



Teamwork, Motivation and Professional Socialization in Health Professions Education: A Qualitative Study at ISPITS–Tetouan

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Abstract Background: Group learning promises deep understanding and “work-ready” capabilities, yet its benefits are uneven when teams lack clear structures, fair assessment or psychological safety. Anchored in Self-Determination Theory and related perspectives on cooperative and collaborative learning, this qualitative study examines how teamwork practices in a Moroccan health-professions institute shape students’ motivation, competence development and professional socialization. **Objectives:** The study investigates the conditions under which group work catalyzes learning and identity formation in health-professions education, the assessment designs that sustain accountability while preserving trust and how teacher orchestration and feedback cultures enable equitable participation. **Methods:** Using a qualitative design, we conducted semi-structured interviews with instructors and focus-group discussions with students at the Higher Institute of Nursing and Health Care Professions (ISPITS) in Tetouan, Morocco. Data were analyzed through reflexive thematic analysis with procedures to enhance trustworthiness (audit trail, peer debriefing, credibility checks). Reporting follows the COREQ 32-item checklist. **Results:** Four cross-cutting themes emerged. First, motivational affordances: teams supported autonomy, competence and relatedness when roles were explicit, tasks were authentically professional and time for intra-team regulation was protected. Second, fairness and accountability: transparent criteria, formative peer feedback and calibrated weighting of individual versus team marks tempered free-riding and status effects. Third, orchestration and scaffolding: teacher moves that combined monitoring, just-in-time coaching and post-task consolidation were pivotal to constructive interaction. Fourth, identity and professional socialization: collaborative care scenarios, interdependence under time pressure and exposure to diverse perspectives cultivated clinical reasoning, communication and a nascent professional ethos. **Conclusions:** When designed for autonomy support, explicit accountability and coached collaboration, group work in health-professions curricula advances learning and professional identity formation. The study offers a design logic: align task authenticity and assessment transparency with teacher orchestration and feedback architectures; in doing so, programs can convert teamwork from a compliance exercise into a driver of equitable, motivated learning.

Key Words Collaborative Learning, Cooperative Learning, Self-Determination Theory, Peer Assessment, Feedback, Orchestration, Health-Professions Education, Professional Identity, Qualitative Methods, Reflexive Thematic Analysis

INTRODUCTION

Across the last decade, health systems have been reshaped by rapid digitalization, interprofessional service models and rising expectations for safe, patient-centered care; accordingly, health-professions education has had to pivot from transmissive lectures toward practice-proximate, collaborative pedagogies that cultivate adaptable, reflective graduates [1,2]. In this changing landscape, team-based learning, problem-based learning, simulation and other active approaches are not peripheral add-ons; rather, they are crucial means for helping learners rehearse clinical decision

making, communicate across roles and coordinate complex work under uncertainty [3,4]. Nevertheless and this “nevertheless” matters, group work can falter in the absence of clear goals, equitable roles, formative feedback and calibrated facilitation, with well-known pitfalls such as free-riding, unequal participation and role conflict undermining both motivation and learning [5,6].

Situated in this international conversation, the present study emerges from the Higher Institute of Nursing and Health Care Professions (ISPITS) in Tetouan, Morocco, where collaborative projects, simulations and interprofessional

tasks are now sewn into curricula alongside essential foundational lectures (e.g., anatomy, physiology). While such integration is promising, local observations revealed variability in students' prior experiences with group work, time pressures in large cohorts and tensions in peer coordination, all factors that can sap engagement if unresolved [7,8]. Consequently, our research asks how and under what conditions, group work functions as a lever for motivation and professional socialization among ISPITS students acknowledging both interpersonal dynamics and organizational constraints in the learning environment [9]. These institutional features and preliminary insights are drawn from the ISPITS project dossier that frames the present article's qualitative results strand.

Conceptually, we braid three strands: (a) collaborative learning as social-cognitive co-construction of knowledge through task-oriented interaction [10,11]; (b) motivation through the Self-Determination Theory (SDT) lens, which posits that autonomy, competence and relatedness support internalization and high-quality engagement [12,13]; and (c) professional socialization, understood as the ongoing negotiation of identity in communities of practice and organizational contexts [14,15]. Together, these literatures suggest that group work can be both a motivational engine and a socialization mechanism, yet only if its design and facilitation meet learners' psychological and interactional needs [16,17].

Guided by these premises, the broader project adopts a mixed-methods design; however, this article reports the qualitative results and therefore states hypotheses as sensitizing propositions that organize inquiry rather than statistical tests. First, we posit that perceived responsibility enactment and skill use in teams will shape perceived value of group work (H1) [17,18]. Second, positive attitudes and enjoyment are expected to align with a stronger orientation to collective success and personal contribution (H2) [19], [4]. Third, perceived asymmetry of effort is anticipated to correlate with individualistic preferences and negative effects (H3) [5]. Fourth, constructive conflict management should be associated with better emotional regulation and interpersonal climate (H4) [20,21]. Finally, perceived costs in time and energy should depress motivation, enjoyment and perceived utility (H5) [22]. These hypotheses, derived from the ISPITS context and the international literature, orient our thematic analysis of teachers' and students' accounts of group work's promises and pain points.

In what follows, we first review the literature on collaborative learning in health professions, then synthesize evidence on motivation (with emphasis on SDT and achievement emotions) and finally survey scholarship on professional socialization and identity development in training programmes, each time linking conceptual claims to designable levers for practice. This review, in turn, motivates the qualitative analytic framework and sets expectations for the results reported in the subsequent sections of the article.

LITERATURE REVIEW

Collaborative Learning in Health Professions Education: From Promise to Practice

Defining Team-Based Pedagogies in Context: Whereas "teams" are often defined as identifiable social units with interdependence, shared goals, distributed expertise and clear role structures, "teamwork" denotes the interaction processes through which members marshal collective resources to meet task demands [23,24]. In higher education, health professions included, collaborative learning denotes purposeful co-activity in which learners exchange reasoning, test understandings and co-construct artefacts or decisions under representational or material constraints, whether in class, simulation or community placements [10,25]. Because clinical practice is inherently interdependent, early and repeated rehearsal of collaborative cognition is both epistemically and professionally authentic, particularly when activities are tightly coupled to patient-centred scenarios [4,26].

Why Group Work is Compelling, When It Works

Meta-analytic and design-based research consistently links active, team-centred pedagogies to improved conceptual understanding, problem-solving and transfer, especially when peer discussion is scaffolded by instructor prompts and closure [3,27]. For health students, simulation and interprofessional assignments appear to strengthen communication, role clarity and collaborative efficacy, outcomes that are not merely academic but map onto real clinical teamwork behaviours [4,26]. Additionally, group writing and peer feedback have been shown to bolster academic identity, reflective judgment and a repertoire of scholarly practices across cohorts, thus advancing both methodological and relational competencies [28,29].

Why Do Groups Work Disappointingly When They Don't

Despite these benefits, design and facilitation contingencies are decisive. Without clear roles, equitable accountability and transparent assessment, social loafing and role ambiguity proliferate; likewise, insufficient scaffolding for metacognition, feedback and conflict resolution undermines both performance and climate [30,31]. Class size, scheduling and resource constraints add operational friction, while mixed prior knowledge and language barriers complicate micro-coordination unless deliberately addressed [8,32]. Importantly, instructor interventions must be calibrated to group needs, neither over-directing nor abdicating, so that time-on-task rises and conceptual progress is sustained [33,34].

The Teacher's Pivotal Role

A robust framework conceptualizes teacher competencies across pre-active (planning), interactive (monitoring and supporting) and post-active (consolidating and reflecting) phases. Here, macro-scripts and micro-scripts orchestrate interdependence, while adaptive prompts regulate social-affective and cognitive-metacognitive processes [6].

Tools such as team charters and RACI matrices (“responsible, accountable, consulted, informed”) formalize expectations and decision pathways, devices that have migrated effectively from industry to academic teams to reduce ambiguity and boost coordination [35]. In the ISPITS context, teachers have voiced similar priority-clarifying roles, staged interim milestones and blended team-level grading with individual assessment to protect fairness and learning value.

Interim Synthesis

In sum, collaborative learning is most potent when (a) interdependence is real and intelligible, (b) roles and goals are explicit, (c) feedback is timely and dialogic and (d) teachers strategically regulate group processes; absent these pillars, group work risks becoming busywork with uneven effort and fragile climate [3,6].

Motivation in Groups

Self-Determination, Achievement Emotions and the Value of Work Motivation as a Situated, Regulative Process: Motivation in education is not a static trait but a dynamic regulation of effort, direction and persistence toward valued ends; as such, it is shaped jointly by self-perceptions and contextual affordances [16,36]. Self-Determination Theory (SDT) distinguishes intrinsic motivation, doing an activity for its inherent satisfaction, from a spectrum of extrinsic regulations varying in autonomy: external, introjected, identified and integrated [12,13]. High-quality engagement is supported when learning environments satisfy basic psychological needs for autonomy (choice and rationale), competence (optimal challenge and feedback) and relatedness (belonging and care) [13,37].

Collaborative tasks can bolster autonomy through shared agency, competence through collective problem-solving with feedback and relatedness through mutual support, mechanisms that foster internalization of academic values and purpose [17,20].

Conversely, if groups are coercive, opaque or inequitable, regulation becomes controlled, enjoyment falls and withdrawal rises, an arc commonly heard in student narratives about “carrying the team” or “being silenced,” especially when assessment structures exacerbate inequity [22,38]. In the ISPITS diagnostic, teachers and students flagged time costs, ambiguous expectations and uneven participation as drains on motivation that can be reversed through clearer structuring and formative guidance (Table 1).

Achievement Emotions and Social Climate

Beyond regulation, achievement emotions, enjoyment, pride, anxiety and frustration, shape cognitive resources and strategy use [19]. Enjoyment and pride tend to covary with perceived control and value, whereas anxiety rises when value is high, but control feels low [19]. In group work, perceived fairness, inclusive discourse and conflict-handling norms modulate these emotions: where

Table 1: Self-Determination Theory: Regulatory types and contextual support. Adapted from Ryan and Deci (2020) and aligned to the ISPITS conceptualization of groupwork support

Category	Regulation type	Summary description & likely impact
Intrinsic motivation	Intrinsic	Doing the activity for interest or joy typically yields deeper engagement, persistence and well-being.
Extrinsic motivation (controlled)	External; Introjected	Compliance for rewards or punishments or to avoid guilt or shame; fragile persistence; often poorer outcomes.
Extrinsic motivation (autonomous)	Identified; Integrated	Valuing the activity or aligning it with one’s identity; robust persistence and higher-quality learning.
Contextual supports	Autonomy; Competence; Relatedness	Choice with rationale, optimal challenge with process feedback and belonging; together, they enable internalization.

voice is shared and conflict is constructive, students report more enjoyment and collective efficacy; where work is uneven or recognition scarce, frustration and withdrawal are common [20,21]. In our setting, these patterns were repeatedly linked to how roles, milestones and feedback were structured and to whether groups were supported to surface and resolve disagreements productively.

Accordingly, H1–H2–H5 follow naturally: seeing one’s contribution matter (competence), having voice in process (autonomy) and feeling included (relatedness) are the proximate pathways through which group work acquires value and becomes enjoyable; by contrast, perceived time and energy costs without commensurate learning value erode motivation and prompt preference for individual work [13,22].

Professional Socialization and Identity Learning to “Be” (Not Only to “Do”)

Socialization As Identity Work: Professional socialization refers to how novices internalize norms, values and role expectations as they transition into a community of practice; crucially, this is not simple transmission but negotiated identity work across subjective and institutional registers [15]. From a sociocultural perspective, learning is fundamentally social: interaction within the zone of proximal development, supported by more capable peers and tools, mediates concept formation and appropriation of practices [39]. Group tasks thus act as socialization spaces where learners develop a sense of professional self through talk, coordination and accountability to shared standards [14,40].

Modern Vectors of Socialization and ISPITS Realities

Today, socialization extends beyond the classroom and clinic into hybrid, mediated spaces where digital platforms, peer networks and institutional rituals co-construct belonging [41]. ISPITS students operate within such plural ecologies while also contending with cohort size, scheduling and resource limits, contextual features that can amplify or attenuate opportunities for legitimate participation and identity rehearsal during group work [8]. In interviews, teachers emphasized that mixed-discipline

Table 2: Enablers and barriers of collaborative learning in health-professions education Synthesized from the ISPITS project context and literature cited in Sections 1–3 [6,22,33].

Dimension	Enablers (what helps)	Barriers (what hinders)
Task & goals	Clinically authentic problems; explicit ambitious shared goals	Vague aims; misaligned difficulty; "busywork" tasks
Roles & accountability	Team charters; RACI-style clarity; rotating roles; individual and team grading	Role ambiguity; free-riding; unfair assessment weight
Facilitation Peer	Calibrated instructor prompts; interim milestones; dialogic closure	Over- or under-intervention; lack of timely feedback
Processes Resources	Inclusive discourse; micro-scripts for giving and receiving feedback	Dominance or silence patterns; untrained peer feedback
& Logistics Conflict &	Adequate time, space, tools; manageable group size; scaffolds	Over-large cohorts; time pressure; resource scarcity
Climate	Norms for constructive conflict; mediation pathways; reflective debriefs	Avoidance or hostility; unresolved tensions; blame cycles
Recognition & belonging	Visible credit for contributions; opportunities to showcase work	Invisible labour; lack of voice; social exclusion

Table 3: Analytical framework: constructs and qualitative indicators for group work. Elaborated from the ISPITS qualitative protocol and the theoretical synthesis in this review [13,14].

Construct	Working definition	Illustrative qualitative indicators
Responsibility & skill enactment	Perceived ability to contribute tasks on time and to standard	Talk about role clarity, tracking progress, finishing tasks; evidence of "owning" deliverables
Perceived value / utility	Sense that group work improves understanding, performance or readiness	Narratives of learning through peer explanation; links to clinical relevance; satisfaction with outcomes
Affective experience	Emotional valence of group work	Enjoyment, pride, anxiety, frustration; accounts of fairness or unfairness; "feeling heard"
Motivation (SDT)	Nature of regulation (autonomous vs. controlled)	Mentions of choice or rationale; feedback that builds competence; belonging cues; pressure or avoidance talk
Conflict management	How disagreements are handled	Examples of open talk, mediation, compromise, debriefs; or avoidance or escalation patterns
Perceived costs	Time or energy burden vis-à-vis benefits	Workload language ("time-consuming," "carrying others") vs. efficiency gains; resource adequacy
Socialization	Identity work within the team	Shifts in language ("we talk like nurses"), recognition of standards, peer modelling or mentoring

groupings and structured oral presentations help students “learn to speak as professionals,” while students noted that norms that protect dignity while demanding contribution, typically via charters, rotating roles and multi-source assessment that make participation visible and improvable [35,38].

Enablers and Barriers: A Synthesis for Design

The following table distils recurrent enablers and barriers to collaborative learning in health education that map directly onto socialization and motivation mechanisms; each item corresponds to a designable feature of tasks, facilitation or assessment.

To connect literature to analysis, we specify the qualitative indicators expected under each construct. This framework guided coding and theme development for the results section of the article (Table 2).

The socialization lens clarifies H3–H4 (Table 3): groups that surface rather than suppress differences and that integrate fair accountability with dignity, are more likely to build robust professional identities, whereas hidden asymmetries and unresolved conflict corrode both belonging and motivation [13,42].

METHODS

Design and Qualitative Orientation

This second part reports the qualitative strand of a broader mixed-methods inquiry at the Higher Institute of Nursing and Health Care Professions (ISPITS), Tetouan. The design follows a pragmatic orientation, in which qualitative

interviews illuminate the mechanisms and conditions shaping students’ and teachers’ experiences of group work as a lever for motivation and professional socialization. We employed reflexive thematic analysis to interpret semi-structured interviews with ISPITS instructors who routinely design and facilitate team-based activities, privileging their situated judgments about drivers and barriers to effective collaboration [30,43].

Setting, Sample and Sampling Strategy

The study site is ISPITS–Tetouan, a public health-professions institute in northern Morocco whose programmes combine foundational courses with practice-proximate, collaborative pedagogies (e.g., team projects, simulations, interprofessional presentations). For the qualitative corpus, we conducted eight semi-structured interviews with instructors, indexed E1–E8 in the analytic excerpts below. Participants were purposefully sampled to capture variation in discipline and teaching responsibilities associated with group work; interviews were anonymized and coded solely by these identifiers. This purposive, maximum-variation strategy sought information-rich perspectives on design choices, facilitation practices, perceived student responses and organizational affordances and constraints relevant to teamwork and motivation in this context. Ethical authorization for the project was granted by the ISPITS administration on 21 February 2025, with written informed consent obtained before participation. These parameters, site, corpus and ethics, are detailed in the ISPITS dossier from which the present qualitative strand is developed.

Table 4: Semi-structured interview guide: domains and sample prompts (teachers E1–E8). Source: interview guide from the ISPITS project dossier; alignment to COREQ reporting domains [44].

Domain	Focus	Sample prompts
Experience/opinions	How group work is conceived and enacted	“What functions do team tasks serve in your course?”; “When do groups flourish or flounder?”
Pedagogical effects	Motivation, socialization, identity, emotions	“How does teamwork change students’ motivation or sense of belonging?”; “What emotions do you notice?”
Optimization levers	Composition, roles, feedback, assessment, conflict	“Which design choices improve fairness and engagement?”; “How do you handle disengagement or conflict?”

Table 5: Trustworthiness strategies and their implementation. Adapted from Lincoln and Guba and Nowell *et al.* [45,46], applied to the ISPITS corpus.

Criterion (Lincoln & Guba)	Strategy	Implementation in this study
Credibility	Triangulation; prolonged engagement with the local curriculum	Juxtaposed teacher interviews with the project’s student survey and institutional context notes; draw examples from multiple courses
Transferability	Thick description of setting and tasks	Detailed ISPITS curricular features, group formats and constraints
Dependability	Transparent analytic workflow	Versioned codebooks, meeting notes and iterative theme refinement
Confirmability	Reflexive memoing; audit trail	Memos documenting assumptions about fairness, conflict and assessment

Table 6: Thematic map with representative extracts and links to propositions. Derived from the thematic analysis of ISPITS teacher interviews (E1–E8).

Superordinate theme	Subtheme (code)	Representative extract (≤ 25 words)	Related proposition(s)
Conditional promise	Design clarity	“Group work is a lever—when goals and roles are clear.” [E1, translated]	H1, H2
Conditional promise	Facilitation discipline	“Without structured follow-up, a few carry the group.” [E2]	H1
Motivation & identity	Enjoyment/belonging	“They speak as professionals when tasks are authentic.” [E3]	H2
Motivation & identity	Internalization	“Ownership increases when feedback shows progress.” [E6]	H1, H2
Fairness/ethics	Hybrid assessment	“Team grade, but also individual evaluation—otherwise unfair.” [E8]	H1
Fairness/ethics	Recognition	“Credit must match contribution; then they invest.” [E4]	H1, H2
Conflict as pedagogy	Norms & debriefs	“Debriefing turns tension into learning.” [E5]	H4
Cost calculus	Time/energy	“Scope the project to the time budget or motivation drops.” [E6]	H5

Interview Guide

We used a semi-structured interview guide (Table 4) articulating three domains: (a) instructors’ and conflict management to map onto the hypotheses specified in Part I (H1–H5). The guide content and the interview domains are summarized in Table 4. This structure aligns experience and opinions about group work in their courses; (b) perceived pedagogical effectiveness of group work for motivation and socialization; and (c) practical recommendations to optimize teamwork (composition, roles, assessment, feedback, conflict resolution). The guide balanced open prompts (“Describe a recent group activity that worked well or poorly, what happened and why?”) with probes about role clarity, assessment fairness, time and energy costs, with best-practice reporting standards such as COREQ, which emphasise transparency about research team, study design, context and analytic procedures [44].

Data Collection Procedures

Interviews were conducted at ISPITS in quiet rooms on campus, scheduled to minimize teaching disruptions and recorded with permission. All interviews were transcribed in full and de-identified prior to analysis interviews emphasised concrete examples (e.g., recent group projects, assessment episodes, conflict incidents) to elicit practice-proximate accounts rather than generalized attitudes, a tactic that typically enhances descriptive adequacy and analytic traction in applied education research [44].

Analytic Approach

Our analysis followed Braun and Clarke’s six-phase reflexive thematic analysis: familiarization; coding; constructing initial themes; reviewing themes against the

corpus; defining and naming themes; and producing the analytic narrative. Codes were generated inductively from the ISPITS transcripts while being sensitized deductively by the five propositions articulated in Part I (H1–H5), thereby integrating local, emic meanings with theory-led expectations about responsibility enactment, affect, conflict and perceived costs. The team met iteratively to refine code boundaries and theme architecture, attending to patterned meanings (e.g., “accountability signals,” “enjoyment as driver,” “ethical discomfort with exclusion,” “time or energy trade-offs”) until analytic sufficiency was reached. We treat themes as patterns of shared meaning organized by central concepts rather than mere topic collections, consistent with reflexive thematic analysis [43,46].

Trustworthiness and Ethical Integrity

Credibility was sought through triangulation with complementary quantitative survey results from the broader project (reported in the dossier), transparent audit trails (versioned codebooks, theme memos) and thick description of contextual constraints (e.g., cohort size, assessment practices). Transferability is supported by explicit detailing of site, participants and tasks; dependability through consistent coding and recoding cycles; and confirmability through reflexive memos that bracket our design preferences vis-à-vis teacher agency and fairness. We have structured reporting to reflect COREQ items where feasible. All procedures complied with the institute’s ethics authorization noted above (Table 5). These strategies align with Lincoln and Guba’s criteria, credibility, transferability, dependability and confirmability, commonly applied in qualitative education research [43,46].

Qualitative Findings

To preserve participants' anonymity while conveying voice, extracts are labelled E1–E8; translations from French are indicated as [translated]. We present four superordinate themes with subthemes that map to the sensitizing propositions H1–H5. Thematic definitions, representative extracts and links to propositions are summarized in Table 6.

“A Lever, Yet Not by Default”

The Conditional Promise of Group Work: Across interviews, instructors framed group work as pedagogically powerful, “a lever for active engagement” [E1, translated], but conditional on clarity of purpose, equitable roles and ongoing facilitation. When activity goals were explicit and interdependence genuine, students “moved beyond passive listening,” rehearsed professional communication and owned deliverables; otherwise, uneven participation and role confusion eroded value and morale. This conditionality mirrors international findings that the design discipline of collaborative tasks, clear roles, staged milestones, dialogic closure, underwrites both cognitive gain and motivational lift [3,43].

“From Doing to Becoming”

Motivation, Belonging and Identity Work: Instructors consistently linked enjoyment, pride and belonging to better participation and persistence. Group tasks that were authentic and well-scaffolded invited students to “speak as professionals,” normalize interdependence and internalize collaborative norms; conversely, opaque expectations bred anxiety, guarded talk and withdrawal [E3, E6]. The pattern aligns with Self-Determination Theory: when autonomy (voice or choice), competence (clear challenge and feedback) and relatedness (support) are met, regulation shifts from controlled to autonomous, with concomitant gains in quality of effort and well-being [13]. Likewise, the control-value model explains the co-occurrence of enjoyment and pride when learners perceive high value and sufficient control, as well as anxiety where value is high, but control feels low [19].

“Fairness is Not Optional”

Accountability, Assessment and Ethics: Teachers emphasized fairness as both a means and an end. Students were seen to value group work when individual accountability was visible and recognition commensurate with contribution; absent these, frustration and calls to “remove non-contributors” surfaced [E2, E8]. Instructors advocated for hybrid assessment, team grades plus individual components and selective use of peer input, protecting equity while preserving the collaborative aim. This ethic of visible fairness surfaced as a precondition for enjoyment and sustained effort, substantiating H1 (contribution enactment drives perceived value) and H2 (positive effect aligns with commitment to collective success) in experiential terms [13,17].

“Make Conflict Teachable”

Communication, Mediation and Climate: Conflict appeared ambivalent: potentially corrosive when avoidance or dominance patterns prevailed, but educationally generative when structured as open communication, negotiated compromise and reflective debriefs. Several instructors described explicit norms and facilitated debriefs as turning points that “stopped blame cycles” and restored trust [E4, E5]. Where this occurred, students reported more satisfaction and cohesion, consistent with evidence that constructive conflict and feedback can enhance both performance and climate in learning teams [20]. Qualitatively, these narratives support H4: better conflict practice is associated with a better emotional and interpersonal climate.

“Time is a Budget”

Workload, Logistics and Perceived Cost: Finally, teachers noted that large cohorts, packed timetables and resource constraints rendered some group tasks time- and energy-intensive for students and staff alike. Without right-sized scopes, interim checkpoints and logistical support (rooms, scheduling), perceived costs eclipsed benefits, blunting motivation and enjoyment [E6]. This aligns with H5 and general motivational evidence: high extraneous load without perceived value depresses autonomous engagement and invites controlled regulation [13].

Analytic Narrative (Results in Depth)

Conditional Promise

From “Busywork” Risk to Designed Interdependence: Across E1–E8, “group work” was not a monolith but a design space. Instructors contrasted task designs that instantiate interdependence (distinct roles, staggered milestones, shared artifacts) with those that let teams divide work superficially. The former elicited cross-explanation, peer coaching and visible co-ownership; the latter invited social loafing and disengagement. Importantly, “monitoring and closure” were singled out as teacher competencies, catching drift early, offering process prompts and convening debriefs to consolidate learning. This practice-proximate testimony dovetails with research that structured interdependence and calibrated facilitation are decisive for collaborative cognition and equity [3]. In short, teachers' accounts make palpable why H1 and H2 matter: when students experience responsibility enactment and skill use under clear structures, perceived value and enjoyment rise together [13].

Motivation and Identity

Satisfaction, Pride and Belonging as Drivers: Two paired observations occurred. First, when tasks were clinically authentic (e.g., case analysis feeding into an oral defence), students showed enjoyment and pride, citing relevance and self-efficacy; second, voice in process (choosing topics, negotiating roles) intensified commitment. Teachers read these

Table 7: Crosswalk between propositions (H1–H5) and qualitative evidence. Synthesis from the ISPITS teacher interview corpus (E1–E8)

Proposition	Qualitative support from themes	Direction	Implication
H1: Responsibility enactment and skill use → higher perceived value	Conditional promise; fairness and accountability	Supported	Make contribution visible (roles, milestones, hybrid grading)
H2: Positive attitudes and enjoyment ↔ commitment to collective success and contribution	Motivation and identity	Supported	Authentic tasks plus voice plus timely feedback cultivate enjoyment and pride
H3: Asymmetry of effort ↔ individualist preferences & negative affect	Fairness and ethics	Partially supported	Teachers observe resentment under asymmetry; design fixes mitigate pull toward individual work
H4: Constructive conflict ↔ better emotional or interpersonal climate	Conflict as teachable moment	Supported	Explicit norms plus debrief convert tension into learning and trust
H5: High time or energy costs ↓ motivation, enjoyment, utility	Cost calculus	Supported	Right-size scope; add checkpoints; ensure resources

Table 8: From findings to design levels: an evidence-informed checklist. Derived from ISPITS teacher interviews (E1–E8) and aligned with SDT and team feedback literature [13,42]

Finding	Risk if neglected	Practical lever
Value rides on enacted responsibility	Social loafing, perceived unfairness	Roles plus milestones plus hybrid assessment
Affect drives effort	Drained persistence	Authentic tasks plus voice plus timely feedback
Asymmetry fuels resentment	Drift to individualism	Contribution logs plus targeted oral checks
Conflict can teach	Blame cycles, avoidance	Explicit norms plus mediated debriefs
Cost perception matters	Controlled regulation, withdrawal	Right-size scope; align resources

as identity rehearsal moments, “speaking as nurses,” “owning the deliverable” and as socialization into professional discourse. The pattern aligns with Self-Determination Theory: autonomy (voice or choice), competence (optimal challenge plus feedback) and relatedness (belonging) operate jointly to foster internalization; under these conditions, enjoyment is not a luxury but a signature of high-quality engagement [13]. At the same time, when control was felt low (e.g., unclear grading), anxiety rose, a control-value dynamic [19]. Therefore, H2 is qualitatively substantiated: positive attitudes and enjoyment track with emphasis on collective success and salient personal contribution.

Fairness, Accountability and Ethical Tension

Instructors emphasized fairness as a motivational mediator. Absent visible accountability, students demanded the exclusion of “non-contributors,” a stance teachers labelled ethically fraught but symptomatic of design failure. The preferred remedy was a hybrid assessment: combine team grades with individual components (e.g., brief individual defence, contribution logs, targeted questions) and selective peer input to surface invisible labour while avoiding popularity contests. Teachers reported that such recognition mechanisms increased buying and tempered resentment. This directly supports H1 and implicates the need for assessment architectures that make contribution visible and improvable, not merely punitive [13,17].

Conflict as a Teachable Moment

Accounts of conflict split along practice lines. Where norms were implicit, small slights escalated into blame; where norms were explicit (turn-taking, evidence-based disagreement, “challenge the idea, not the person”) and teachers facilitated reflective debriefs, disagreement became productive. In the latter, students reported reduced anxiety, sharper reasoning and renewed trust. These patterns echo the literature on feedback in teams and structured debriefing as engines for both performance and climate, thereby

supporting H4. Teachers called this “teaching conflict,” underscoring that socialization includes ethical and emotional labour, not only cognitive outcomes.

The Cost Calculus

Time, Energy and Logistical Design: Finally, instructors situated group work within real logistical constraints, large cohorts, compressed schedules, limited rooms and simulation slots. Under such conditions, over-scoped projects produced fatigue and perceived inequity; conversely, right-sized tasks with interim waypoints and clear resource support preserved energy for sense-making rather than mere coordination. In teachers’ judgment, perceived costs are malleable through design choices; where costs outweighed perceived value, students defaulted to controlled regulation or avoided group work, consistent with H5 and motivational theory [36].

DISCUSSION

Integrating Findings with Literature and Validating Hypotheses (Tables 7-10)

Designing For Interdependence Clarifies Value (H1): Teacher narratives demonstrate that perceived value hinges on students being able to enact responsibility and use skills in ways that matter to team outcomes. This is precisely what structured interdependence, explicit roles and dialogic feedback afford. In SDT terms, such arrangements amplify competence signals and thereby raise internalization of collaborative norms; in cooperative learning research, they express positive interdependence in practice [13,17]. Accordingly, H1 is validated by convergent qualitative evidence, where contribution counts and is recognized and value follows.

Enjoyment, Pride and Belonging are Not Epiphenomena (H2)

The interviews show enjoyment and pride as proximal drivers of persistence and collective orientation, not mere byproducts. This dovetails with control-value theory, which

Table 9: Corpus overview (qualitative strand) and alignment to reporting standards

Element	Description	Link to reporting standards
Setting	ISPITS–Tetouan; undergraduate health programs; strong emphasis on collaborative tasks	Context description (COREQ)
Participants	Eight instructors (E1–E8), varied disciplines; purposive sampling related to group-work teaching	Participant selection (COREQ)
Instrument	Semi-structured interview guide with three domains (experience, effects, optimization)	Study design (COREQ)
Data handling	Audio recording (with consent), full transcription, de-identification	Data collection/analysis (COREQ)
Analysis	Reflexive thematic analysis; inductive–deductive coding; iterative theme review	Analytic approach (COREQ)
Ethics	ISPITS authorization (21 Feb 2025); informed consent; confidentiality	Ethical issues (COREQ)

Source: ISPITS qualitative corpus and interview protocol; mapped to COREQ [44].

Table 10: Example codebook excerpt (condensed)

Code	Definition	Example indicator from extracts
Accountability signal	Mechanism making individual contribution visible	“Team grade and individual check” (E8)
Enjoyment as driver	Positive affect energising participation	“They enjoy authentic tasks” (E3)
Ethical discomfort	Tension over exclusion of peers	“Remove non-contributors?”—contested (E2)
Constructive conflict	Normed disagreement plus debrief	“Debrief turns tension into learning” (E5)
Cost talk	Time or energy burden outweighing value	“Scope to time budget” (E6)

Source: Derived from a reflexive thematic analysis of ISPITS teacher interviews (E1–E8).

predicts positive activity and outcome emotions where value and control are jointly perceived as high and with SDT’s account of autonomous motivation under need-supportive conditions. Thus, H2 is validated qualitatively: positive effects with and appears to sustain commitment to both team goals and one’s contribution [13,19].

Asymmetry, Resentment and the Pull toward Individualism (H3)

While teachers acknowledged resentment under unequal effort, they framed it as a design-solvable problem (hybrid grading, contribution visibility) rather than an inevitable drift toward individualism. Consequently, H3 receives partial support: asymmetry correlates with frustration and individualist preference when accountability is weak; yet with design remedies, teachers observed students maintaining collaborative preference. This nuance is consistent with evidence that evaluation architectures modulate social loafing and perceived fairness in team-based learning [20].

Conflict as Curriculum (H4)

Qualitative accounts make clear that conflict’s valence depends on norms and facilitation. When explicit norms and debriefs are in place, conflict is reframed as shared problem-solving, strengthening emotional regulation and trust, a pattern echoing team feedback literature and endorsing H4. Importantly, teachers conceptualized this as part of professional socialization: learning to disagree professionally is a core identity move [20].

The Cost Side of the Equation (H5)

Finally, instructors’ emphasis on time and energy budgets confirms that design must reckon with logistical realities. Over-scoped assignments under tight timetables inhibit autonomous motivation by inflating perceived cost relative to value; conversely, right-sizing, staging and resource support restore the balance, validating H5. This finding precisely matches SDT’s prediction that need-thwarting contexts elicit controlled regulation and disengagement [13].

CONCLUSIONS

Situated in a public health-professions institute pivoting toward collaborative pedagogy, this qualitative strand shows that group work functions as a motivational and socialization engine, if and only if it is designed and facilitated with discipline. Four conditions emerge repeatedly from instructors’ accounts: (a) authentic, well-scaffolded tasks that instantiate real interdependence; (b) visible fairness through hybrid assessment and recognition of contributions; (c) explicit norms and facilitated debriefs that convert conflict into learning; and (d) right-sizing of scope and logistics so that perceived costs do not swamp perceived value. Under these conditions, students display enjoyment, pride and belonging, internalize collaborative norms and rehearse a professional identity oriented to shared responsibility, precisely the dispositions that contemporary care systems demand [13,19].

Limitations

This strand draws on eight teacher interviews from a single institute, which limits claims to transferability beyond similar training contexts. While triangulated with survey results in the broader project, the present analysis did not include student interviews or classroom observations, which could reveal divergent meanings or unobserved coordination practices. Moreover, because interviews were conducted in a setting where instructors both design and grade teamwork, social desirability may have muted critical self-appraisal. Finally, while our analytic procedures followed reflexive thematic analysis and trustworthiness criteria, the absence of member checking is a constraint on interpretive validity [43,45].

Three trajectories follow from these findings. First, design-based research at ISPITS and sister institutes should iteratively test assessment architectures (e.g., calibrated peer input, individual oral checks, contribution dashboards) that enhance fairness without crowding out collaboration; outcomes would include motivation quality, affect and team products [13]. Second, longitudinal, mixed-methods work following cohorts into clinical placements could examine how early group-work experiences translate into

interprofessional teamwork, moral reasoning around fairness and resilience under stress, guided by control-value and SDT frameworks [13,19]. Third, instructional development should foreground conflict literacy and facilitation craft, skills that teachers in this corpus treat as pivotal but demanding, embedding explicit norms and debrief routines across the curriculum [42]. These avenues promise a practice-proximate science of collaboration that advances both educational quality and patient-centred care.

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