



INSTRUMENTS TO ASSESS DOCTORAL SUPERVISORY STYLES: DEVELOPMENT AND VALIDATION IN SPANISH- SPEAKING SAMPLES

Javier Sánchez-Rosas*	Universidad Católica de Temuco, Temuco, Chile	jsanchez@uct.cl
Lorena Fernández-Fastuca	Pontificia Universidad Católica Argentina, Buenos Aires, Argentina	lorena_fernandez@uca.edu.ar
Hilda DiFabio de Anglat	Consejo Nacional de Investigaciones Científicas y Técnicas, Mendoza, Argentina	ganglat@gmail.com
Sergio Dominguez-Lara	Universidad de San Martín de Porres, Lima, Perú	sdominguezmpcs@gmail.com

* Corresponding author

ABSTRACT

Aim/Purpose	To develop and validate psychometric scales to assess supervisory styles in doctoral education – directive, guiding, and hands-off – from both supervisor and student perspectives (SSS-S and SSS-s).
Background	Doctoral supervision critically shapes students' progress, well-being, and completion; yet, most studies rely on qualitative or conceptual typologies, and there is no standardized, validated instrument to quantify supervisory styles. Addressing this gap can help programs diagnose practices and align expectations between supervisors and candidates.
Methodology	Two complementary studies were conducted with multi-country, Spanish-speaking doctoral programs. Study 1 established content validity with the assistance of expert judges. Study 2 used online, non-probability sampling to survey 333 supervisors and 510 doctoral students. Instruments were administered, and factor-analytic models (oblique and bifactor) and reliability coefficients were used to evaluate internal structure and consistency.
Contribution	This study introduces the first psychometrically validated instruments to quantify directive, guiding, and hands-off supervisory styles through brief, parallel

Accepting Editor Allyson Kelley | Received: March 12, 2025 | Revised: October 16, November 20, 2025 |
Accepted: November 22, 2025.

Cite as: Sánchez-Rosas, J., Fernández-Fastuca, L., DiFabio de Anglat, H., & Dominguez-Lara, S. (2025). Instruments to assess doctoral supervisory styles: Development and validation in Spanish-speaking samples. *International Journal of Doctoral Studies*, 20, Article 17. <https://doi.org/10.28945/5670>

(CC BY-NC 4.0) This article is licensed to you under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/). When you copy and redistribute this paper in full or in part, you need to provide proper attribution to it to ensure that others can later locate this work (and to ensure that others do not accuse you of plagiarism). You may (and we encourage you to) adapt, remix, transform, and build upon the material for any non-commercial purposes. This license does not permit you to use this material for commercial purposes.

	supervisor and student scales, providing a standardized, scalable approach for programs to diagnose and improve doctoral supervision.
Findings	Our results indicate that supervisory styles are one-dimensional. The internal consistency coefficients estimated for each style were satisfactory. Two instruments were developed, each tailored to assess the three supervisory styles, comprising three subscales with twelve items in each.
Recommendations for Practitioners	Use the instruments to (a) map supervisory-style profiles across programs or departments, (b) target professional development for supervisors (e.g., strengthen guiding behaviors), and (c) facilitate expectation-alignment conversations between supervisors and students.
Recommendations for Researchers	Employ the scales to examine links between supervisory styles and outcomes (e.g., student satisfaction, time-to-degree, well-being), test invariance across disciplines or countries, and evaluate changes in style following training or feedback interventions.
Impact on Society	By enabling evidence-based supervision, these instruments can help universities enhance doctoral learning environments, potentially improving candidate well-being and completion, and thus strengthening research capacity.
Future Research	Validate the instruments in additional languages and contexts; assess predictive validity for academic and psychosocial outcomes; and investigate dyadic (supervisor–student) convergence or divergence and its consequences over time.
Keywords	theses, educational advisers, measurement, doctoral degrees, professional training, higher education

INTRODUCTION

Doctoral supervision is a pivotal educational practice that shapes candidates' progression, well-being, and completion of a PhD. Recent research has documented substantial mental-health concerns among PhD candidates and highlighted organizational conditions that can undermine progress, underscoring the need for effective, evidence-informed supervision (Levecque et al., 2017). The COVID-19 pandemic intensified several of these pressures by disrupting research access, moving supervision online, and delaying degree timelines for a sizable share of doctorate recipients (Wisker et al., 2021).

While prior scholarship has richly described supervisor–doctoral student relationships and proposed when different supervisory approaches may be appropriate, empirical work has relied largely on conceptual typologies or qualitative evidence rather than standardized, validated measurement tools (Boehe, 2016; Gruzdev et al., 2020; Orellana et al., 2016). In practice, programs still lack brief, scalable instruments that quantify supervisory styles in ways that support diagnosis, training, and continuous improvement at scale.

This study introduces the first psychometrically validated instruments to measure directive, guiding, and hands-off supervisory styles. We offer brief, parallel supervisor and student scales that provide a standardized, scalable assessment for programs to monitor and enhance supervisory practices. Building on contingency perspectives of supervision and interpersonal models of the supervisor–student relationship, we operationalize three styles – directive, guiding, and hands-off – and test whether they can be measured reliably from both perspectives (Boehe, 2016; Mainhard et al., 2009).

Beyond filling a measurement gap, quantifying supervisory styles is important because different styles have been linked to doctoral experiences and outcomes (Wollast et al., 2023). Studies suggest that

unsupportive or “hands-off” patterns can jeopardize student satisfaction and are associated with longer expected time-to-degree, whereas constructive guidance relates to more favorable experiences (Gruzdev et al., 2020). In addition, misalignments between supervisors’ and students’ schemas about needs and roles are common and consequential – another reason to gather data from both sides of the relationship (Janssen et al., 2021).

This study aims to develop and validate concise, parallel instruments to assess doctoral supervisory styles from the perspectives of supervisors and students. Specifically, we:

1. Develop brief scales that operationalize three supervisory styles (directive, guiding, hands-off) in supervisor and student scales; and
2. Evaluate content validity (expert review), internal structure (factor analyses), and reliability in multi-country, Spanish-speaking samples.

LITERATURE REVIEW

THESES, DISSERTATIONS, AND SUPERVISION AS A PEDAGOGICAL PRACTICE

In higher education, culminating projects such as theses and dissertations are core to graduate training. A thesis typically refers to a master’s project that demonstrates subject mastery through original research, while a dissertation is a more extensive doctoral project intended to advance knowledge (Jiraneck, 2010; Lovitts, 2005). Although expectations vary by discipline and country, both emphasize independent research and critical thinking as central outcomes of graduate education (Boud & Lee, 2009; Pyhältö et al., 2009). For clarity, we use the term “thesis” as a generic term; however, the instruments developed here are specifically targeted at doctoral supervision.

Consistent with pedagogical perspectives, thesis supervision is a teaching practice in which the supervisor deliberately supports the development of research knowledge and skills through structured activities and guidance (Fernández Fastuca & Wainerman, 2015). This view aligns with mentoring-oriented and relational approaches to research training (Guarimata-Salinas et al., 2024; Janssen et al., 2021). Pedagogy literature also shows that instructors enact styles shaped by beliefs, prior experiences, and didactic principles. Styles comprise both observable actions and the meanings attributed to them, which include conceptions, motivations, and objectives (Cols, 2011; Hoffman & Seidel, 2015; Wollast et al., 2023).

SUPERVISORY STYLES AND THEIR IMPLICATIONS

The literature on supervisory styles largely relies on theoretical categorizations or qualitative studies rather than standardized measurement (Boehe, 2016; Gruzdev et al., 2020). Classifications often span two poles, such as the over-protective supervisor versus the hands-off supervisor (Farji-Brener, 2007; Gruzdev et al., 2020; Mainhard et al., 2009). Other frameworks portray the supervisor as a team leader whose approach ranges from a production-focused stance to one centered on supporting the supervisee (Deuchar, 2008; Khuram et al., 2023; Murphy et al., 2007). Few studies map the full range of mentoring roles and their pedagogical implications (Guarimata-Salinas et al., 2024; Parker-Jenkins, 2016).

Research converges on the idea that supervisors vary along patterns of structure and involvement, and that these patterns relate to doctoral experiences and outcomes. Interpersonal models of the supervisor–student relationship show that the supervisory climate influences engagement and satisfaction (Mainhard et al., 2009). Empirical work indicates that hands-off supervision is associated with lower satisfaction and a longer expected time to degree, whereas guiding patterns align with more favorable experiences (Gruzdev et al., 2020). Misalignments between supervisors’ and students’ schemas about roles and needs can undermine motivation and well-being, which supports collecting perceptions from both sides (Janssen et al., 2021; Pyhältö et al., 2009; Wollast et al., 2023). Following the COVID-19 pandemic, supervision conditions have become more fragile due to disrupted access,

online mentoring, and uneven support, which increases the need for systematic and evidence-based approaches to monitor and improve supervisory practice (Burford et al., 2024; Krumsvik et al., 2024). Institutions are also exploring how to train supervisors more consistently, a trend that underscores the value of actionable measurement for capacity building (Karampelias et al., 2025).

DIRECTIVE, GUIDING, AND HANDS-OFF SUPERVISORY STYLES

Scholarship commonly describes doctoral supervision along a continuum of involvement and structure, which can be captured by three distinct styles: directive, guiding, and hands-off. Each reflects a recognizable pattern of beliefs, role enactment, and recurrent practices in the supervisory relationship (Boehe, 2016; Cols, 2011; Hoffman & Seidel, 2015; Mainhard et al., 2009).

The directive style involves active leadership in the design and pacing of the thesis, with supervisors demonstrating, explaining, and prescribing specific activities. It typically features frequent meetings, detailed standards, and close monitoring based on an assumption that early-stage doctoral candidates require strong structure and external regulation (Fernández Fastuca, 2019; Wichmann-Hansen & Herrmann, 2017; Wollast et al., 2023). In contingency terms, directive practices may be appropriate when tasks are novel, stakes are high, or when students need clarity to progress (Boehe, 2016).

The guiding style adopts a mentorship stance that scaffolds autonomy while maintaining purposeful structure. Supervisors emphasize dialogue, formative feedback, and co-regulation of goals and processes, and remain responsive to students' academic and emotional needs, including periods of frustration or blockage (Fernández Fastuca, 2019; Murphy et al., 2007; Parker-Jenkins, 2016; Wollast et al., 2023). This balance of structure and autonomy support is associated with more favorable doctoral experiences in several studies (Gruzdev et al., 2020; Mainhard et al., 2009).

The hands-off style is characterized by minimal involvement and scarce feedback, often confined to initial administrative setup and end-stage evaluation, with limited engagement in the intervening process (Farji-Brener, 2007; Gruzdev et al., 2020). Low-involvement patterns are often associated with lower satisfaction and a longer expected time to degree (Gruzdev et al., 2020).

These styles rarely appear in pure form. Supervisory behavior tends to be fluid and contingent on thesis stage, disciplinary norms, topic expertise, and student characteristics, including gender dynamics and evolving competence over time (Boehe, 2016; Fernández Fastuca et al., 2023). From a pedagogical perspective, styles could be decomposed into three complementary dimensions that help clarify how they manifest in practice: conceptions about students and supervision, role positions enacted in the relationship, and actions as recurring supervisory practices such as setting milestones and providing formative feedback (Cols, 2011; Hoffman & Seidel, 2015; Murphy et al., 2007; Orellana et al., 2016; Parker-Jenkins, 2016). Recent contributions also point to related constructs of involvement, autonomy support, and structure, which are relevant to doctoral supervision and for which short measures exist, reinforcing the need to understand how these elements cohere within identifiable patterns of style (Van der Linden et al., 2018; Wollast et al., 2023).

THE NEED FOR INSTRUMENT DEVELOPMENT

The supervision literature offers rich conceptual typologies and qualitative accounts, yet programs still lack brief, standardized instruments that quantify supervisory styles in ways that directly support diagnosis, training, and continuous improvement (Boehe, 2016; Gruzdev et al., 2020). Existing tools tend to capture either interpersonal climate or need support rather than supervisory style patterns per se, which limits actionable benchmarking and capacity building. For example, the Questionnaire on Supervisor–Doctoral Student Interaction focuses on perceived interpersonal style in the dyad, and the Doctorate-Related Need Support and Need Satisfaction short scales assess need support and satisfaction, not supervisory styles as such (Mainhard et al., 2009; Van der Linden et al., 2018).

Managerial style also contributes to misalignment between supervisors and candidates. Mismatches in schemas about roles and needs can undermine motivation and well-being, which argues for gathering

information from both sides using parallel scales to detect gaps between supervisor self-perceptions and student experiences and to inform expectation alignment and training (Janssen et al., 2021).

The stakes are nontrivial. Hands-off or low-involvement patterns are associated with lower satisfaction and longer expected time to degree, whereas guiding approaches align with more favorable experiences (Gruzdev et al., 2020). Widespread mental-health concerns among doctoral candidates further reinforce the need for structured and autonomy-supportive supervision, as well as reliable style measurement, as practical levers for quality improvement and monitoring of change (Levecque et al., 2017).

Recent system-level disruptions amplify the case for measurement. Post-pandemic analyses describe more fragile supervision conditions, including disrupted access and uneven online mentoring, and institutions are increasingly exploring how to train supervisors systematically (Burford et al., 2024; Karampelias et al., 2025; Krumsvik et al., 2024). A brief, validated, and scalable instrument can supply the actionable evidence these initiatives require, enabling periodic audits of style profiles, targeted professional development, and longitudinal evaluation of change.

Grounding a new instrument in contingency and interpersonal perspectives provides theoretical coherence and practical utility. Contingency accounts emphasize that effective supervision depends on task, stage, and context, which justifies measuring recognizable tendencies such as directive, guiding, and hands-off, and then examining how these tendencies adapt across situations (Boehe, 2016). Interpersonal models clarify why style patterns matter for engagement and satisfaction, and situate style measurement alongside related constructs, such as climate and need for support (Mainhard et al., 2009). A validated style instrument, offered in brief and parallel scales for supervisors and students, would therefore fill a specific gap while integrating with established approaches to studying doctoral supervision (Mainhard et al., 2009; Van der Linden et al., 2018).

THE PRESENT STUDIES

The present studies aimed to develop and validate two instruments to assess supervisory styles from both supervisors' and supervisees' perspectives. Specifically, we measured the three previously defined styles – directive, guiding, and hands-off – across three key dimensions: role, conception, and action. To establish validity and reliability, we conducted two studies: Study 1 examined content validity, ensuring that items accurately represent each construct based on expert and user evaluations, and Study 2 assessed internal structure and reliability, confirming whether items appropriately reflect each style and dimension while minimizing measurement error.

STUDY 1. CONTENT-BASED VALIDITY OF THE SUPERVISORY STYLES SCALES

METHOD

Participants

For the Supervisory Styles Scale-Supervisor (SSS-S), 11 supervisors and seven experts participated, while for the Supervisory Styles Scale-Supervisee (SSS-s), 13 supervisees and six experts were involved. Participants were recruited from Argentina, Mexico, Cuba, and Peru, selected for their active research communities and diverse academic traditions. The study included experts and professionals from natural sciences, social sciences, and humanities to ensure a broad perspective on supervisory styles. Recruitment was purposive through academic networks, reflecting the research team's professional connections in these countries. Recruitment followed a non-probability approach (Creswell & Plano Clark, 2023), which was consistent with the instrument's developmental scope and feasibility constraints.

Supervisees were either currently pursuing or had recently completed their doctorate, while supervisors were actively advising at least one supervisee. Experts were eligible if they had a PhD and peer-reviewed publications on doctoral supervision, research training, or higher education. To prevent sample overlap, experts were assigned to only one of the evaluation processes (SSS-S or SSS-s), while supervisors and supervisees participated exclusively in their respective groups. This separation ensured a clear comparison of item relevance and clarity between the instruments' target populations and experts, following best practices in previous research (Dominguez-Lara, 2017; Sánchez-Rosas et al., 2021). Table 1 presents the distribution of participants by gender, country of origin, academic field, highest level of education, and supervision experience.

Table 1. Descriptions of the samples for the experts' judgments

		SSS-S		SSS-s	
		Supervisors (N = 11)	Experts (N = 7)	Supervisee (N = 13)	Experts (N = 6)
Gender	Male	6	4	5	3
	Female	5	3	8	3
Country of origin	Argentina	11	5	13	3
	Mexico	0	2	0	1
	Cuba	0	0	0	1
	Peru	0	0	0	1
Area of Knowledge	Natural Sciences	5	1	3	0
	Social Sciences	4	6	8	5
	Humanities	2	0	2	1
Educational attainment	Bachelor's degree	0	0	4	0
	Master's degree	0	0	4	1
	Ph D	11	7	5	5
Bachelor degree thesis	M supervised	11	23	2	13
	M ongoing supervision	1	1	1	3
Master degree thesis	M supervised	3	9	1	3
	M ongoing supervision	1	1	1	2
	M supervised	4	8	0	1
PhD thesis	M ongoing supervision	2	2	1	2

Note. M = Mean; Natural sciences = Physics, Chemistry, and Biology participants; Social Sciences = Psychology, Sociology, Education, Psychopedagogy, Political Sciences; Humanities = Literature, Archeology, Theology.

Measures

Supervisory styles scale – supervisor, and supervisory styles scale – supervisee

Two self-reported scales were created in Spanish: the SSS-S and the SSS-s. Each form comprised 24 items organized in three dimensions per style: role (nine items), conceptions (five items), and actions (10 items). Responses used a five-point Likert format from 1 (totally disagree) to 5 (totally agree).

Items were derived from definitions of directive, guiding, and hands-off supervisory styles and were written in parallel for both scales to allow comparison across perspectives.

Item formulation followed a structured approach to ensure clarity and consistency across perspectives. Prompts for the role dimension included “My role as a supervisor is” and “My supervisor considers that their role is.” For the conception dimension, items followed “I consider that the supervisee” and “My supervisor considers that the supervisee.” The action dimension used “As a supervisor, I” and “My supervisor” as prompts. Special attention was given to simplifying content and vocabulary, minimizing item length, and avoiding ambiguity.

Procedure

Participants received an email invitation outlining the study’s objectives, data confidentiality, and voluntary participation. The email included a digital evaluation protocol, which they completed independently and returned via email. Although no direct interaction with researchers occurred, participants could seek clarification if needed.

Participants assessed the clarity and relevance of each item, defining an item as clear if it had a single, unambiguous interpretation and pertinent if it accurately reflected the content being measured. Using a five-point Likert scale (1 = poor to 5 = excellent), they rated both attributes and provided written feedback when necessary. The scale range was (1) poor, (2) fair, (3) good, (4) very good, to (5) excellent. This scale provided a way to measure the intensity of the participants’ evaluations of each item’s clarity and relevance. Participants could add qualitative comments to suggest wording revisions, flag ambiguity, or propose deletions.

This study was approved by an ethics committee, ensuring compliance with ethical guidelines and the proper treatment of participants.

Data analysis

Both intra-group and inter-group evaluations were conducted to assess item clarity and relevance. Intra-group analysis ensured consistency within evaluator categories (e.g., supervisors or supervisees), while inter-group analysis compared assessments across categories (e.g., supervisors vs. supervisees), allowing for cross-validation from both expert and user perspectives. This dual approach enhanced the instrument’s robustness by confirming item clarity and relevance.

To quantify agreement among judges, we applied Aiken’s V coefficient and its confidence intervals (CI), expecting a lower limit above .50 for validity (Dominguez-Lara, 2017). Additionally, differences between supervisors vs. experts and supervisees vs. experts were considered significant if their CI did not include zero (Merino-Soto, 2018). These criteria ensured that retained items met a minimum level of agreement and that ratings between experts and users were statistically similar.

A double-entry matrix was created with 24 items, six styles (three per instrument), and 288 data points. Based on these analyses, items were preserved, modified, or deleted. Items were preserved if their mean rating exceeded 3.5, their CI’s lower limit was above .50, and their CI differences included zero in all styles and instruments. Items were modified if the mean exceeded 3.5, the CI’s lower limit was above .50, but the CI difference did not include zero in at least one style. Items were deleted if the mean was below 3.5, the CI’s lower limit was below .50, and the CI difference did not include zero in at least one style. These criteria supported the refinement of the pools for administration in Study 2. When alternative phrasings were suggested, preference was given to formulations that improved clarity while preserving the intended construct meaning. All content validity analyses were conducted in Jamovi (The Jamovi Project, 2025), and outputs informed the refined item pools that were carried forward to Study 2.

RESULTS

The individual item analysis revealed that three directive-style items met the criteria for deletion (“It is a student,” “To demonstrate to the thesis student the tools they should use in their work,” and “To

solve any problems that arise during the research process”). While conceptually aligned with the style, these items were deemed unclear or insufficiently relevant, with low agreement both within and between groups. Conversely, three items were retained without modification.

Eighteen items had mean scores above 3.5 and a lower CI greater than .50, but their Aiken’s V CI did not include zero, indicating the need for revision. Overall, only 12% of data points showed inconsistencies, with 40 affected points in the supervisor version (21 for pertinence and 19 for clarity) and seven in the supervisee version (three for pertinence and four for clarity).

Table 2 presents mean scores, Aiken’s V values, CI, and differences in Aiken’s V across supervisors, supervisees, and experts. It includes seven role-dimensional items (two deleted), four conception-dimensional items (one deleted), and ten action-dimensional items. The results show consensus among raters regarding item clarity and relevance, with Aiken’s V values high and most mean scores above 3.5. However, group differences emerged where Aiken’s V CI did not include zero, suggesting varying interpretations among supervisors, supervisees, and experts. The action dimension showed greater stability, while the role and conception dimensions required more modifications. The directive style had the highest number of deletions due to a lack of clarity or consensus, indicating a need for clearer conceptualization. Despite these refinements, only 12% of data points showed inconsistencies, supporting the overall validity of the scale while identifying areas for improvement.

Table 2. Expert evaluations of supervisory styles for supervisors, supervisees, and experts

	SSS-S				SSS-s			
	M ₁ -M ₂	V ₁ -V ₂	CI 95% _{01/2}	CI V ₁ /V ₂	M ₃ -M ₄	V ₃ -V ₄	CI 95% _{03/4}	CI V ₃ /V ₄
Mp R _{Dir}	4.75-4.60	.93-.90	.82-.97/.74-.95	-.07/.21	4.78-4.85	.94-.96	.85-.97/.80-.98	-.06/.19
			.77-.94/.70-.94				.78-.94/.78-.96	
Mc	4.46-4.48	.89-.86		-.07/.24	4.58-4.68	.89-.91		-.11/.18
Mp C _{Dir}	4.83-4.63	.95-.90	.85-.98/.75-.96	-.06/.21	4.71-4.91	.92-.97	.82-.96/.82-.99	-.07/.18
			.81-.96/.74-.96				.79-.95/.75-.96	
Mc	4.74-4.60	.93-.89		-.04/.25	4.65-4.66	.90-.91		-.03/.28
Mp A _{Dir}	4.74-4.63	.93-.90	.82-.97/.74-.96	-.09/.19	4.83-4.95	.95-.98	.86-.98/.84-.99	-.09/.14
			.81-.96/.73-.95				.78-.94/.70-.94	
Mc	4.72-4.59	.92-.89		-.08/.21	4.60-4.51	.89-.87		-.05/.25
Mp R _{Gui}	4.81-5.00	.95-1.0	.85-.98/.87-1.0	-.07/.16	4.83-4.97	.95-.99	.86-.97/.85-.99	-.10/.14
			.84-.98/.78-.97				.85-.97/.80-.98	
Mc	4.81-4.75	.94-.93		-.07/.19	4.82-4.83	.95-.95		-.08/.21
Mp C _{Gui}	4.81-4.88	.95-.97	.84-.97/.83-.99	-.05/.19	4.76-4.95	.94-.98	.83-.97/.84-.99	-.11/.15
			.80-.95/.78-.97				.84-.97/.79-.98	
Mc	4.67-4.74	.91-.93		-.05/.22	4.77-4.83	.94-.95		-.06/.20
Mp A _{Gui}	4.81-4.92	.94-.98	.85-.98/.84-.99	-.06/.17	4.77-4.88	.94-.96	.84-.97/.81-.99	-.08/.16
			.84-.97/.75-.96				.82-.96/.77-.97	
Mc	4.76-4.65	.93-.91		-.06/.22	4.71-4.75	.92-.93		-.09/.19
Mp R _{Han}	4.93-4.32	.98-.82	.88-.99/.65-.92	.01/.33	4.60-4.64	.89-.90	.79-.94/.74-.96	-.07/.26
			.86-.98/.62-.90				.81-.96/.82-.99	
Mc	4.85-4.24	.96-.80		.01/.33	4.68-4.90	.91-.97		-.06/.19
Mp C _{Han}	4.98-4.49	1.0-.86	.91-1.0/.70-.94	.01/.29	4.90-4.79	.97-.94	.88-.99/.74-.96	-.07/.18
			.90-.99/.70-.94				.81-.94/.77-.96	
Mc	4.98-4.49	.99-.86		.00/.29	4.65-4.70	.91-.92		-.14/.14

	SSS-S				SSS-s			
Mp	4.95-4.30	.98-.82	.89-.99/.64-.92	.02/.34	4.76-4.71	.93-.92	.83-.97/.76-.96	-.04/.23
A _{Han}			.87-.98/.64-.92				.82-.96/.79-.97	
Mc	4.88-4.30	.97-.82		.00/.32	4.73-4.78	.93-.94		-.08/.20

Note. Mp = mean of the pertinence, Mc = mean of the clarity, M = Mean, V = Aiken's V, CI = confidence intervals; R = role, C = conception, A = action; Dir = directive, Gui = guiding, Han = hands-off. The subscripts 1, 2, 3, and 4 indicate that the results belong to the supervisors and experts of judgment of the SSS-S and supervisee and experts of judgment of the SSS-s, successively.

DISCUSSION

This study provides strong evidence of content validity for two instruments assessing supervisory styles in doctoral education. The high agreement among intra- and inter-group judges (88% of data points) confirms the clarity and relevance of most items (Dominguez-Lara, 2017; Merino-Soto, 2018). However, modifications were necessary, particularly in the role and conception dimensions, suggesting that these aspects of supervisory styles may be more nuanced and open to interpretation.

The directive style required the highest number of deletions due to interpretation inconsistencies, highlighting challenges in defining its boundaries within a structured measurement framework. In contrast, the action dimension exhibited greater stability, reinforcing the idea that concrete supervisory behaviors are more easily identifiable than conceptual or role-based elements (Guarimata-Salinas et al., 2024; Parker-Jenkins, 2016).

With only 12% of items requiring revision, the instrument remains highly robust. The retained high-quality items provide a strong foundation for further validation in Study 2, which examined internal structure and reliability to refine the assessment of supervisory styles.

STUDY 2. INTERNAL STRUCTURE AND RELIABILITY OF THE SUPERVISORY STYLES SCALES

METHOD

Participants

Two independent samples of individuals from Spanish-speaking doctoral programs participated in Study 2. The SSS-S was completed by 333 supervisors (Mage = 51.19, SD = 10.15), and the SSS-s by 510 doctoral students (Mage = 34.63, SD = 7.06). Both scales were administered in Spanish. Eligibility requires self-identifying as a current doctoral supervisor (actively advising $\geq$ one thesis) or as a current/recent doctoral student. Participants were self-recruited and self-selected through open calls distributed via email and social networks, and the sampling strategy was non-probabilistic (Creswell & Plano Clark, 2023). The country focus reflects the research team's institutional locations and collaboration networks, which facilitated access to the target populations. Considering this recruitment approach, no claims are made regarding national representativeness; the findings should be interpreted in light of the participating contexts. Information on full-time versus part-time student status was not collected.

A demographic overview is presented in Table 3. In the supervisor sample, 43% identified as female, whereas in the student sample 32% identified as female. With respect to country of origin or residence, the largest proportions were from Argentina (80.2% among supervisors; 86.5% among students). Additional participation was recorded from Chile, Mexico, Colombia, Cuba, Spain, Ecuador, Peru, Puerto Rico, Uruguay, and Venezuela. Regarding academic field, supervisors most frequently reported Social Sciences (52%), followed by Natural Sciences (40%) and Humanities (8%). In the student sample, the Natural Sciences were most represented (51%), followed by the Social Sciences (34%) and the Humanities (15%). These characteristics indicate a predominantly Argentine, Spanish-

speaking cohort with broad disciplinary coverage, which provides relevant diversity for instrument validation while reflecting the feasibility constraints of network-based recruitment.

Table 3. Descriptive statistics for the samples

		Supervisors (N = 333)	Supervisees (N = 510)
Gender	Male	190	347
	Female	143	163
Country of origin	Argentina	267	441
	Chile, México	17	22
	Colombia	31	21
	Cuba, Spain, Ecuador	13	24
	Perú, Puerto Rico, Uruguay, Venezuela	5	8
Area of knowledge	Natural Sciences	133	260
	Social Sciences	173	173
	Humanities	27	76
Educational attainment	Bachelor's degree	3	214
	Specialization	0	26
	Master's degree	3	82
	PhD	326	189
Duration of the doctorate	3 years	-	28
	4 years	-	33
	5 years	-	449
Year of study	1st or 2nd year	-	87
	3rd or 4th year	-	133
	5th year	-	112
	Completed 2 years ago or less	-	102
	Completed 3 years ago or more	-	76
Scholarship	Yes	-	434
	No	-	76
PhD thesis	M supervised	1	-
	M ongoing supervision	2	-
	M co-supervised	1	-
	M ongoing co-supervision	3	-
Main activity	Non-academic activity	27	-
	Teaching	93	-
Main activity	Research in a national research institution	143	-
	Investigation in a non-national institution	70	-

Note. M = mean. Natural Sciences = Physics, Chemistry, Biology participants; Social Sciences = Psychology, Sociology Education, Psychopedagogy, Political Sciences; Humanities = Literature, Archeology, Theology.

Measures

Supervisory Styles Scale-Supervisor and Supervisory Styles Scale-Supervisee. Two Spanish-language, parallel self-report instruments were administered: the SSS-S and the SSS-s. Item pools were refined from Study 1, and three supervisory styles were operationalized: directive, guiding, and

hands-off. Each instrument consists of 21 items measuring three dimensions: role (seven items), conception (four items), and action ten items). Participants responded using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), measuring the intensity of their agreement with each statement. The scale ranged from (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, (5) strongly agree. The final items are available from Appendix A to Appendix D.

Procedure

Following Study 1, the refined Spanish-language item pools were programmed as two parallel online questionnaires: the SSS-S and the SSS-s. The survey landing page presented the study overview, eligibility criteria, informed consent, and data use and confidentiality statements. Eligibility required self-identifying as a doctoral supervisor actively advising at least one thesis or as a doctoral student currently enrolled or recently graduated. After consent, respondents selected their role and were routed to the corresponding form. Recruitment used open calls disseminated through institutional mailing lists, professional networks, and social media channels common in the region. Invitations encouraged recipients to share the link within their networks to reach additional supervisors and doctoral students through snowball sampling (Creswell & Plano Clark, 2023). Participation was voluntary and uncompensated.

Before the style items, respondents completed a short demographic module aligned with Table 3 (for example, age, gender, country, academic field, and highest level of education). Information on full-time versus part-time student status was not collected. No claims of population representativeness were made; the procedure sought broad disciplinary and institutional coverage within reachable networks. Data were stored securely and later exported for cleaning and psychometric analyses in Mplus and Jamovi (The Jamovi Project, 2025; Muthén & Muthén, 1998-2017). All procedures complied with institutional ethical standards, including informed consent and confidentiality safeguards.

Data analysis

The internal structure of each instrument was analyzed using two factorial models: (1) oblique and (2) bifactor. The oblique model tested whether the nine correlated factors (three per supervisory style) were statistically associated. Fit indices included Comparative Fit Index ($CFI > .90$), Root Mean Square Error of Approximation ($RMSEA < .08$) (McDonald & Ho, 2002), and Weighted Root Mean Square Residual ($WRMR < 1$) (DiStefano et al., 2018). Factor loadings ($\geq .50$) (Dominguez-Lara, 2018) and Average Variance Extracted ($AVE > .50$) (Hair et al., 2010) assessed how well the supervisory styles explained item variance. For convergent validity, factor correlations were expected to be positive ($> .20$) (Ferguson, 2009). Discriminant validity was analyzed to ensure that inter-factor associations were not so high as to compromise factor distinction. This was verified by confirming that the AVE per factor exceeded the squared inter-factor correlation (ϕ^2).

Given the potential overlap between factors, a bifactor model was also tested, considering general factors (GF, one per style) and specific factors (SF, dimensions). However, due to linear dependence issues, separate bifactor analyses were conducted for each style. This approach examined whether item variance was better explained by a GF or an SF. Indices included hierarchical omega (ω_h) (Zinbarg et al., 2006), hierarchical omega by factor (ω_{hs}), and explained common variance (ECV) (Sijtsma, 2009). A GF was considered dominant if ω_h and ECV exceeded .70, and ω_{hs} was below .30 (Rodriguez et al., 2016).

To ensure concise yet comprehensive instruments, the role and conception factors included three items each (minimum recommended) (Dominguez-Lara & Merino-Soto, 2018; Lloret-Segura et al., 2014), while the action factor, due to its diagnostic importance, contained six items. Items with the highest factor loadings were selected after factor analysis. Construct reliability was estimated using the omega coefficient ($\omega > .70$) (Hunsley & Marsh, 2008). As illustrated in Figure 1, the internal structure was examined by comparing an oblique nine-dimension specification with a style-specific bifactor specification to inform model selection. As summarized in Figure 2, Model 1 tested an oblique three-factor CFA, and fit was evaluated by inspecting indices and loadings. If fit was

unacceptable, a bifactor CFA was estimated and re-evaluated. The final model was selected on fitness and parsimony, and reliability (ω) was computed for each style and each form.

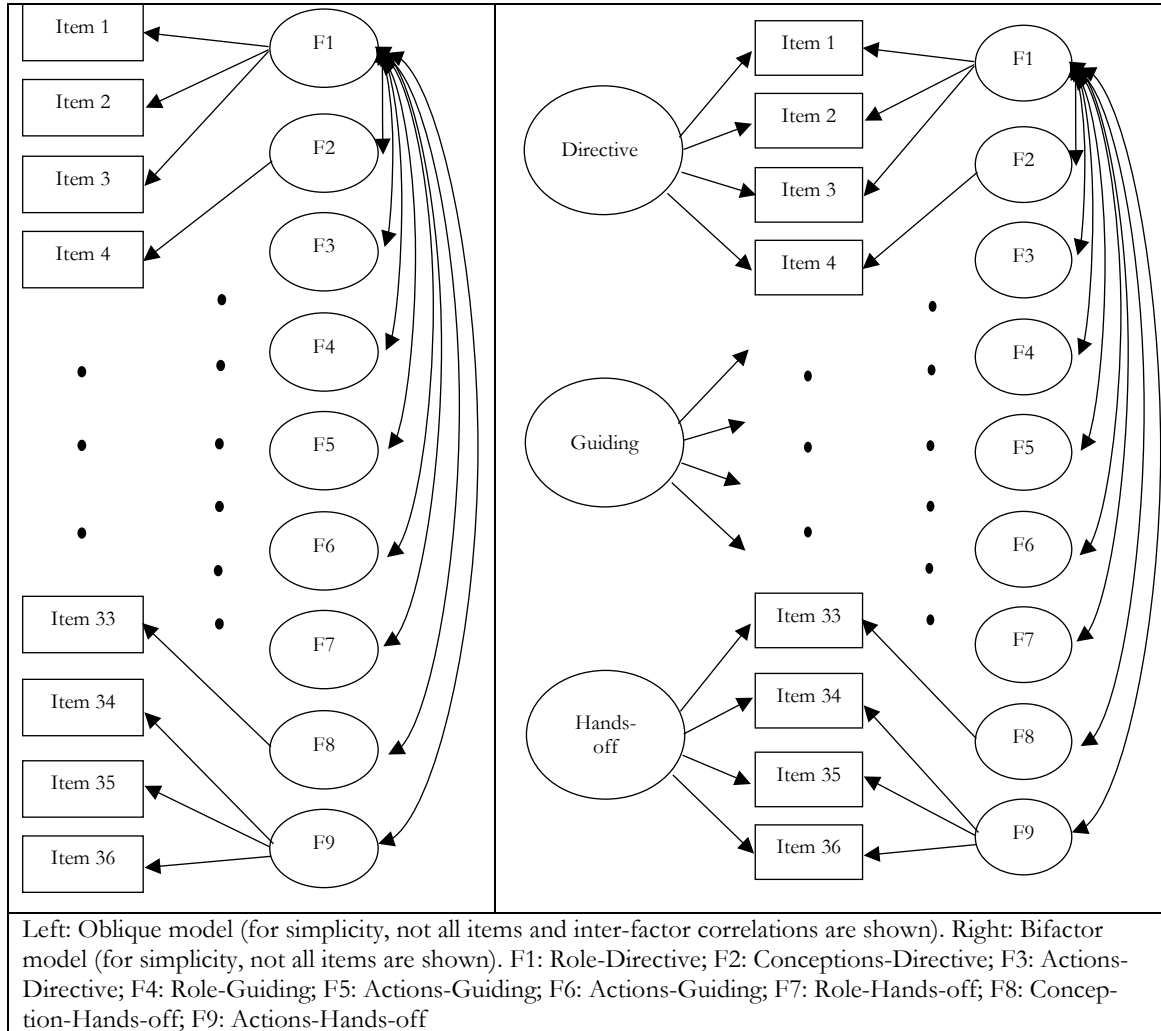


Figure 1. Oblique nine-dimension and bifactor specifications for supervisory styles

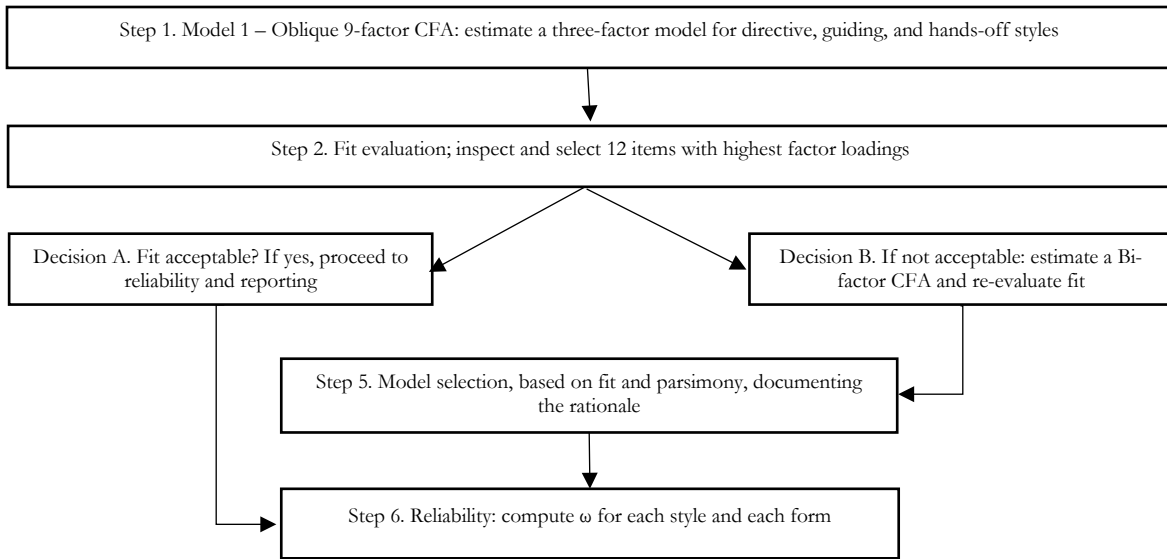


Figure 2. Study 2 data analysis workflow

RESULTS

The scales were first tested with a nine-factor oblique model that treats each style as three correlated dimensions (role, conception, action). Within each style, the three dimensions were moderately associated, and the shared variance exceeded the AVE, indicating poor discriminant validity among the dimensions. In practical terms, this means the three dimensions inside each style tended to move together so strongly that treating them as separate scores would be misleading.

To probe this overlap, bifactor models were then estimated per style, with one general style factor (directive, guiding, or hands-off) and three specific dimension factors. The bifactor results showed that the general style factor dominated the common variance (high ω_h and ECV, with ω_{hs} generally low), which supports interpreting and reporting style-level scores rather than separate dimension scores. Fit was excellent for students across styles. For supervisors, hands-off showed excellent fit, whereas directive and guiding showed only moderate fit, reinforcing the decision to privilege a single style score per style.

Reliability, indexed by McDonald's ω , was adequate for all three style subscales in both scales, indicating that the style-level scores are internally consistent and suitable for research and program diagnostics. In sum, the evidence supports a three-style representation (directive, guiding, hands-off) with one score per style on each form (12 items), rather than separate scores for role, conception, and action within styles.

Internal structure and reliability

The nine-factor oblique model. This model aimed to assess whether the instrument represents nine related but distinct factors. However, poor fit indices were observed in both the supervisor version (CFI = .84; RMSEA = 0.047; WRMR = 1.521) and the supervisee version (CFI = .82; RMSEA = 0.069; WRMR = 2.022).

Factor loadings were adequate (λ average > .55) in both versions, though the AVE per factor met the minimum threshold (< .50) inconsistently. Regarding convergent validity, the three factors (conception, role, and action) within each supervisory style (directive, guiding, hands-off) were moderately associated. However, their shared variance exceeded the AVE, indicating poor discriminant validity and suggesting overlap between dimensions, preventing isolated interpretation of each. This may indicate the presence of a general factor explaining the variance among highly correlated factors.

Bifactor model. Given the previous results, a bifactor analysis was conducted to determine whether statistical relationships between specific factors were better explained by a general factor.

For the supervisor version, model fit was moderate for the directive style (CFI = .93; RMSEA = 0.120; WRMR = 1.238) but excellent for the hands-off style (CFI = .98; RMSEA = 0.042; WRMR = 0.628). The ω_h and ECV values, along with ω_{hs} exceeding .30 in only two cases, suggest that the GF is more representative than specific factors (Table 3).

Due to model identification issues, the bifactor analysis could not be applied to the guiding style. Instead, a confirmatory factor analysis (CFA) with three oblique factors showed acceptable fit (CFI = .93; RMSEA = 0.092; WRMR = 1.096). However, this model did not provide strong evidence for internal discriminant validity (Table 4). In contrast, a one-dimensional model demonstrated acceptable fit and reliability (CFI = .92; RMSEA = 0.099; WRMR = 1.216).

To facilitate interpretation, Table 4 presents a concise version of the final instruments. Columns 1, 6, and 11 indicate each item's final position in the instrument. For each style, the first three items correspond to *role*, the next three to *conception*, and the last six to *actions*. This 12-item set per style was selected after preliminary oblique-factor analyses to retain the highest-loading items within each dimension, consistent with minimum per-dimension item recommendations (Dominguez-Lara & Merino-Soto, 2018; Lloret-Segura et al., 2014). The remaining columns report standardized bifactor loadings, organized by style and dimension as follows: Directive (Columns 1–5: GF, Role, Conception, Actions), Hands-off (Columns 6–10), and Guiding (Columns 11–15). Higher loadings on the GF indicate stronger alignment with the style, whereas comparatively weak specific-factor loadings support scoring at the style level.

**Table 4. Structural analysis of the SSS-S using bifactor and factor models:
Directive, hands-off, and guiding styles**

Directive					Hands-off					Guiding				
Item	GF	R	C	A	Item	GF	R	C	A	Item	GF	R	C	A
1	.56	.37			65	1	.95			1	.55	.60		
2	.64	.57			67	2	.41			2	.54	.58		
3	.68	.27			70	3	.41			3	.64	.69		
4	.58		.49		71	4		.44		4	.47		.51	
5	.47		.65		72	5		.45		5	.66		.72	
6	.46		.49		73	6		.35		6	.68		.75	
7	.63			.42	75	7			.03	7	.66			.67
8	.60			.35	76	8			.06	8	.51			.53
9	.68			.47	78	9			.44	9	.50			.52
10	.70			-.19	79	10			.48	10	.73			.76
11	.64			-.51	80	11			.72	11	.63			.65
12	.64			-.19	81	12			.07	12	.71			.72
										RGui	-	-	.76	.66
ω_h	.85				ω_h	.78				CGui	-	.87	-	.64
ω_{hs}		.23	.42	.01	ω_{hs}		.52	.27	.15	AGui	-	.81	.80	-

Directive					Hands-off					Guiding				
Item	GF	R	C	A	Item	GF	R	C	A	Item	GF	R	C	A
ECV	.66				ECV	.60				AVE	-	.39	.45	.42
ω	.92	.80	.79	.85	ω	.92	.81	.72	.89	ω	.86	.66	.70	.81

Note. The Item column indicates each item's final position in the instrument. GF = General factor loadings; R = Role specific-factor loadings, C = Conception specific-factor loadings, A = Action specific-factor loadings. ECV = Explained Common Variance by the GF. AVE = Average Variance Extracted. ω_h = General Hierarchical Omega. ω_{hs} = Hierarchical Omega by Factor. ω = Omega Reliability Coefficient. For the Guiding style, the diagonal (bottom of the table) shows shared variances between factors, while the lower diagonal presents factor correlations.

Across styles, items show substantial loadings on the general factor and comparatively small specific factor loadings, which indicates that the core variance is captured at the style level. This pattern supports computing one score per style rather than separate Role, Conception, and Actions scores.

For the supervisee version, statistical fit was excellent across all supervisory styles: directive (CFI = .97; RMSEA = .056; WRMR = .718), guiding (CFI = .99; RMSEA = .057; WRMR = .636), and hands-off (CFI = .98; RMSEA = .054; WRMR = .682). Additionally, ω_h and ECV values, along with ω_{hs} exceeding .30 in only two cases, suggest that the general factor is more representative than the specific factors (Table 5 follows the same conventions used above).

**Table 5. Structural analysis of the SSS-s using the bifactor model:
Directive, guiding, and hands-off styles**

Directive					Guiding					Hands-off				
Item	GF	R	C	A	Item	GF	R	C	A	Item	GF	R	C	A
1	.75	-.53			1	.70	.45			1	.69	.63		
2	.73	.05			2	.75	.59			2	.54	.60		
3	.49	.20			3	.73	.31			3	.55	.52		
4	.54		.51		4	.54		.80		4	.68		.47	
5	.67		.56		5	.74		.19		5	.58		.26	
6	.58		.23		6	.71		.10		6	.42		.43	
7	.48			.34	7	.74			.18	7	.66			.07
8	.42			.51	8	.68			.53	8	.66			.41
9	.47			.53	9	.62			.46	9	.74			.36
10	.44			.38	10	.69			.15	10	.71			-.19
11	.44			.55	11	.68			.12	11	.71			.08
12	.38			.50	12	.69			.13	12	.80			-.22
ω_h	.72				ω_h	.87				ω_h	.86			
ω_{hs}		.01	.27	.43	ω_{hs}		.25	.19	.11	ω_{hs}		.43	.23	.01
ECV	.60				ECV	.74				ECV	.72			
ω	.89	.75	.79	.81	ω	.94	.90	.84	.88	ω	.93	.87	.73	.88

Note. The Item column indicates the original order of each item in the survey. GF = General factor loadings; R = Role factor loadings, C = Conception factor loadings, A = Action factor loadings. ECV = Explained Common Variance by the GF. ω_h = General Hierarchical Omega. ω_{hs} = Hierarchical Omega by Factor. ω = Omega Reliability Coefficient.

DISCUSSION

This study examined the internal structure and consistency of two instruments designed to assess supervisory styles by comparing oblique and bifactor models.

The nine-factor oblique model showed similar fit patterns across factor loadings, as well as convergent and discriminant validity. In contrast, the bifactor model, which incorporated a general factor for each style, explained item variance more effectively than the specific factor, except for the guiding style in the supervisor version (Rodríguez et al., 2016). However, CFA supported a single explanatory factor for that case (DiStefano et al., 2018; Dominguez-Lara, 2018; Hair et al., 2010; McDonald & Ho, 2002). Overall, the internal consistency coefficients were satisfactory for all styles (Hunsley & Marsh, 2008).

GENERAL DISCUSSION

This study developed and validated two instruments to assess supervisory styles in doctoral education, treating supervision as a pedagogical practice and distinguishing three styles (Cols, 2011; Fernández Fastuca, 2019). Unlike previous studies that relied on qualitative descriptions or conceptual classifications (Boehe, 2016; Gruzdev et al., 2020; Orellana et al., 2016), this research offers the first psychometrically validated tools for measuring supervisory styles. This innovation provides a standardized, replicable, and quantitative approach to assessing doctoral supervision. In addition, the availability of brief, parallel scales in Spanish directly addresses program needs for scalable diagnostics and complements instruments that focus on supervision climate or need support rather than style patterns per se (Mainhard et al., 2009; Van der Linden et al., 2018). The contribution also aligns with recent developments in doctoral education associated with hybrid and distance supervision and with growing efforts to formalize supervisor training at the institutional level (Burford et al., 2024; Karampelias et al., 2025; Krumsvik et al., 2024).

A key advancement of this study is the development of separate yet complementary instruments for supervisors and supervisees. This bidirectional approach captures both the supervisor's intended guidance and the student's lived experience. By structuring supervisory styles around three core dimensions – role, conception, and action – the study ensures a comprehensive evaluation of supervisory behaviors (Murphy et al., 2007; Orellana et al., 2016; Parker-Jenkins, 2016). At the same time, evidence from Study 2 supported scoring at the style level rather than at the dimension level, given that a general factor within each style accounted for most of the common variance in item responses.

These validated instruments lay the groundwork for future research on how supervisory styles impact academic outcomes, student well-being, and persistence (Khuram et al., 2023; Martínez García et al., 2025). They serve as diagnostic tools for supervisors and institutions while contributing to theoretical advancements in doctoral supervision. To enhance transparency and reproducibility, the full wording and final ordering of items for both scales are provided in an Appendix, enabling independent use and external validation.

Structure and classification of supervisory styles

Findings reveal that supervisors' conceptions of the student, self, and actions are interconnected aspects of guidance (Boehe, 2016; Devos et al., 2016; Fernández Fastuca, 2019). These results align with Wollast et al. (2023) and Van der Linden et al. (2018), who define supervisory styles along three dimensions: involvement, autonomy, and structure. The directive style emphasizes control, the guiding style balances structure and autonomy, while the hands-off style reflects neglect rather than involvement. Consistent with this literature, the nine-factor oblique specification showed limited

discriminant evidence among role, conception, and action within each style, whereas bifactor solutions indicated that a general style factor dominated shared variance. This supports computing one score per style and using the parallel scales to compare supervisor and student perspectives in program diagnostics.

A general supervisory style factor emerged, explaining item variability better than a specific factor (Rodríguez et al., 2016). This suggests that extreme profiles are unlikely, as supervisors align their conceptions, roles, and actions within a consistent approach (Murphy et al., 2007; Orellana et al., 2016; Parker-Jenkins, 2016). Nuanced differences across scales were also observed, with students showing consistently strong fit across styles and supervisors showing excellent fit for hands-off, acceptable for guiding, and directive, which is informative for tailoring training content.

Two validation studies confirmed that supervisory styles are cohesive constructs rather than fragmented elements, providing strong empirical evidence for their measurement. Study 1 established content validity through expert and participant evaluations, while Study 2 confirmed internal structure and reliability, reinforcing the stability of supervisory styles as constructs. Taken together, this pattern demonstrates both conceptual coherence and practical feasibility for use in continuous improvement cycles.

Limitations and future research directions

A key achievement of this study is the inclusion of both supervisor and student perspectives (Orellana et al., 2016). However, a limitation is that supervisors and students did not form dyadic pairs, meaning that students evaluated different individuals than those self-assessed by supervisors. Future research should explore whether their assessments align. Sampling was non-probabilistic and relied on self-selection via academic networks; consequently, coverage and self-selection biases cannot be ruled out. Participants were predominantly from Argentina, with additional Spanish-speaking countries represented, so generalization beyond these contexts should be made cautiously. The instruments were administered in Spanish, and measurement invariance across languages remains to be tested. Information on full-time versus part-time status was not collected, limiting analysis of heterogeneity by enrollment intensity. The cross-sectional design precludes claims about temporal stability or sensitivity to change, and test–retest reliability was not estimated. Finally, predictive and incremental validity relative to adjacent constructs were not examined in this study and warrant future assessment.

Additionally, this study did not examine the predictive validity of supervisory styles. Future research should investigate their associations with student well-being, persistence intentions, and mental health (Hermana et al., 2025; Martínez García et al., 2025; Wollast et al., 2018, 2023). Comparative analyses across academic disciplines, countries, gender groups, and scholarship status (Fernández Fastuca et al., 2023; Lozano-Blasco et al., 2024; Wollast et al., 2018) would further validate these instruments. Priorities include testing measurement invariance across countries and languages; estimating test–retest reliability and responsiveness to supervisor training; conducting response-process studies to document how items are interpreted; and examining fairness through differential item functioning analyses. It is also important to study adoption and behavior change, that is, whether regular feedback plus training leads supervisors to modify their mentoring practices and whether programs use the parallel scales to align expectations and monitor improvement over time (Karampelias et al., 2025).

Expanding the sample size and ensuring a diverse participant pool would enhance generalizability. Longitudinal studies could provide insights into how supervisory styles evolve, while qualitative methods, such as in-depth interviews, could capture nuanced supervision experiences. Multi-site and cross-national collaborations would be especially valuable to extend the evidence base beyond the current settings.

Practical and theoretical applications

These instruments offer a valuable tool for doctoral education, benefiting supervisors, students, and program administrators. Systematic implementation could assess and refine supervisory practices to improve doctoral experience. Program-level dashboards can summarize style profiles at aggregate levels, highlight units with concentrated hands-off patterns, and inform targeted faculty development. Parallel administration at milestones can surface misalignments between supervisor self-perceptions and student experiences, supporting expectation alignment and supervisory agreements. Use should remain developmental and confidential to avoid high-stakes decisions at the individual level.

In practice, supervisors can use these tools to reflect on their approach, identify areas for improvement, and tailor their guidance (Devos et al., 2016). Students can articulate their needs and expectations, fostering transparent communication with supervisors (Orellana et al., 2016). Doctoral program administrators can use these tools to monitor supervision quality, identify patterns, and implement targeted interventions, such as faculty training programs. Because the scales are brief and parallel, they are practical to embed into existing quality-assurance workflows and post-pandemic supervision initiatives in hybrid or distance formats (Burford et al., 2024; Krumsvik et al., 2024).

Applying these instruments to both supervisors and students simultaneously allows for a comprehensive assessment of doctoral supervision. Comparing responses helps identify strengths, gaps, and areas for improvement, ensuring harmonious collaboration that benefits both supervisor professional development and student academic progress (Devos et al., 2016). Institutions may also pilot periodic feedback loops in which summarized findings guide mentoring workshops and policy adjustments, followed by re-assessment to evaluate change.

From a theoretical perspective, using these instruments with advanced statistical methods (Asparouhov et al., 2018) allows for cross-sectional and longitudinal analyses, providing insights into doctoral supervision dynamics. This approach facilitates research on how supervisory styles impact well-being, motivation, and persistence in doctoral studies (Åkerlind & McAlpine, 2017; Janssen et al., 2021; Wollast et al., 2023). Future work can examine incremental validity over climate and need-support measures, and specify mechanisms linking style patterns to doctoral trajectories, thereby situating style measurement within broader frameworks of motivation and professional socialization.

By offering an empirically validated approach to assessing doctoral supervision, this study provides a foundation for evidence-based improvements in student support, supervision quality, and doctoral success. Within the study's boundaries, the instruments constitute a practical starting point for routine monitoring and for evaluating supervisor training in diverse contexts.

CONCLUSIONS

This study developed and validated concise, parallel instruments to assess doctoral supervisory styles from supervisor and student perspectives. Specifically, the goals were to operationalize three styles—directive, guiding, and hands-off—into brief supervisor and student scales, and to evaluate content validity, internal structure, and reliability in Spanish-speaking samples.

Through two studies, the instruments met these aims. Study 1 established content validity through expert and user judgments. Study 2 supported a three-style representation in both scales. A nine-factor oblique model that treated role, conception, and action as separate dimensions within each style showed limited discriminant evidence. Bifactor models indicated that a general style factor captured the most common variance, supporting style-level scoring rather than separate dimension scores. Reliability was adequate for all style scores. Fit patterns were consistently strong in the student form and acceptable to strong in the supervisor form.

These results yield psychometrically validated, brief, and parallel tools that can be used for program diagnostics and research. Practically, the scales enable programs to monitor style patterns across perspectives, surface misalignments between supervisors and students, and inform supervisor

development and mentoring workshops. Its use should emphasize developmental feedback and confidentiality, avoiding high-stakes individual decisions.

Future work should test measurement invariance across languages and contexts, estimate test–retest reliability and sensitivity to change, and examine predictive relations with outcomes such as engagement, satisfaction, time to degree completion, and risk of attrition. Studies of adoption and behavior change can assess whether routine feedback, combined with training, helps shift supervisory practices. Expanding validation to additional countries and disciplines will strengthen generalizability and inform policy and practice beyond the present settings.

In summary, the instruments offer an accessible, standardized, and parallel approach to measuring supervisory styles, thereby advancing both practical improvements in doctoral supervision and theoretical clarity about how supervisory tendencies are organized and assessed.

REFERENCES

- Åkerlind, G., & McAlpine, L. (2017). Supervising doctoral students: Variation in purpose and pedagogy. *Studies in Higher Education*, 42(9), 1686–1698. <https://doi.org/10.1080/03075079.2015.1118031>
- Asparouhov, T., Hamaker, E. L., & Muthén, B. (2018). Dynamic structural equation models. *Structural Equation Modeling: A Multidisciplinary Journal*, 25(3), 359–388. <https://doi.org/10.1080/10705511.2017.1406803>
- Boehe, D. (2016). Supervisory styles: A contingency framework. *Studies in Higher Education*, 41(3), 399–414. <https://doi.org/10.1080/03075079.2014.927853>
- Boud, D., & Lee, A. (Eds.). (2009). *Changing practices of doctoral education*. Routledge. <https://doi.org/10.4324/9780203870488>
- Burford, J., McChesney, K., Frick, L., & Khoo, T. (2024). Conceptualising distance doctoral study after COVID-19: Are we post-distance now? *Distance Education*, 46(3), 496–513. <https://doi.org/10.1080/01587919.2024.2388216>
- Cols, E. (2011). *Estilos de enseñanza. Sentidos personales y configuraciones de acción tras la semejanza de las palabras*. [Teaching Styles: Personal Meanings and Action Configurations Behind the Similarity of Words]. Homo Sapiens.
- Creswell, J., & Plano Clark, V. (2023). Revisiting mixed methods research designs twenty years later. In C. N. Poth (Ed.), *The Sage handbook of mixed methods research design* (pp. 21–36). Sage. <https://doi.org/10.4135/9781529614572.n6>
- Deuchar, R. (2008). Facilitator, director or critical friend? Contradiction and congruence in doctoral supervision styles. *Teaching in Higher Education*, 13(4), 489–500. <https://doi.org/10.1080/13562510802193905>
- Devos, C., Boudrenghien, G., Van der Linden, N., Frenay, M., Azzi, A., Galand, B., & Klein, O. (2016). Misfits between doctoral students and their supervisors: (How) are they regulated? *International Journal of Doctoral Studies*, 11, 467–486. <https://doi.org/10.28945/3621>
- DiStefano, C., Liu, J., Jiang, N., & Shi, D. (2018). Examination of the weighted root mean square residual: Evidence for trustworthiness? *Structural Equation Modeling: A Multidisciplinary Journal*, 25(3), 453–466. <https://doi.org/10.1080/10705511.2017.1390394>
- Dominguez-Lara, S. (2017). Construcción de una escala de autoeficacia para la investigación: Primeras evidencias de validez. [Development of a research self-efficacy scale: Preliminary evidence of validity]. *Revista Digital de Investigación en Docencia Universitaria*, 11(2), 308–322. <https://doi.org/10.19083/ridu.11.514>
- Dominguez-Lara, S. (2018). Propuesta de puntos de corte para cargas factoriales: Una perspectiva de fiabilidad de constructo [Proposal for cut-offs for factor loadings: A construct reliability perspective]. *Enfermería Clínica*, 28(6), 401–402. <https://doi.org/10.1016/j.enfcli.2018.06.002>
- Dominguez-Lara, S., & Merino-Soto, C. (2018). Dos versiones breves del Big Five Inventory en universitarios peruanos: BFI-15p y BFI-10p [Two brief versions of the Big Five Inventory in Peruvian university

- students: BFI-15p and BFI-10p]. *Liberabit Revista Peruana de Psicología*, 24(1), 81–96. <https://doi.org/10.24265/liberabit.2018.v24n1.06>
- Farji-Brener, A. G. (2007). Ser o no ser director, esa es la cuestión: Reflexiones sobre cómo (no) debería ser el desarrollo de una tesis doctoral [Being a director or not being a director, that is the question: reflections on how (not) should be the development of a doctoral thesis]. *Ecología Austral*, 17(2), 287–292. <https://bit.ly/3y9F2WK>
- Ferguson, C. J. (2009). An effect size primer: A guide for clinicians and researchers. *Professional Psychology, Research and Practice*, 40(5), 532–538. <https://doi.org/10.1037/a0015808>
- Fernández Fastuca, L. (2019). Estilos de dirección de tesis en la formación doctoral en programas de ciencias sociales y ciencias biológicas [Thesis management styles in doctoral training in Social Sciences and Biological Sciences programs]. *Espacios en Blanco*, 2(29), 201–217. <https://bit.ly/3HEEWtk>
- Fernández Fastuca, L., Sánchez-Rosas, J., Rojas-Torres, L., & Difabio de Anglat, H. (2023). Los estilos de dirección de tesis: Diferencias según género, área de conocimiento y etapa en la tesis doctoral [Styles of thesis supervision: Differences by gender, areas of knowledge and stage of the doctoral dissertation]. *Revista Mexicana de Investigación Educativa*, 28(98), 913–935. http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1405-66662023000300913&lng=es&tln=es
- Fernández Fastuca, L., & Wainerman, C. (2015). La dirección de tesis de doctorado: ¿una práctica pedagógica? [The doctoral thesis management: A pedagogical practice?] *Perfiles Educativos*, 37(148), 156–171. <https://doi.org/10.22201/iisue.24486167e.2015.148.49319>
- Gruzdev, I., Terentev, E., & Dzharfarova, Z. (2020). Superhero or hands-off supervisor? An empirical categorization of PhD supervision styles and student satisfaction in Russian universities. *Higher Education*, 79(5), 773–789. <https://doi.org/10.1007/s10734-019-00437-w>
- Guarimata-Salinas, G., Carvajal, J. J., & Jiménez López, M. D. (2024). Redefining the role of doctoral supervisors: a multicultural examination of labels and functions in contemporary doctoral education. *Higher Education*, 88(4), 1305–1330. <https://doi.org/10.1007/s10734-023-01171-0>
- Hair, J. F., Black, W., Babin, B., Anderson, R. E., & Tatham, R. L. (2010). *Multivariate data analysis*. Prentice Hall.
- Hermana, D., Ramdahan, R. M., Kisahwan, A., & Winarno, A. (2025). The ripple effects of toxic supervision on academic performance in doctoral programs: Investigating mediation and moderation mechanisms. *International Journal of Doctoral Studies*, 20, 1–20. <https://doi.org/10.28945/5437>
- Hoffman, B. H., & Seidel, K. (2015). Measuring teachers' beliefs: For what purpose? In H. Fives, & M. G. Gill (Eds.), *International handbook of research on teachers' beliefs* (pp. 106–127). Routledge.
- Hunsley, J., & Marsh, E. J. (2008). Developing criteria for evidence-based assessment. In J. Hunsley & E. J. Mash (Eds.), *A guide to assessments that work* (pp. 3–14). Oxford University Press. <https://doi.org/10.1093/med:psych/9780195310641.003.0001>
- The Jamovi Project. (2025). *Jamovi (Version 2.6)* [Computer software]. <https://www.jamovi.org>
- Janssen, S., van Vuuren, M., & de Jong, M. D. T. (2021). Sensemaking in supervisor-doctoral student relationships: Revealing schemas on the fulfillment of basic psychological needs. *Studies in Higher Education*, 46(12), 2738–2750. <https://doi.org/10.1080/03075079.2020.1804850>
- Jiranek, V. (2010). Potential predictors of timely completion among dissertation research students at an Australian Faculty of Sciences. *International Journal of Doctoral Studies*, 5, 1–13. <https://doi.org/10.28945/709>
- Karampelias, C., Stigmar, M., & Auer, N. (2025). Behind the scenes of doctoral success: A mixed methods approach to exploring PhD supervision courses in Swedish higher education institutions. *Studies in Higher Education*, 50(6), 1138–1150. <https://doi.org/10.1080/03075079.2024.2364066>
- Khuram, W., Wang, Y., Ali, M., Khalid, A., & Han, H. (2023). Impact of supportive supervisor on doctoral students' research productivity: The mediating roles of academic engagement and academic psychological capital. *Sage Open*, 13(3). <https://doi.org/10.1177/21582440231185554>

- Krumsvik, R. J., Røkenes, F. M., Skaar, Ø. O., Jones, L., Solstad, S. H., Salhus, Ø., & Høydal, K. L. (2024). PhD-supervisors experiences during and after the COVID-19 pandemic: A case study. *Frontiers in Education*, 9, 1436521. <https://doi.org/10.3389/feduc.2024.1436521>
- Levecque, K., Anseel, F., De Beuckelaer, A., Van der Heyden, J., & Gisle, L. (2017). Work organization and mental health problems in PhD students. *Research Policy*, 46(4), 868–879. <https://doi.org/10.1016/j.res-pol.2017.02.008>
- Lloret-Segura, S., Ferreres-Traver, A., Hernández-Baeza, A., & Tomás-Marco, I. (2014). El análisis factorial exploratorio de los ítems: una guía práctica, revisada y actualizada [Exploratory item factor analysis: A practical guide revised and up-dated]. *Anales de Psicología*, 30(3), 1151–1169. <https://doi.org/10.6018/analesps.30.3.199361>
- Lovitts, B. E. (2005). Being a good course-taker is not enough: A theoretical perspective on the transition to independent research. *Studies in Higher Education*, 30(2), 137–154. <https://doi.org/10.1080/03075070500043093>
- Lozano-Blasco, R., Romero-Gonzalez, B., & Soto-Sánchez, A. (2024). How to survive the doctorate? A meta-analysis of success in PhD candidates. *Educación XXI*, 27(1), 105–129. <https://doi.org/10.5944/educxx1.36566>
- Mainhard, T., van der Rijst, R., van Tartwijk, J., & Wubbels, T. (2009). A model for the supervisor–doctoral student relationship. *Higher Education*, 58(3), 359–373. <https://doi.org/10.1007/s10734-009-9199-8>
- Martínez García, I., García Martínez, J., Javier Cano García, F., & De Witte, H. (2025). Navigating stress, support and supervision: A qualitative study of doctoral student wellbeing in Norwegian academia. *International Journal of Doctoral Studies*, 20, 1–32. <https://doi.org/10.28945/5413>
- McDonald, R. P., & Ho, M.-H. R. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods*, 7(1), 64–82. <https://doi.org/10.1037/1082-989x.7.1.64>
- Merino-Soto, C. (2018). Intervalos de confianza para la diferencia entre coeficientes de validez de contenido (V Aiken): Una sintaxis SPSS [Confidence interval for difference between coefficients of content validity (Aiken's V): A SPSS syntax]. *Anales de Psicología*, 34(3), 587–590. <https://doi.org/10.6018/analesps.34.3.283481>
- Murphy, N., Bain, J. D., & Conrad, L. (2007). Orientations to research higher degree supervision. *Higher Education*, 53(2), 209–234. <https://doi.org/10.1007/s10734-005-5608-9>
- Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus user's guide* (8th ed.). Muthén & Muthén.
- Orellana, M., Darder, A., Pérez, A., & Salinas, J. (2016). Improving doctoral success by matching PhD students with supervisors. *International Journal of Doctoral Studies*, 11, 87–103. <https://doi.org/10.28945/3404>
- Parker-Jenkins, M. (2016). Mind the gap: Developing the roles, expectations and boundaries in the doctoral supervisor–supervisee relationship. *Studies in Higher Education*, 43(1), 57–71. <https://doi.org/10.1080/03075079.2016.1153622>
- Pyhältö, K., Stubbs, J., & Lonka, K. (2009). Developing scholarly communities as learning environments for doctoral students. *International Journal for Academic Development*, 14(3), 221–232. <https://doi.org/10.1080/13601440903106551>
- Rodriguez, A., Reise, S. P., & Haviland, M. G. (2016). Applying bifactor statistical indices in the evaluation of psychological measures. *Journal of Personality Assessment*, 98(3), 223–237. <https://doi.org/10.1080/00223891.2015.1089249>
- Sánchez-Rosas, J., Dyzenchauz, M., & Dominguez-Lara, S. (2021). Validez de contenido de la escala de autoeficacia colectiva docente [Content validity of the teaching collective self-efficacy scale]. *Revista Argentina de Ciencias del Comportamiento*, 13(1), 59–72. <https://doi.org/10.32348/1852.4206.v13.n1.28132>
- Sijtsma, K. (2009). On the use, the misuse, and the very limited usefulness of Cronbach's alpha. *Psychometrika*, 74(1), 107–120. <https://doi.org/10.1007/s11336-008-9101-0>
- Van der Linden, N., Devos, C., Boudrenghien, G., Frenay, M., Azzi, A., Klein, O., & Galand, B. (2018). Gaining insight into doctoral persistence: Development and validation of doctorate-related need support and

need satisfaction short scales. *Learning and Individual Differences*, 65, 100–111. <https://doi.org/10.1016/j.lindif.2018.03.008>

Wichmann-Hansen, G., & Herrmann, K. J. (2017). Does external funding push doctoral supervisors to be more directive? A large-scale Danish study. *Higher Education*, 74(2), 357–376. <https://doi.org/10.1007/s10734-016-0052-6>

Wisker, G., McGinn, M. K., Bengtsen, S. S. E., Lokhtina, I., He, F., Cornér, S., Leshem, S., Inouye, K., & Löfström, E. (2021). Remote doctoral supervision experiences: Challenges and affordances. *Innovations in Education and Teaching International*, 58(6), 612–623. <https://doi.org/10.1080/14703297.2021.1991427>

Wollast, R., Aelenei, C., Chevalère, J., Van der Linden, N., Galand, B., Azzi, A., Frenay, M., & Klein, O. (2023). Facing the dropout crisis among PhD candidates: The role of supervisor support in emotional well-being and intended doctoral persistence among men and women. *Studies in Higher Education*, 48(6), 813–828. <https://doi.org/10.1080/03075079.2023.2172151>

Wollast, R., Boudrenghien, G., Van der Linden, N., Galand, B., Roland, N., Devos, C., De Clercq, M., Klein, O., Azzi, A., & Frenay, M. (2018). Who are the doctoral students who drop out? Factors associated with the rate of doctoral degree completion in universities. *International Journal of Higher Education*, 7(4), 143–156. <https://doi.org/10.5430/ijhe.v7n4p143>

Zinbarg, R. E., Yovel, I., Revelle, W., & McDonald, R. P. (2006). Estimating generalizability to a latent variable common to all of a scale's indicators: A comparison of estimators for ω_h . *Applied Psychological Measurement*, 30(2), 121–144. <https://doi.org/10.1177/0146621605278814>

APPENDIX A. SUPERVISORY STYLES SCALE-SUPERVISOR

Item	Directive style
	<i>My role as supervisor is:</i>
1	Take responsibility for decision-making.
2	Determine the goals that the supervisee should achieve.
3	Establish the tasks and times for the supervisee to complete them within the pre-established deadlines.
	<i>I consider that the supervisee:</i>
4	Needs direct instruction to develop their knowledge.
5	Requires precise instructions to develop the necessary skills to carry out their thesis.
6	Needs continued supervision from their supervisor or even a more advanced supervisee.
	<i>As supervisor, I:</i>
7	Develop the object of study of the thesis.
8	Write the thesis project together with the supervisee.
9	Design the data collection strategy and instruments.
10	Instruct the supervisee on the ideas to be developed.
11	Instruct the supervisee on the research skills to be acquired.
12	Indicate the supervisee how to solve difficulties.

Note. The item column indicates the sequence in which each item appeared in the survey.

Item	Guiding style
	<i>My role as supervisor is:</i>
1	Guide the supervisee's activities during the development of the thesis.
2	Agree with the supervisee about decision-making.
3	Promote that the supervisee participates in scientific events as a speaker.
	<i>I consider that the supervisee:</i>
4	Develops their knowledge if they receive sufficient guidance.
5	Develops the necessary skills to carry out their thesis with the supervisor's support.
6	Receives constructive feedback from their supervisor.
	<i>As supervisor, I:</i>
7	Guide the design of the data collection strategy and instruments.
8	Support the supervisee in data collection.
9	Accompany the supervisee during data analysis.
10	Guide the thesis writing process.
11	Encourage the supervisee to expand their research skills.
12	Propose different activities that can be carried out to solve difficulties.

Note. The item column indicates the sequence in which each item appeared in the survey.

Item	Hands-off style
	<i>My role as supervisor is to:</i>
1	Disregard guiding the supervisee during the entire process of the thesis.
2	Disregard the goals set by the supervisee.
3	Be unconcerned about promoting the supervisee to participate in a scientific event.
	<i>I consider that the supervisee:</i>
4	Should acquire their knowledge without the supervisor's intervention.
5	Is responsible for developing the necessary skills to carry out their thesis.
6	Is free to self-manage during the entire process of the thesis.
	<i>As supervisor, I:</i>
7	Do not involve myself in the object of study of the thesis.
8	Leave the writing of the thesis project to the initiative of the supervisee.
9	Leave the design of the data collection strategy and instrument to the initiative of the supervisee.
10	Leave the data collection to the initiative of the supervisee.
11	Leave the analysis of the data to the initiative of the supervisee.
12	Avoid getting involved in written productions related to the thesis.

Note. The item column indicates the sequence in which each item appeared in the survey.

APPENDIX B. SUPERVISORY STYLES SCALE-SUPERVISEE

Item	Directive style
	<i>My role as supervisor is to:</i>
1	Indicate to the supervisee how to carry out the activities throughout the thesis process.
2	Set the tasks and deadlines for the supervisee to complete.
3	Ensure that the supervisee participates in scientific events as an assistant to the research team.
	<i>I consider that the supervisee:</i>
4	Needs direct instruction to develop their knowledge.
5	Requires precise instructions to develop the necessary skills to carry out their thesis.
6	Needs continued supervision by their supervisor or an even more advanced supervisee.
	<i>As supervisor, I:</i>
7	Design the data collection strategy and instruments.
8	Work closely in data collection with the supervisee.
9	Show the supervisee how the data analysis is carried out.
10	Instruct the supervisee on the ideas to develop.
11	Instruct the supervisee on the research skills to be acquired.
12	Indicate the supervisee how to solve difficulties.

Note. The item column indicates the sequence in which each item appeared in the survey.

Item	Guiding style
	<i>My role as supervisor is to:</i>
1	Guide the supervisee's activities during the thesis development.
2	Orient the supervisee's learning during the entire process of the thesis.
3	Guide the supervisee towards the establishment of their own goals.
	<i>I consider that the supervisee:</i>
4	Develops their knowledge if they receive sufficient guidance.
5	Develops the necessary skills to carry out their thesis with the supervisor's support.
6	Receives constructive feedback from their supervisor.
	<i>As supervisor, I:</i>
7	Guide the design of the data collection strategy and instruments.
8	Support the supervisee in data collection.
9	Accompany the supervisee when conducting the data analysis.
10	Guide the thesis writing process.
11	Encourage the supervisee to expand their research skills.
12	Suggest to the supervisee different activities that they can carry out to solve difficulties.

Note. The item column indicates the sequence in which each item appeared in the survey.

Item	Hands-off style
	<i>My role as supervisor is to:</i>
1	Disregard guiding the supervisee during the entire process of the thesis.
2	Disregard the goals set by the supervisee.
3	Be unconcerned about promoting the supervisee to participate in a scientific event.
	<i>I consider that the supervisee:</i>
4	Should acquire their knowledge without the supervisor's intervention.
5	Is responsible for developing the necessary skills to carry out their thesis.
6	Is free to self-manage during the entire process of the thesis.
	<i>As supervisor, I:</i>
7	Refrain from suggesting a bibliography that the supervisee may consider at the beginning of the thesis.
8	Leave the design of the data collection strategy and instrument to the initiative of the supervisee.
9	Leave data collection to the initiative of the supervisee.
10	Avoid discussing with the supervisee about their ideas.
11	Leave the development of research skills to the responsibility of the thesis student.
12	Refuse to collaborate with the resolution of the difficulties that the supervisee is going through.

Note. The item column indicates the sequence in which each item appeared in the survey.

APPENDIX C. SUPERVISORY STYLES SCALE-SUPERVISOR (SPANISH VERSION)

Ítem	Estilo directivo
	<i>Mi rol como director es:</i>
1	Asumir la responsabilidad de la toma de decisiones.
2	Determinar los objetivos que el tesista debe alcanzar.
3	Establecer las tareas y los tiempos para que el tesista las complete en los plazos preestablecidos.
	<i>Considero que el tesista:</i>
4	Necesita instrucción directa para desarrollar su conocimiento.
5	Requiere indicaciones precisas para desarrollar las competencias necesarias para realizar su tesis.
6	Necesita supervisión sostenida de su director o de tesisas más avanzados.
	<i>Como director, yo:</i>
7	Formulo el objeto de estudio de la tesis.
8	Escribo el proyecto de tesis junto con el tesista
9	Diseño la estrategia e instrumentos de recolección de datos.
10	Instruyo al tesista sobre las ideas que debe desarrollar.
11	Instruyo al tesista sobre las habilidades investigativas que debe adquirir.
12	Le indico al tesista cómo resolver las dificultades.

Nota. La columna 'ítem' indica la secuencia en que apareció cada pregunta en la encuesta.

Ítem	Estilo orientador
	<i>Mi rol como director es:</i>
1	Guiar las actividades del tesista durante el desarrollo de la tesis.
2	Consensuar con el tesista la toma de decisiones.
3	Promover que el tesista participe en eventos científicos como ponente.
	<i>Considero que el tesista:</i>
4	Desarrolla su conocimiento si recibe la orientación suficiente.
5	Desarrolla las competencias necesarias para realizar su tesis con el apoyo del director.
6	Recibe retroalimentación constructiva de su director.
	<i>Como director, yo:</i>
7	Oriento el diseño de la estrategia e instrumentos de recolección de datos.
8	Apoyo al tesista en la recolección de datos.
9	Acompaño al tesista al realizar el análisis de datos.
10	Oriento el proceso de escritura de la tesis.
11	Aliento al tesista a expandir sus habilidades investigativas.
12	Propongo al tesista distintas actividades que puede realizar para resolver dificultades.

Nota. La columna 'ítem' indica la secuencia en que apareció cada pregunta en la encuesta.

Ítem	Estilo ausente
	<i>Mi rol como director es:</i>
1	Desentenderme de orientar al tesista durante todo el proceso de tesis.
2	Desentenderme de los objetivos planteados por el tesista.
3	Despreocuparme de promover que el tesista participe en un evento científico.
	<i>Considero que el tesista:</i>
4	Debe adquirir su conocimiento sin intervención del director.
5	Es el responsable de desarrollar las competencias necesarias para realizar su tesis.
6	Es libre de autogestionarse durante toda la tesis
	<i>Como director, yo:</i>
7	No participo en la formulación del objeto de estudio de la tesis.
8	Dejo librado a la iniciativa del tesista la escritura del proyecto de tesis
9	Dejo librado a la iniciativa del tesista el diseño de la estrategia e instrumento de recolección de datos.
10	Dejo librado a la iniciativa del tesista la recolección de datos.
11	Dejo librado a la iniciativa del tesista el análisis de los datos
12	Evito intervenir en las producciones escritas relacionadas con la tesis

Nota. La columna 'ítem' indica la secuencia en que apareció cada pregunta en la encuesta.

APPENDIX D. SUPERVISORY STYLES SCALE-SUPERVISEE (SPANISH VERSION)

Ítem	Estilo directivo
	<i>Mi director considera que su rol es:</i>
1	Indicar al tesista el modo de realizar las actividades durante todo el proceso de tesis.
2	Establecer las tareas y los tiempos para que el tesista las complete en los plazos preestablecidos.
3	Asegurar que el tesista participe en eventos científicos como ayudante del equipo de investigación.
	<i>Mi director considera que el tesista:</i>
4	Necesita instrucción directa para desarrollar su conocimiento.

Ítem	Estilo directivo
5	Requiere indicaciones precisas para desarrollar las competencias necesarias para realizar su tesis.
6	Necesita supervisión sostenida de su director o de tesistas más avanzados.
	<i>Mi director:</i>
7	Diseña la estrategia e instrumentos de recolección de datos.
8	Colabora estrechamente en la recolección de datos junto al tesista
9	Muestra al tesista la manera en que se realiza el análisis de datos.
10	Instruye al tesista sobre las ideas que debe desarrollar.
11	Instruye al tesista sobre las habilidades investigativas que debe adquirir.
12	Le indica al tesista cómo resolver las dificultades.

Nota. La columna 'ítem' indica la secuencia en que apareció cada pregunta en la encuesta.

Ítem	Estilo orientador
	<i>Mi director considera que su rol es:</i>
1	Guiar las actividades del tesista durante el desarrollo de la tesis.
2	Orientar el aprendizaje del tesista durante todo el proceso de tesis.
3	Guiar al tesista hacia el establecimiento de sus propios objetivos.
	<i>Mi director considera que el tesista:</i>
4	Desarrolla su conocimiento si recibe la orientación suficiente.
5	Desarrolla las competencias necesarias para realizar su tesis con el apoyo del director.
6	Recibe retroalimentación constructiva de su director.
	<i>Mi director:</i>
7	Orienta el diseño de la estrategia e instrumentos de recolección de datos.
8	Apoya al tesista en la recolección de datos.
9	Acompaña al tesista al realizar el análisis de datos.
10	Orienta el proceso de escritura de la tesis.
11	Alienta al tesista a expandir sus habilidades investigativas.
12	Propone al tesista distintas actividades que puede realizar para resolver dificultades.

Nota. La columna 'ítem' indica la secuencia en que apareció cada pregunta en la encuesta.

Ítem	Estilo ausente
	<i>Mi director considera que su rol es:</i>
1	Desentenderse de orientar al tesista durante todo el proceso de tesis.
2	Desentenderse de los objetivos planteados por el tesista.
3	Despreocuparse de promover que el tesista participe en un evento científico.
	<i>Mi director considera que el tesista:</i>
4	Debe adquirir su conocimiento sin intervención del director.
5	Es el responsable de desarrollar las competencias necesarias para realizar su tesis.
6	Es libre de autogestionarse durante toda la tesis
	<i>Mi director:</i>
7	Se abstiene de sugerir bibliografía que el tesista pueda considerar al inicio de la tesis.
8	Deja librado a la iniciativa del tesista el diseño de la estrategia e instrumento de recolección de datos.
9	Deja librado a la iniciativa del tesista la recolección de datos.
10	Evita dialogar con el tesista sobre sus ideas
11	Deja a la responsabilidad del tesista el desarrollo de habilidades investigativas.
12	Se desentiende de colaborar con la resolución de las dificultades que atraviesa el tesista.

Nota. La columna 'ítem' indica la secuencia en que apareció cada pregunta en la encuesta.

AUTHORS



Javier Sánchez-Rosas is a teacher and researcher in educational psychology at the Universidad Católica de Temuco. His research focuses on academic emotions, motivation, and teaching quality in higher education. He applies advanced theoretical and methodological approaches. He leads collaborative research projects, mentors early-career researchers, and participates in university management and academic engagement initiatives.



Lorena Fernández Fastuca holds a PhD and a Master's degree in education from the University of San Andrés. She is currently a researcher in the Institute for Research, Faculty of Social Sciences, Pontifical Catholic University of Argentina. Her research focuses on university pedagogy, with a specialization in graduate-level education and thesis supervision as a formative practice. In addition, she serves as Director of the Doctorate in Education at the Catholic University of Cuyo.



Hilda DiFabio de Anglat holds a PhD in Education Sciences from the National University of Cuyo. She is Principal Researcher (ad honorem, retired) at the National Scientific and Technical Research Council. Her research focuses on the promotion of postgraduate academic genres in virtual environments. She is Co-Director of the Doctorate in Education at the Catholic University of Cuyo and a member of the Academic Committee of the Doctorate in Psychology at the University of Aconcagua.



Sergio Dominguez-Lara has a Master's in Clinical Psychology from the Universidad Nacional Mayor de San Marcos and a PhD in Psychology from the Universidad de San Martín de Porres. He is a researcher at the Universidad de San Martín de Porres. His research interests include psychometrics and methodological developments in psychology, as well as issues related to university student academic behavior. He has published several papers in indexed journals in his research domain.