The importance of relationships and communication in student satisfaction at Rey Juan Carlos University

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Abstract

This study investigates the impact of relational coordination (RC) on student satisfaction in higher education. It aims to identify which dimensions of RC – communication and relational ties – most significantly influence students' perceived satisfaction. A stratified random sample of 593 university students was surveyed between December 2024 and February 2025. The questionnaire, based on an adapted RC model, included 18 items measuring communication and relational ties with lecturers, peers, administrative staff, and student representatives. Satisfaction was assessed using a Likert scale. Factor analysis (exploratory and confirmatory) was conducted using principal axis factoring and promax rotation, supported by reliability tests (Cronbach's alpha > 0.7). Results/findings: Five key factors were identified: (1) RC with administrative staff, (2) RC with lecturers, (3) RC with student representatives, (4) RC with peers, and (5) perceived quality improvement. RC with administrative staff explained the highest variance (15.6%), followed by RC with lecturers (10.3%). The confirmatory model showed a good fit ($p < 0.001$), confirming the relevance of these dimensions to overall student satisfaction. Findings suggest that improving communication and relational ties - especially with administrative staff and lecturers - can significantly enhance student satisfaction. Universities should simplify administrative processes, ensure staff availability, and foster mutual respect and shared goals among all stakeholders. These measures can lead to more effective interactions and better educational outcomes. Relational coordination is a critical determinant of student satisfaction in higher education. Strengthening RC dimensions can guide universities in designing organizational practices that promote efficient communication, inclusive relationships, and tailored support for diverse student profiles. Future research should expand the sample across institutions and timeframes to validate and generalise these findings.

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Introduction

In recent years, the enhancement of higher education has become a point of interest for policymakers across the globe. Gittell (2002) introduced the concept of relational coordination (RC), describing it as a

mutually reinforcing process of communication and relationship-building aimed at integrating tasks. The RC framework is structured around two key dimensions: communication and relationships.

The communication dimension encompasses several elements: frequent interaction, which fosters role-based relationships through repeated contact; timely exchanges, ensuring information is shared when needed; accuracy, which is key for effective group performance; and problem-solving dialogue, which supports coordinated responses to challenges.

On the relational side, RC includes shared objectives, which are essential for coordinating complex, interdependent tasks; shared understanding, which can be hindered by differences in background, training, and experience; and mutual respect, which enhances coordination by encouraging participants to value each other's contributions and consider the broader impact of their actions.

Exploring the interplay between these RC dimensions can offer valuable insights into how institutional resources might be better organised to optimise performance. Research has shown positive correlations between RC and organisational outcomes across various sectors. For instance, Gittell et al. (2010) found that hospital units with stronger RC achieved superior results. Similarly, Havens et al. (2018) linked RC to increased job satisfaction, greater engagement, and reduced burnout. Haider et al. (2020) applied the model to the banking sector, demonstrating its relevance to high-performance work systems and employee satisfaction. In the context of higher education, Gallego et al. (2021) and Margalina et al. (2015) used RC to explain improved outcomes in online learning environments, while Checa et al. (2020, 2023) identified RC factors aligned with sustainability goals.

Student satisfaction is widely recognised as a key performance indicator in education, reflecting institutional effectiveness across areas such as academic and administrative services, teaching quality, and programme design (Gallego et al., 2021). Nonetheless, there remains a gap in empirical research concerning the specific influence of relational dimensions on student satisfaction.

This study aims to pinpoint which aspects of the RC framework most significantly affect students' overall satisfaction. By understanding the relative importance of each RC dimension, universities can strengthen organisational practices and mechanisms that enhance communication and relationships within the teaching and learning process.

The following sections outline the literature review (Section 2), Research Methodology (Section 3), present the findings (Section 4), provide discussion and conclusion (Section 5), and offer limitations and direction for future research (Section 6).

Literature review

Relational Coordination (RC), introduced by Gittell (2002), explains performance outcomes through the quality of communication and relationships among interdependent actors. Its dimensions—shared goals, shared knowledge, and mutual respect—combined with frequent, timely, and problem-solving communication, have been shown to enhance coordination in complex environments.

Empirical evidence confirms RC's relevance across sectors. In healthcare, stronger RC correlates with improved patient outcomes and staff engagement (Gittell et al., 2010; Havens et al., 2018). In banking, RC mediates the link between high-performance work systems and job satisfaction (Haider et al., 2020), illustrating its adaptability to service-oriented contexts.

Higher education research has begun to adopt RC to explain interactions among students, faculty, and administrative staff. Studies in online learning environments show that relational ties improve educational quality and engagement (Margalina et al., 2015; Gallego et al., 2021). Checa et al. (2020, 2023) further demonstrate RC's alignment with sustainability goals, expanding its scope beyond academic performance.

Despite these contributions, few studies examine how specific RC dimensions influence student satisfaction, a key indicator of institutional effectiveness (Gallego et al., 2021). Existing work often assumes that better coordination benefits students but rarely identifies which relational elements matter most. Addressing this gap, the present study investigates the RC dimensions that most strongly predict student satisfaction, offering insights for strategies that enhance communication and relationships in higher education.

Research methodology

A stratified random sample comprising 593 university students was gathered between 1 December 2024 and 25 February 2025. To assess the nature of communication and relational connections between students and key university stakeholders—namely lecturers, fellow students, and administrative personnel—an adapted instrument based on the relational coordination framework was employed. The survey consisted of 18 items.

A composite variable representing perceived quality was constructed from students' satisfaction responses. Its validity was examined using Generalised Linear Models (GLM), following the approach outlined by Bandalos et al. (2018). Data analysis was conducted using principal axis factoring, with five factors manually retained. This decision was based on theoretical alignment with the relational coordination framework and empirical evidence from prior studies in higher education contexts, which consistently identify similar dimensions (e.g., Gittell, 2002; Gallego et al., 2021). Manual retention ensured conceptual coherence and interpretability of factors, prioritising theoretical relevance over purely statistical criteria such as eigenvalues.

Promax rotation was applied to facilitate interpretation. All statistical procedures were carried out using JASP software, version 0.19.3 for Apple Silicon.

Satisfaction was measured through students' self-reported perceptions across several dimensions: interactions with lecturers, peers, and administrative staff; quality of materials; effectiveness of communication channels; and relevance of training content. A five-point Likert scale was used, ranging from 1 (not satisfied) to 5 (very satisfied), with scale intervals treated as metric based on empirical observations.

Limitations: While most items exhibited satisfactory loadings (>0.4), some cross-loadings were observed, which may indicate overlapping constructs within relational coordination dimensions. These were retained to preserve the theoretical integrity of the model, but future research should consider refining item wording or applying stricter criteria to minimise cross-loading effects.

Table 1 presents the categories and items included in the survey instrument.

Variables	Items
Sociodemographic	Study modality, age, gender, academic discipline, faculty, campus, level of study
Satisfaction	Perceived quality of the university over time; identification of organisational factors influencing satisfaction; satisfaction with practices and services
Communication ties	Information provision by different profiles; frequency of communication; problem-solving support; awareness of academic progress and challenges; information flow
Relational ties	Perceived appreciation of student contributions; alignment of goals between students and institutional stakeholders

Table 1. Variables and Items Included in the Survey

Findings/results

The outcomes of the factorial analysis are presented in Table 2. The table displays the loadings for each item across five identified factors, along with their respective uniqueness values.

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Uniqueness
15 FFAIcau	0.886					0.310
12FAYbuz	0.885					0.359
15 FFAIbuz	0.865					0.350
12 FAYcau	0.862					0.335
11 FCOMbuz	0.797					0.377
16 FVALpas	0.775					0.368
11 FCOMcau	0.769					0.413
17 FCOBpas	0.732					0.435
15 FFAIpas	0.728					0.465
13 FCOTpas	0.724					0.440
12 FAYpas	0.683					0.497
14 FCPROpas	0.682					0.434
10 OIbuz	0.632					0.540
10 OIcau	0.605					0.565
11 FCOMpas	0.559					0.626
10 OIpas	0.530					0.596
18 SUpas	0.495					0.519
16 FVALpdi		0.843				0.376
13 FCOTpdi		0.821				0.393
17 FCOBpdi		0.786				0.388
18 SUpdi		0.786				0.312
10 OIpdi		0.736				0.470
11 FCOMpdi		0.735				0.472
15 FFAIpdi		0.724				0.413
14 FCPROpdi		0.703				0.474
12 FAYpdi		0.697				0.472
15 FFAIdel			0.844			0.251
18 SUdel			0.823			0.349
12 FAYdel			0.800			0.333
11 FCOMdel			0.794			0.361
14 FCPROdel			0.785			0.312
16 FVALdel			0.770			0.290
13 FCOTdel			0.732			0.341
17 FCOBdel			0.668			0.402
10 OIdel			0.648			0.457
12 FAYcom				0.872		0.269
15 FFAIcom				0.807		0.288
13 FCOTcom				0.800		0.290
14 CPROcom				0.793		0.342

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Uniqueness
11 FCOMcom				0.722		0.373
17 FCOBcom				0.717		0.422
16 FVALcom				0.712		0.429
10 OIcom				0.680		0.470
9 MCALmmordc					0.635	0.682
9 MCALev					0.635	0.640
9 MCALcfor					0.619	0.509
9 MCALapps					0.599	0.652
9 MCALmmau					0.589	0.674
9 MCALint					0.578	0.676
9 MCALbib					0.558	0.738
9 MCALcv					0.531	0.754
9 MCALprof					0.473	0.550
9 MCALoac					0.440	0.672
9 MCALlimp					0.412	0.837
8 MCALu					0.408	0.603
9 MCALoad						0.713
12 FAYme						0.869
18 SUmm						0.617
18 SUmc						0.922
18 SUcf						0.476

Note. Applied rotation method is promax.

Table 2. Factor Loadings

The exploratory analysis revealed that the majority of variables exhibited factor loadings exceeding 0.4, indicating a satisfactory level of association with the underlying constructs. The factors extracted from the model are interpreted as follows:

Factor 1: Relational coordination between students and administrative personnel delivering support services.
Factor 2: Relational coordination between students and academic staff (lecturers).
Factor 3: Relational coordination between students and their elected representatives.
Factor 4: Relational coordination among students themselves.
Factor 5: Perceived enhancement in quality.

As illustrated in Table 3, the analysis of factor characteristics shows that Factor 1, concerning coordination with administrative and support services, accounts for the largest proportion of explained variance at 15.6% in the rotated solution. This is followed by Factor 2, coordination with academic staff, which explains 10.3% of the variance.

Factor Characteristics

		Unrotated solution			Rotated solution	
	Eigenvalues	SumSq. Loadings	Proportion var.	Cumulative	SumSq. Loadings	Proportion var.	Cumulative
Factor 1	17.443	17.003	0.283	0.283	9.363	0.156	0.156
Factor 2	6.415	6.010	0.100	0.384	6.203	0.103	0.259
Factor 3	4.302	3.863	0.064	0.448	5.928	0.099	0.358
Factor 4	2.676	2.195	0.037	0.485	5.254	0.088	0.446
Factor 5	2.429	1.964	0.033	0.517	4.288	0.071	0.517

Table 3. Characteristics of the Factors

Following the identification of factors through exploratory analysis, a confirmatory factor analysis was conducted. This model incorporated the previously identified factors as second-order constructs, with a higher-order factor defined as overall student satisfaction.

The model demonstrated a good fit, with the Chi-square test yielding a p-value < 0.001.

Second-order factor loadings

						95% Confidence Interval	
Factor	Indicator	**Std. estimate**	Std. Error	z-value	p	Lower	Upper
SecondOrder	PAS CAU BUZ	**0.682**	0.036	18.692	< .001	0.611	0.754
	PDI	**0.836**	0.033	25.114	< .001	0.770	0.901
	DELEGADO	**0.569**	0.047	12.080	< .001	0.477	0.662
	COMPAÑEROS	**0.500**	0.052	9.641	< .001	0.398	0.601
	MEJORA CALIDAD	**0.650**	0.049	13.174	< .001	0.554	0.747

Factor loadings

Table 4. Confirmatory Model Factor Loadings

All factor loadings in the confirmatory model were statistically significant (p < 0.001), confirming the robustness of the structure.

Reliability

	Coefficient α
Administrative staff	0.949
Lecturers	0.926
Student's representative	0.941
Mates	0.932
Improvement of Quality	0.821
total	0.955

Table 5. Reliability Analysis

Reliability testing produced strong results, with Cronbach's alpha values exceeding 0.7 for all factors, indicating high internal consistency.

Figure 1 presents the structural path diagram, which illustrates the relationships between the relational coordination dimensions and overall student satisfaction, as conceptualised within the framework of Relational Coordination Theory.

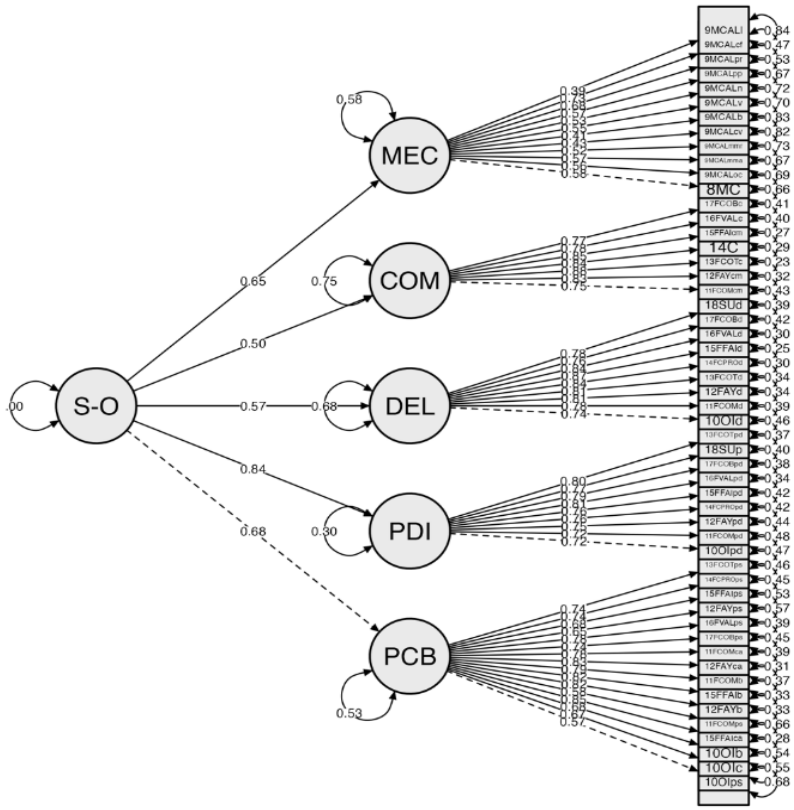

Figure 1. Structural Path Diagram

The student questionnaires included an open-ended section for comments related to each relational coordination dimension. The majority of remarks aligned with feedback typically encountered in everyday interactions. These comments predominantly addressed operational aspects of faculty and campus management, such as:

Timeliness of administrative procedures
Quality and availability of infrastructure
Effectiveness of communication channels
Scheduling and timetable organisation

Discussion and conclusion

The findings of this study offer empirical evidence supporting the significance of Relational Coordination (RC) in enhancing student satisfaction within higher education institutions. The identification of five distinct factors - relational coordination with administrative staff, lecturers, student

representatives, peers, and perceived quality improvement—highlights the multifaceted nature of student satisfaction and underscores the central role of communication and relational dynamics in academic settings.

The prominence of Factor 1, which pertains to coordination between students and administrative personnel, aligns with prior research that emphasises the critical contribution of support services to students' educational experiences (Gallego et al., 2021). Efficient administrative procedures, timely responses, and accessible communication channels are key elements that shape students' perceptions of institutional quality and responsiveness (Gittell, 2002).

Factor 2, concerning the relationship between students and lecturers, further validates the importance of pedagogical relationships in fostering satisfaction. As Gittell et al. (2010) and Havens et al. (2018) argue, mutual respect, shared goals, and timely communication between educators and learners are essential for effective coordination and positive educational outcomes. This is particularly pertinent in higher education, where the complexity of academic tasks necessitates high levels of interdependence and collaboration.

The emergence of Factor 3, involving student representatives, highlights the mediating role these actors play in facilitating communication and aligning institutional practices with student needs. This finding resonates with the work of Checa (2023), who identified student representation as a key mechanism for promoting sustainability and inclusivity in higher education governance.

Factor 4, which captures relational coordination among peers, reflects the social dimension of learning. Peer interactions contribute not only to academic support but also to emotional well-being and a sense of belonging—factors that are well-established predictors of student satisfaction (Haider et al., 2020). The strength of this factor suggests that universities should foster collaborative learning environments and peer mentoring initiatives.

Finally, Factor 5, related to perceived quality improvement, indicates that students' satisfaction is also influenced by their perception of institutional efforts to enhance educational quality. This aligns with the findings of Margalina et al. (2015), who demonstrated that continuous quality improvement, when effectively communicated, reinforces students' trust and engagement with the institution.

In sum, this study confirms that the RC framework is a robust tool for understanding and improving student satisfaction. It provides actionable insights for university administrators and academic staff seeking to design student-centred policies and practices. Future research should consider longitudinal designs and multi-institutional samples to validate these findings and explore causal relationships.

This study has identified five key factors that contribute to higher levels of student satisfaction within the higher education teaching and learning process. These include: (1) relational coordination between students and administrative staff; (2) relational coordination between students and academic staff; (3) coordination with student representatives; (4) peer-to-peer coordination; and (5) students' perceptions of quality improvement.

Enhancing communication between students and administrative personnel emerges as a particularly impactful area for improving overall satisfaction. Universities are encouraged to streamline administrative procedures, extend office hours, and ensure that students have access to relevant contact information to facilitate timely resolution of issues. Furthermore, the alignment of goals and mutual availability among students, lecturers, and administrative staff is essential for fostering a supportive academic environment. Promoting mutual respect across all university stakeholders can help dismantle hierarchical barriers, thereby enabling more effective and inclusive interactions. This aligns with existing literature that highlights the importance of shared understanding and mutual appreciation in achieving positive institutional outcomes.

Moreover, shared knowledge—defined as an awareness of the broader educational process beyond individual roles—enhances the capacity for problem-solving and strengthens communication networks. These elements collectively contribute to a more cohesive and responsive educational experience.

This study extends Relational Coordination Theory (Gittell, 2002) to the higher education context by empirically validating its dimensions as predictors of student satisfaction. While prior research applied RC in healthcare and organizational settings, our findings demonstrate its explanatory power for academic environments, where interdependence among students, faculty, and administrative staff is critical. By identifying five distinct factors, this research operationalizes RC for educational quality assessment, offering a robust theoretical lens for understanding coordination in complex learning ecosystems.

The results align with European Standards and Guidelines (ESG) for Quality Assurance and similar frameworks emphasizing student-centered learning, effective communication, and stakeholder engagement. Factors such as administrative coordination and lecturer-student relationships correspond to ESG's principles on support services and teaching quality. Moreover, the emphasis on continuous quality improvement resonates with ISO 21001 and national accreditation criteria, reinforcing RC as a complementary model for institutional quality strategies.

By bridging RC theory with established quality assurance frameworks, this study provides a dual contribution: a theoretical expansion of RC and a practical roadmap for universities seeking compliance with international standards while enhancing student satisfaction.

Limitations and direction for future research

It is important to acknowledge the limitations of this study. The data were collected from a single institution, with varying response rates across faculties and campuses, and within a limited timeframe. As such, the analysis is cross-sectional in nature, which restricts the ability to identify longitudinal trends or changes over time.

Future research should aim to broaden the scope of analysis by increasing the sample size to ensure more comprehensive representation across academic disciplines, incorporating multiple institutions, and conducting longitudinal studies to capture the evolution of relational coordination and its impact on student satisfaction.

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