each accounting for fewer than 4% of the total instances. The least commonly identified participant roles—Range, Beneficiary, Receiver, and Behaver—each made up less than 1% of the data, suggesting that certain experiential meanings, such as beneficiaries of actions or behavioral processes, were marginal in the students' narratives.

In terms of circumstantial elements, the analysis showed that Manner was by far the most frequently utilized category, appearing in 109 instances (27.46%). This high occurrence suggests that students were particularly attentive to describing how actions and experiences unfolded, often elaborating on their strategies, emotional states, or modes of engagement. Location/time (75 instances, 18.89%) and Location/place (80 instances, 20.15%) were also commonly represented, pointing to the importance of temporal sequencing and spatial settings in grounding their academic stories.

Circumstantial elements categorized under Cause, which include reasons and purposes (55 instances, 13.85%), were employed less frequently but still played a meaningful role, often helping students to articulate the reasons behind their actions or the factors influencing certain outcomes. Extent (21 instances, 5.29%), which measures the degree or frequency of an action or state, was also relatively rare. Contingency, which expresses conditions or dependencies between processes, appeared in 35 instances (8.82%), indicating that while conditional relationships were occasionally acknowledged, they were not a dominant feature.

Other circumstantial categories, such as Matter (3.52%) and Accompaniment (1.26%), were sparsely distributed across the data, suggesting that while students occasionally elaborated on what their experiences concerned or who they engaged with, these aspects were not central to their storytelling. The least frequently occurring category was Role, with only 3 instances recorded, reflecting its marginal relevance in these narratives.

4.2 The Contribution of the Types of Processes to the Construction of Academic Identity

The prominence of Material processes in the analysis suggests that doctoral students frequently choose to articulate and construct their academic identities through action-oriented language, emphasizing doing, achieving, and engaging within academic contexts. This trend is clearly illustrated in the examples in (1) and (2), where both excerpts demonstrate the recurrent use of Material processes alongside the Actor role "I", representing the student as an active participant in academic endeavors.

(1)	I	am going to email	my supervisor
	Participant: Actor	Process: Material	Participant: Goal

(2)	I	was working	in the lab
	Participant: Actor	Process: Material	Circumstance: Location

In (1), the student is depicted as initiating communication with supervisors, while in (2), the focus shifts to the student's involvement in conducting laboratory work. In both cases, the consistent positioning of the student as the Actor highlights their direct engagement in essential academic activities. These findings emphasize that PhD students' academic identity is not abstract or passively formed; rather, it is rooted in concrete actions and tasks associated with productivity, research participation, and scholarly contribution.

This pattern of linguistic representation reveals how doctoral students strategically construct themselves as active agents within their narratives. Through the repeated combination of first-person pronouns ("I") with Material processes, students project a self-conceptualization of themselves as proactive, competent researchers who are deeply involved in the practices and expectations of academic life.

Moreover, the transitivity patterns identified in the narratives reflect how linguistic choices are not neutral but serve to actively shape and reinforce academic identity. By foregrounding concrete, goal-oriented academic activities—such as writing, experimenting, presenting, or collaborating—students align themselves with the values and practices of the academic community. These choices also implicitly position them within institutional spaces, suggesting a sense of belonging, responsibility, and evolving professional expertise.

Then, relational processes play a crucial role in enabling writers and speakers to express connections between different elements, particularly by defining, classifying, and attributing qualities. In the context of the present study, these linguistic tools allow PhD students to position themselves in relation to their academic progress, aspirations, and the institutional expectations surrounding their doctoral journeys. In other words, relational processes provide students with the means to linguistically construct and articulate their academic identities by defining who they are, how they are progressing, and what their experiences mean within broader academic structures. Consider the examples in (3) and (4).

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(3)

what I want to talk about	is	my full experience that I had during the PhD
Participant: Token	Process: Relational (Identifying)	Participant: Value

(4)

That	was	a really good environment to sit in
Participant: Carrier	Process: Relational (Attributive)	Participant: Attribute

In (3), the student employs an identifying relational process to align their intentions with their doctoral experience. Here, the clause "what I want to talk about" functions as the Token, while "my full experience. . . " serves as the Value. The relational process "is" establishes a clear relationship of identity between the student's immediate communicative goal and their broader academic journey. Through this linguistic strategy, the student foregrounds the significance of her personal experiences, suggesting that their doctoral narrative is not incidental but rather central and worthy of articulation. Thus, the relational process enables the student to frame

their academic identity as one that is introspective, deliberate, and meaningfully engaged with the realities of doctoral study.

Similarly, in (4), the student utilizes an attributive relational process to characterize their academic environment in positive terms. In this clause, "that" (referring to the relationship with the supervisor) is the Carrier, "was" functions as the relational attributive process, and "a really good environment to sit in" is the Attribute. Through this construction, the student evaluates the learning environment as nurturing, emphasizing the feeling of acceptance, comfort, and intellectual safety. Importantly, although the student is describing an external factor (the environment provided by the supervisor), the evaluation indirectly shapes their own academic identity by portraying them as beneficiaries of a supportive and empowering scholarly space. This positive attribution helps to reinforce a sense of belonging, confidence, and agency within the academic setting. Through such examples, it becomes clear that relational processes are powerful linguistic tools through which doctoral students actively define, negotiate, and affirm aspects of their academic selves, weaving their experiences and environments into coherent identity narratives.

Meanwhile, the use of Mental processes allows PhD students to present themselves not merely as active participants in academic tasks, but also as reflective individuals who navigate the emotional and cognitive complexities of the doctoral journey. Through Mental processes, they reveal their inner worlds (including thoughts, feelings, doubts, and realizations) which offer a richer, more comprehensive picture of their academic identities as evolving, emotionally engaged beings. For instance, the examples in (5) and (6) provide valuable glimpses into the psychological and emotional landscapes these students experience during their PhD studies.

(5)

I	thought	well maybe I should just quit
Participant: Senser	Process: Mental	Participant: Phenomenon

(6)

I	stopped worrying	about the end result
Participant: Senser	Process: Mental	Participant: Phenomenon

In (5), the Senser ("I") engages in a Mental Process ("thought") directed toward the Phenomenon ("well maybe I should just quit"). This clause powerfully captures a moment of internal conflict, vulnerability, and uncertainty, highlighting the emotional weight and mental strain that often accompany the early stages of doctoral work. The contemplation of quitting reveals how identity work at this

point is marked by self-doubt and the questioning of one's place within academia. In contrast, the example in (6) demonstrates a notable psychological shift later in the student's narrative. Here, the Senser ("I") engages in a different Mental Process ("stopped worrying") regarding the Phenomenon ("about the end result"). This change reflects a movement away from anxiety about performance outcomes and toward a more present-focused, resilient mindset. The transition from self-doubt to self-assurance illustrates an important aspect of academic identity development, i.e., the capacity to adapt, reframe challenges, and build emotional resilience over time. Together, these examples highlight the critical role mental processes play in the linguistic construction of academic identity. They allow students to position themselves not only as knowledge producers but also as emotionally aware and self-reflective individuals, capable of growth, transformation, and self-care within the demanding domain of doctoral education.

In addition, verbal processes also play an important role in how doctoral students construct and express their academic identities. They allow students to assert evaluative stances, articulate reflections, and narrate shifts in their academic thinking. Consider the examples in (7) and (8).

In (7), the student employs the verbal process "would argue" to assert a strong evaluative stance regarding the difficulty of publishing papers during an experimentalist instrumentation-based PhD. In this clause, the Sayer ("I") uses the verbal process to frame the Verbiage ("that getting papers out of an experimentalist instrumentation-based PhD. . . "). Here, verbalization is not merely used to report information but serves as a strategic tool to assert personal opinion, validate experiences, and highlight the institutional challenges faced by PhD students. Thus, verbal processes function as a means of shaping academic identity through evaluative positioning and self-representation.

(7)

I	would argue	that getting papers out of an experimentalist instrumentation-based PhD is probably one of the hardest tasks you can sign yourself up to
Participant: Sayer	Process: Verbal	Participant: Verbiage

(8)

I	didn't say	if I get a PhD
Participant: Sayer	Process: Verbal	Participant: Verbiage

I	said	when I would get a PhD
Participant: Sayer	Process: Verbal	Participant: Verbiage

Moreover, the example in (8) demonstrates how verbal processes can capture important psychological shifts over time. Initially, the student uses the verbal process "didn't say" in the clause "if I get a PhD," signaling doubt and uncertainty about academic success. Later, however, the student reports a change through the use of "said" in the more confident clause, "when I would get a PhD." This transition from "if" to "when" marks a critical turning point in the student's journey, indicating a movement from self-doubt toward determination and self-assurance. The linguistic choice to highlight this shift through verbal processes foregrounds the evolving nature of academic identity, portraying the student as someone who gains increasing confidence and optimism about their doctoral path, what the student metaphorically describes as seeing "a light at the end of the tunnel." Importantly, the examples in (7) and (8) reinforce the idea that through careful selection of verbal processes, students are able to narrate internal transformations, express attitudes, and contribute actively to the ongoing construction of their academic selves.

Building on the previous exploration of more frequently used processes, existential and behavioral processes further enrich the ways doctoral students construct and convey their academic identities. While verbal processes allow students to assert perspectives and narrate shifts in mindset, existential and behavioral processes reveal the emotional realities and personal efforts supporting their academic journeys. In the examples in (9) and (10), the students draw upon these process types to represent their experiences as deeply personal, effort-driven, and emotionally charged.

(9)	There	is	no magic drug that I took
		Process: Existential	Participant: Existent

(10)	I	was struggling	
	Participant: Behaver	Process: Behavioral	

In (9), the clause employs an existential process, where the Process (is) highlights the absence of an effortless solution to the challenges of doctoral study. The Participant (no magic drug that I took) reinforces the idea that success in academia is not the result of shortcuts or external interventions but rather the outcome of sustained commitment and perseverance. This existential framing underlines the authenticity and groundedness of the student's narrative.

Complementing this existential perspective, the example in (10) captures the student's internal struggles through the use of a behavioral process. The Participant (I) is directly linked to the Process (was struggling), thereby foregrounding the emotional and psychological effort required during the PhD journey. The behavioral process reveals not just external actions but the inward battles, the resilience, and the perseverance demanded by the academic experience.

Overall, these examples emphasize that the construction of academic identity is not solely shaped by visible achievements or intellectual milestones. Rather, it is also deeply embedded in narratives of endurance, emotional resilience, and an honest rejection of idealized, simplistic success stories.

5. Discussion

The analysis of PhD student narratives reveals a predominant use of Material processes, highlighting a strong emphasis on actions and tangible academic activities. This suggests that students perceive and construct their academic identities through active engagement in tasks such as researching, writing, and collaborating. The frequent identification of the students themselves as Actors further reinforces their portrayal as proactive agents in their academic journeys. This finding aligns with recent research, such as the study by Irayanti et al. (2025), which examined international students' experiences in Indonesia. Their transitivity analysis also found a significant presence of Material processes, indicating that students often frame their intercultural experiences through concrete actions and engagements. Similarly, Othman and Lo (2023) observed that Chinese EFL doctoral students in

Malaysia navigated cultural and linguistic challenges (e.g., respecting authority and adapting to English-language conventions) while attempting to construct their academic identities through critical argumentation in thesis writing.

In addition to material processes, relational processes (both Attributive and Identifying), were prominently used to express states of being, ownership, and identity. These processes allowed students to define themselves and their academic environments, attributing qualities and establishing relationships between different elements of their experiences. Although less frequent, verbal processes played a crucial role in expressing the students' voices, opinions, and interactions. The use of Sayer and Verbiage roles indicates moments where students articulated their thoughts, engaged in dialogues, or reflected on their communication within academic settings. This aspect of identity construction confirms the findings of Irayanti et al. (2025), who noted that international students used verbal processes to navigate and express their intercultural experiences, thereby asserting their voices in new academic environments.

The frequent use of mental processes reflects the students' thoughtful engagement with their academic experiences. The roles of Senser and Phenomenon indicate a substantial focus on internal states such as thoughts, feelings, and perceptions. This reflective dimension is revealed in the work of Asadolahi and Nushi (2021), who explored the academic identity construction of bilingual/multilingual PhD candidates through autobiographical narratives. Their findings highlighted the significance of internal reflections and emotional experiences in shaping academic identities, particularly in the context of second language (L2) authorship development. In addition, the frequent use of mantel and relational processes was also documented in the study by Rahimpour et al. (2018). Also, Cutri et al. (2021) emphasized that reflections on emotional struggles are central to the development of doctoral identity, underlining the complex emotional journey of PhD students.

While the current analysis and some of the recent studies share common findings regarding the use of transitivity processes in academic identity construction, cultural contexts can influence these patterns. For example, the study by Othman and Lo (2023) focused on Chinese EFL doctoral students in Malaysia, highlighting how cultural backgrounds and language proficiency levels impacted the students' identity construction and engagement with academic writing. Similarly, Asadolahi and Nushi (2021) emphasized the role of bilingualism/ multilingualism in shaping the academic identities of PhD candidates, suggesting that language proficiency and cultural experiences are integral to how students perceive and articulate their academic selves. This could be further investigated in future research on the matter.

6. Conclusion

The transitivity analysis of PhD student narratives highlights the multifaceted and dynamic nature of academic identity construction. Students predominantly employ Material processes to position themselves as active agents engaged in tangible academic practices. At the same time, the frequent use of Relational and Mental processes highlights the significant role of self-definition, reflection, and emotional engagement in shaping their academic journeys. Verbal processes, though less frequent, serve as crucial means through which students articulate their voices, assert their agency, and engage in dialogue within academic communities. Additionally, circumstantial elements enrich these narratives by providing critical contextual information about time, place, cause, and manner, thereby situating students' experiences within broader academic and socio-cultural environments.

These findings align with and extend recent studies, further emphasizing how individuals, specifically PhD students, utilize linguistic tools to make sense of their world, reflect on their experiences, and perceive and construct their academic identities. Furthermore, the interplay between action, reflection, relational positioning, and communication reveals that academic identity is not static but is continually negotiated through both external practices and internal processes. Understanding these complex patterns offers valuable insights for educators, supervisors, and institutional policymakers. It highlights the need to design support systems and learning environments that recognize and nurture the diverse ways in which doctoral students build their academic selves. By fostering inclusive, reflective, and empowering academic spaces, institutions can better support doctoral students in developing resilient, confident, and authentic academic identities that sustain them through the challenges of doctoral study and beyond.

7. Limitations and Implications

The findings of this study offer valuable insights into the role of transitivity processes in the construction of the academic identity of PhD students. However, a number of important limitations need to be considered. First, the dataset was based on a relatively small and context-specific group of participants, which may limit the generalizability of the findings to broader doctoral populations across different disciplines, cultural backgrounds, and educational settings. Additionally, the narratives analyzed were self-reported, which may introduce elements of subjectivity, selective

memory, or strategic self-presentation, potentially influencing the portrayal of identity construction. Moreover, the study primarily employed a transitivity framework within SFL, which, while powerful in capturing process types and participant roles, may not fully account for other linguistic and discursive features—such as modality, evaluation, or intertextuality—that also contribute richly to identity construction. The study also did not deeply explore the longitudinal development of academic identities over time, which is crucial given that identity is a dynamic and evolving phenomenon throughout the doctoral journey.

Future research could address these limitations by adopting a longitudinal design, tracking students' narratives across different stages of their doctoral programs to better capture identity shifts and transformations. Also, including a diverse sample of participants from a variety of disciplines, countries, genders, and linguistic backgrounds would offer a more comprehensive understanding of how academic identity construction may vary across different educational and cultural contexts. Additionally, integrating other analytical frameworks, such as the appraisal theory, could provide a more nuanced view of how affect, stance, and power relations shape academic identities. Mixed-methods approaches that combine linguistic analysis with interviews, focus groups, or ethnographic observations could also deepen the exploration of the lived experiences behind the narratives. Overall, further research in this area can contribute to developing more targeted and culturally responsive support strategies for doctoral students worldwide.

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Note on conflict of inerest

We hereby declare that there is no conflict of interest while preparing this research. We have no financial or personal relationship that may influence the interpretation or publication of the results which are obtained. We affirm that we have respected ethical standards and upheld scientific integrity at all times, in line with the standards set by the academic world and those prescribed by this journal.