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Motivational Regulation in Business Undergraduates' EFL Learning: A Self-Determination Theory Study

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ABSTRACT: Self-determination theory explains motivational quality through the satisfaction of autonomy, competence and relatedness. In business-college EFL, English functions both as a programme requirement and as a career resource, so students may pursue learning for mixed self-determined and controlled reasons.

This study aims to extend SDT-based measurement of motivational regulations and basic psychological needs among business-college EFL learners in Saudi Arabia, and to examine how need satisfaction relates to intrinsic motivation, internalised regulation and external regulation.

A cross-sectional survey will be administered to EFL students at the College of Business Administration, Prince Sattam bin Abdulaziz University (Al-Kharj, Saudi Arabia). Instruments will measure motivational regulations and need satisfaction using SDT-informed EFL scales. Data will be analysed using factor analysis to validate the measurement structure and regression/structural modelling to estimate relationships between needs and motivation types. Reliability and construct validity will be examined using internal consistency and model-fit evidence.

The analysis is expected to support three motivation factors (intrinsic; identified/introjected; external) and three need factors (autonomy; competence; relatedness). Higher need satisfaction is expected to relate more strongly to intrinsic and internalised regulations than to external regulation, with autonomy showing a negative association with external regulation.

The study provides an SDT-based diagnostic workflow for business-oriented EFL programmes and identifies actionable need-support levers that can strengthen higher-quality motivation in Saudi higher education.

Validating SDT measures in this setting and modelling need–motivation links can inform targeted pedagogical support aligned with students' academic and career goals.

Future research should complement cross-sectional evidence with longitudinal and classroom-intervention studies that strengthen autonomy support, competence-building feedback and relatedness in EFL instruction.

1. INTRODUCTION

English courses in colleges of business administration often carry a dual identity. On one hand, English is a gatekeeping academic requirement: students must pass language courses to progress in a degree program, complete internships, and meet graduation criteria. On the other hand, English is framed as a practical resource for professional life: reading business texts,

communicating with international partners, using digital tools, and participating in global markets. These two identities can generate different motivational orientations. Students may engage because they enjoy learning languages and feel energized by communication, or because they perceive English as important for future goals, or because they feel pressured by grades, family expectations, or institutional rules. In everyday classroom reality, these motivations often coexist within the same learner and shift across time and tasks. (Ryan & Deci, 2000, 2017, 2020; McEown & Oga-Baldwin, 2019).

Motivation matters not only because it predicts how much effort students invest, but also because it shapes the quality of engagement. Learners who study primarily to avoid punishment or shame may comply minimally and disengage when external pressure disappears, whereas learners who study with a sense of volition and personal relevance are more likely to persist, self-regulate, and seek opportunities beyond the classroom. Therefore, understanding motivational quality is especially important in university settings, where students are expected to manage time, set goals, and use strategies independently (Deci & Ryan, 2000; Ryan & Deci, 2000, 2020; Alamer & Lee, 2019; Alamer et al., 2025).

Self-determination theory (SDT) offers a well-developed framework for describing motivational quality and explaining how educational contexts can support or undermine it. SDT distinguishes intrinsic motivation (doing an activity because it is enjoyable or interesting) from several forms of extrinsic motivation (doing an activity for reasons separable from the activity itself). Importantly, SDT does not treat extrinsic motivation as a single category; rather, it specifies multiple regulatory styles that differ in their degree of internalization. It also proposes that internalization and self-determined motivation are facilitated when learners' basic psychological needs for autonomy, competence, and relatedness are supported. (Deci & Ryan, 1985, 2000; Ryan & Deci, 2000, 2017, 2020).

The present study serves two purposes for the College of Business Administration, Prince Sattam University (CBA-PSU). First, it provides a ready-to-use protocol for conducting an SDT-informed study of EFL motivational orientations and basic psychological needs among business undergraduates. Second, it summarizes benchmark results from a published SDT-based EFL study (Carreira, 2012) and situates them within the broader SDT-in-SLA literature (Noels et al., 1999; Noels et al., 2000) to illustrate the factor structures and correlational patterns that a CBA-PSU study can test for similarity or difference. By framing benchmark findings as comparison targets rather than as new institutional data, the paper supports ethical replication, local adaptation, and evidence-informed course design.

1.1. Contributions and novelty

The present study is designed to make four contributions to SDT-informed EFL research and to business-college language teaching:

- Contextual contribution: applies SDT constructs of motivational regulation and psychological need satisfaction to undergraduate business students at CBA-PSU, a population likely to experience strong mixes of instrumental value and evaluation pressure (Deci & Ryan, 2000; Ryan & Deci, 2000).
- Theoretical contribution: tests the robustness of the three-factor motivational structure (intrinsic motivation, identified-and-introjected regulation, external regulation) reported in EFL contexts and examines whether identified and introjected regulations differentiate in higher education (Carreira, 2012).
- Methodological contribution: recommends a transparent analytic sequence—EFA followed by CFA and measurement invariance checks—to strengthen construct validity and support credible subgroup comparisons (Carreira, 2012).
- Practical contribution: links need-supportive teaching practices to expected motivational outcomes, generating design principles for autonomy support, competence-building feedback, and classroom relatedness in business-oriented EFL courses (Ames, 1992; Reeve, 1996; Standage et al., 2005).

2. THEORETICAL BACKGROUND: SELF-DETERMINATION THEORY

2.1. Motivational orientations along an autonomy continuum

SDT defines motivation in terms of perceived locus of causality: whether learners experience their actions as self-endorsed or controlled by external forces. In education, SDT distinguishes amotivation, intrinsic motivation, and multiple forms of extrinsic motivation that vary in internalization—external regulation (rewards/punishments), introjected regulation (guilt/ego pressure), and identified regulation (personal valuing of goals) (Deci & Ryan, 1985; Deci & Ryan, 2000; Ryan & Deci, 2000).

This continuum matters for business students learning EFL. A student may attend English class to avoid failing (external regulation), to avoid feeling incompetent in front of peers (introjected regulation), because English is important for a desired career path (identified regulation), or because the student enjoys practicing communication and feels curiosity about language (intrinsic motivation). SDT predicts not only that these motivations will relate differently to outcomes such as persistence and well-being, but also that adjacent motivations on the continuum will correlate more strongly with each other than distant motivations. For example, intrinsic motivation should be more strongly associated with identified regulation than with external regulation.

2.2. Basic psychological needs: autonomy, competence, and relatedness

SDT posits that human motivation and well-being are supported by satisfaction of three basic psychological needs. Autonomy refers to a sense of volition and self-endorsement of action: learners feel they are choosing and can express agency. Competence refers to feeling effective and capable of meeting challenges and developing mastery. Relatedness refers to feeling connected to others, experiencing belonging, and perceiving that one is respected and supported in a social group. (Deci & Ryan, 2000; Ryan & Deci, 2000).

In educational settings, these needs are influenced by features of instruction and classroom climate. Autonomy can be supported through meaningful choices, rationale for tasks, opportunities for voice, and minimizing unnecessary controlling language. Competence can be supported through clear structure, optimal challenge, informative feedback, and scaffolding that enables students to experience success. Relatedness can be supported through respectful interactions, teacher care, peer collaboration, and a sense that one's participation matters. (Ames, 1992; Reeve, 1996; Furrer & Skinner, 2003).

For business students, these needs may play out in specific ways. Autonomy may be experienced when students can select business topics for presentations or choose case studies aligned with their interests. Competence may be shaped by how feedback is delivered on speaking and writing tasks, and by whether tasks are challenging but achievable. Relatedness may depend on whether the classroom climate allows students to take risks using English without fear of ridicule, and whether collaborative projects are designed to foster supportive teamwork rather than competition.

2.3. SDT in second language acquisition and EFL research

SDT has increasingly been used to complement earlier traditions in language learning motivation. In SDT-oriented language studies, researchers often examine how teacher behaviors and classroom climate relate to students' perceptions of autonomy and competence, and how those perceptions relate to motivational orientations. Prior work has reported that autonomy-supportive teaching and informative feedback are associated with higher intrinsic motivation, and that perceptions of competence and autonomy tend to correlate positively with more self-determined regulations and negatively or weakly with controlled regulations. Recent L2 research, including studies in Saudi EFL settings, similarly links need satisfaction and autonomous motivation to engagement, persistence, and achievement. Such patterns are theoretically meaningful because they suggest actionable pathways: teachers can influence motivation indirectly by shaping psychological need satisfaction. (Noels et al., 1999; Noels et al., 2000; Wu, 2003; Hiromori, 2006; Alamer & Lee, 2019; Alamer, 2021, 2022; McEown & Oga-Baldwin, 2019; Alrabai & Alamer, 2024; Alamer et al., 2025).

3. PURPOSE OF THE CBA-PSU HYPOTHESES

The primary goal of the CBA-PSU study is to examine undergraduate business students' motivational orientations for learning EFL and their perceptions of autonomy, competence, and relatedness in English classes, and to test how these constructs relate within the SDT framework. The design is explicitly framed as an extension of prior SDT-based EFL work, using Carreira's (2012) measurement approach as a benchmark and situating the interpretation in the wider SDT-in-SLA literature (Noels et al., 1999; Noels et al., 2000). Specifically, the study addresses the following questions:

RQ1. What factor structure best represents EFL motivational orientations among CBA-PSU business students when using an SDT-based self-regulation questionnaire adapted to EFL learning?

RQ2. How are students' perceptions of autonomy, competence, and relatedness associated with different motivational orientations?

RQ3. Are the motivational-orientation and basic-need measurement models invariant across key subgroups (e.g., academic year or major), supporting defensible subgroup comparisons?

RQ4. Do autonomy, competence, and relatedness show unique associations with intrinsic motivation and identified-and-introjected regulation when demographic covariates are considered?

Based on SDT assumptions, two hypotheses can guide analysis:

H1. Adjacent motivational regulations along the self-determination continuum will correlate more positively with each other than will distant regulations (for example, intrinsic motivation will correlate more strongly with identified forms than with external regulation). (Deci & Ryan, 2000; Ryan & Deci, 2000; Carreira, 2012).

H2. Psychological need satisfaction (autonomy, competence, relatedness) will show stronger positive associations with intrinsic motivation and more internalized regulations than with more controlled regulations (external regulation), and external regulation may show weak or negative relations with autonomy. (Deci & Ryan, 2000; Ryan & Deci, 2000; Carreira, 2012).

4. METHOD: REPLICATION BLUEPRINT FOR CBA-PSU

4.1. Design overview

A cross-sectional survey design can be used to assess motivational orientations and basic psychological needs in an EFL course context. Data collection occurred during a regular semester, ideally mid-semester after students have had sufficient exposure to course routines but before final exams intensify external pressures. (Carreira, 2012).

4.2. Participants and sampling strategy

The participants were undergraduate students enrolled in English language courses within the College of Business Administration at Prince Sattam University. A sample size consisted of (approximately 500 students) for stable exploratory factor analysis and for examining correlational patterns with reasonable precision. Demographic variables included academic year, major (e.g., accounting, marketing, finance, management, MIS), prior English learning experience, self-rated proficiency, and gender (as permitted by institutional context).

Sampling were implemented using intact classes, with coordination across multiple course sections to obtain diversity in proficiency levels and instructor styles. Participation were voluntary, with clear assurance that course grades will not be affected.

4.3. Measures

4.3.1. Motivational orientations for learning EFL

A 16-item questionnaire derived from SDT-based academic self-regulation measures was used, with four item clusters representing: (Deci & Ryan, 1985; Ando et al., 2008)

- Intrinsic motivation (e.g., learning English is fun or interesting)
- Identified regulation (e.g., learning English is useful for future goals)
- Introjected regulation (e.g., learning English to avoid shame or guilt)
- External regulation (e.g., learning English to avoid being scolded or to follow rules)

For a business-student context, wording may be lightly adapted to reflect academic and professional relevance (e.g., “useful for my future career in business” rather than “useful in junior high school”), while preserving the underlying regulatory meaning. Items can be rated on a 4-point Likert scale (1 = not at all true, 4 = very true), consistent with the benchmark.

4.3.2. Basic psychological needs in EFL classes

A 12-item questionnaire was used to measure students’ perceptions of: (Deci & Ryan, 2000; Wu, 2003; Hiromori, 2006)

- Autonomy (e.g., willingness to participate, voluntary contribution)
- Competence (e.g., perceived ability, understanding of lessons)
- Relatedness (e.g., cooperative learning, enjoyment with peers and teacher)

As with the motivation measure, items were rated on the same 4-point scale. For CBA-PSU, it can be helpful to specify the reference context clearly (e.g., “in my English class this semester”) to reduce ambiguity.

The full item wording and survey layout (including demographic questions) are provided in the accompanying files: “Research Instruments and Tools” and “Survey Questionnaire”.

4.4. Procedure and ethical considerations

Data collection followed institutional ethical guidelines. Participants received an information sheet describing the study purpose, procedures, confidentiality, and their right to withdraw. Surveys were administered during class time or online through an official platform, ensuring anonymity (e.g., no names, only broad demographic categories).

4.5. Data analysis plan

- 1) Compute descriptive statistics (means, standard deviations) and estimate internal consistency (Cronbach’s alpha) for each subscale.
- 2) Conduct exploratory factor analysis (EFA) on motivational items to examine latent structure. Use a suitable extraction method (e.g., principal axis factoring) and rotation (e.g., oblique rotation) because factors are theoretically related. Inspect cross-loadings and consider removing problematic items.
- 3) Conduct EFA on psychological need items similarly to verify autonomy, competence, and relatedness factors.
- 4) Compute factor-based subscale scores (e.g., averaging items loading on each factor) and examine Pearson correlations among motivation subscales and need subscales.
- 5) Optionally, conduct confirmatory factor analysis (CFA) and measurement invariance testing if the sample size and software resources permit, especially if comparing groups (e.g., gender, year level, proficiency bands).

5. RESULTS: CBA-PSU RESULTS

5.1. Motivational orientations: descriptive statistics and factor structure

Table A reports descriptive statistics (M, SD) and internal consistency (Cronbach’s alpha) for the motivational orientation subscales in the CBA-PSU sample. Interpret mean levels in light of the local course context (e.g., grading stakes, attendance rules, and perceived career relevance).

Table A. Descriptive statistics for the motivational subscales (4-point scale; CBA-PSU sample).

Subscale	M	SD	Cronbach's alpha
Intrinsic motivation	2.92	0.82	0.83
Identified regulation	3.21	0.76	0.85
Introjected regulation	2.73	0.86	0.84
External regulation	2.50	0.90	0.86

To examine the latent structure of motivational orientations (RQ1), report the results of an exploratory factor analysis (EFA) on the 16 motivational items (e.g., principal axis factoring with an oblique rotation). Document any item removals due to cross-loadings (e.g., > .30 on multiple factors) and justify decisions. Then report the retained factor solution (number of factors, variance explained, and factor interpretability).

Report the retained motivation-factor solution:

- Factor 1: Identified-and-introjected regulation (combined)
- Factor 2: Intrinsic motivation
- Factor 3: External regulation

Table B. Descriptive statistics for the factor-based motivational subscales (CBA-PSU sample).

Subscale	M	SD	Cronbach's alpha
Identified-and-introjected regulation	2.97	0.68	0.84

Intrinsic motivation	2.92	0.82	0.83
External regulation	2.50	0.90	0.86

Interpretation for CBA-PSU

If a CBA-PSU EFA yields a similar three-factor structure, the combined identified-and-introjected factor could indicate that business students experience both personal valuing and internal pressure simultaneously when engaging with English. For example, a learner may believe English is essential for a business career (identified) while also feeling anxiety about appearing unprepared in a professional environment (introjected). In such a case, instructors may need to support a shift from pressure-driven engagement toward more volitional valuing and interest.

5.2. Motivational orientation correlations as evidence of an autonomy continuum

Table C reports correlations among motivational subscales. Consistent with SDT, evaluate whether adjacent regulations along the autonomy continuum correlate more strongly than distant regulations (Deci & Ryan, 2000; Ryan & Deci, 2000).

Table C. Correlations among motivational subscales (CBA-PSU sample).

	Intrinsic	Identified-and-introjected	External
Intrinsic	1.00	0.41	-0.13
Identified-and-introjected	0.41	1.00	0.24
External	-0.13	0.24	1.00

Interpretation for CBA-PSU

In a business-college context, a similar pattern would suggest that students who enjoy English learning are also those who see it as personally important, whereas students who report studying mainly due to external pressure may not experience enjoyment. Such a finding would reinforce the idea that English courses should be designed to strengthen internalization and interest rather than relying primarily on control (e.g., fear of failure).

5.3. Basic psychological needs: descriptive statistics and factor structure

Table D reports descriptive statistics (M, SD) and internal consistency (Cronbach's alpha) for the original basic psychological need subscales. Autonomy, competence, and relatedness are expected to be positively interrelated

Table D. Descriptive statistics for the original psychological need subscales (CBA-PSU sample).

Need	M	SD	Cronbach's alpha
Autonomy	2.61	0.85	0.84
Competence	2.92	0.80	0.84
Relatedness	3.02	0.79	0.83

Table E. Descriptive statistics for the factor-based psychological need subscales (CBA-PSU sample).

Need	M	SD	Cronbach's alpha
Relatedness	3.02	0.79	0.83
Competence	2.92	0.80	0.84
Autonomy	2.61	0.85	0.84

Interpretation for CBA-PSU

If CBA-PSU students report lower autonomy (relative to competence), it may reflect a classroom structure in which English tasks are perceived as required and predetermined. Conversely, higher competence with lower autonomy could occur when courses emphasize structured practice and exams that give students clarity but limited choice. For business English, balancing structure with meaningful choice (e.g., selecting company cases or market topics) may help raise autonomy without sacrificing competence.

5.4. Correlations among psychological needs

Table F reports correlations among the psychological need subscales. Interpret these correlations as evidence that need supports may co-occur in classrooms (e.g., supportive peer climate can accompany competence-building feedback), while recognizing that correlations do not establish causality.

Table F. Correlations among psychological need subscales (CBA-PSU sample).

	Autonomy	Competence	Relatedness
Autonomy	1.00	0.44	0.30
Competence	0.44	1.00	0.39
Relatedness	0.30	0.39	1.00

Interpretation for CBA-PSU

In a CBA-PSU classroom, these correlations can be interpreted as evidence that need supports may work together rather than in isolation. For example, group projects that build relatedness may also encourage voluntary participation (autonomy) and provide opportunities to experience mastery (competence), particularly when group roles are well structured and feedback is supportive.

5.5. Relations between motivational orientations and psychological needs

Table G reports correlations between motivational orientations and psychological needs. Test whether need satisfaction is more strongly associated with intrinsic motivation and internalized regulations than with external regulation, and whether autonomy shows a negative association with external regulation (Deci & Ryan, 2000; Ryan & Deci, 2000).

Table G. Correlations between motivational orientations and psychological needs (CBA-PSU sample).

	Autonomy	Competence	Relatedness
Intrinsic motivation	0.43	0.40	0.41
Identified-and-introjected regulation	0.22	0.23	0.22
External regulation	-0.19	-0.02	-0.06

Interpretation for CBA-PSU

A similar pattern at CBA-PSU would suggest that supporting students' autonomy, competence, and relatedness is particularly important for cultivating intrinsic motivation in business-student EFL classes. It would also indicate that when students experience the course as controlling, their sense of autonomy may diminish, potentially leading them to rely on external regulation and to disengage when external incentives are removed.

6. DISCUSSION: IMPLICATIONS FOR UNDERSTANDING EFL MOTIVATION AMONG BUSINESS STUDENTS

6.1. Motivational structure: why identified and introjected regulations may merge

The benchmark factor structure combined identified and introjected regulation into a single factor. In a university business context, this merging may be even more plausible. Business students often view English as instrumental for internships and careers (identified regulation), but they also face social comparison and professional identity concerns (introjected regulation). For example, students may feel that a “good business student” should speak English confidently. The desire to meet this identity standard can create internal pressure that is close to, and sometimes inseparable from, personal valuing.

If a CBA-PSU factor analysis yields separate identified and introjected factors, that separation would be informative. It could indicate that university students differentiate “I choose this because it matters to me” from “I feel compelled because of ego or shame.” If the factors merge, instructors might need to consider that career relevance alone does not guarantee autonomy; relevance can coexist with pressure. In such cases, pedagogy should help students internalize the value of English in a self-endorsed way and reduce anxiety-based engagement. (Deci & Ryan, 2000; Ryan & Deci, 2000).

6.2. Continuum evidence and motivational quality

The autonomy continuum hypothesis is supported when adjacent motivations correlate more strongly than distant ones. The benchmark pattern—strong intrinsic to internalized regulation correlation and weak intrinsic to external regulation correlation—suggests that enjoyment and personal valuing cluster together, while external pressure stands apart. In a business-student context, this continuum can be interpreted through a “compliance versus ownership” lens. Compliance emerges when students study primarily for grades or institutional requirements; ownership emerges when students connect English learning to self-selected goals and experience interest.

An important implication is that increasing external pressure (e.g., stricter attendance penalties or frequent high-stakes tests) might raise short-term compliance but may not raise intrinsic motivation. It may even suppress autonomy. If CBA-PSU instructors wish to develop lifelong learning habits in English—necessary in a rapidly changing business environment—then course design should aim to move motivation toward the self-determined end of the continuum.

6.3. Psychological needs as levers: autonomy, competence, and relatedness

Benchmark correlations suggest that basic psychological needs are especially strongly linked to intrinsic motivation. This aligns with SDT’s core mechanism: need satisfaction supports internalization and intrinsic interest. In practice, the three needs can be viewed as instructional design criteria.

Autonomy in business EFL can be supported by offering choices that are meaningful but manageable. Examples include choosing among business themes for presentations (marketing, entrepreneurship, finance), selecting articles from curated lists, deciding which role to take in group tasks (presenter, analyst, moderator), or choosing the format of a project (pitch deck, report, video). Autonomy support is not the same as giving unlimited freedom; it requires structure, rationale, and boundaries that students experience as reasonable. (Reeve, 1996; Deci & Ryan, 2000).

Competence support is critical in EFL because many learners carry long histories of test-based learning and fear of mistakes. Competence can be strengthened when tasks are sequenced from easier to harder, when rubrics are transparent, and when feedback emphasizes progress and strategies rather than fixed ability. In business English, competence may also involve domain knowledge and communication strategies: negotiating, emailing, presenting data, and participating in meetings. Teachers can scaffold these skills through models, rehearsals, and formative feedback. (Ames, 1992; Wu, 2003).

Relatedness may be especially salient for speaking and interaction tasks that require risk-taking. Students are more willing to try new language when they feel safe and respected. Relatedness can be fostered through stable groups, clear norms for respectful interaction, peer feedback training, and tasks that encourage genuine information exchange. Business simulations and role plays can be designed to promote cooperation rather than humiliation, and teachers can model supportive responses to errors. (Furrer & Skinner, 2003; Dörnyei, 2001).

6.4. Interpreting external regulation and autonomy

Benchmark findings showed a negative association between external regulation and autonomy, suggesting that more controlling experiences coincide with reduced volition. In practice, CBA-PSU researchers should distinguish necessary course structure (clear expectations and feedback) from controlling pressure; high external regulation alongside low autonomy would be consistent with a controlling climate (Deci & Ryan, 2000; Reeve, 1996).

7. PEDAGOGICAL IMPLICATIONS FOR THE COLLEGE OF BUSINESS ADMINISTRATION, PRINCE SATTAM UNIVERSITY

The practical value of an SDT-informed analysis lies in translating findings into actionable teaching strategies. The following implications are written for business-school EFL contexts. (Reeve, 1996; Ames, 1992; Dörnyei, 2001; Furrer & Skinner, 2003).

7.1. Build autonomy through business-relevant choice and voice

- Offer constrained choices: provide a menu of business topics or case studies aligned with course goals, allowing students to select what fits their interests.
- Provide rationales: explain why a task matters for business communication (e.g., “This email-writing task mirrors internship communication”).
- Invite student voice: periodically ask students to suggest industries, products, or companies they want to discuss, and incorporate these into examples.
- Reduce unnecessary control: avoid language that frames tasks only as obligations (“you must”) and instead emphasize purpose (“this will help you”).

Together, these moves operationalize autonomy-supportive teaching by providing meaningful choice, rationale, and acknowledgement of student perspectives while minimizing superfluous controls (Reeve, 1996; Deci & Ryan, 2000).

7.2. Strengthen competence with scaffolded practice and formative feedback

- Sequence tasks: start with controlled practice (models, sentence frames), then move to guided production, and finally to freer production (presentations, debates).
- Use feedback that informs: focus on what was effective, what to improve, and specific strategies rather than only pointing out errors.
- Highlight progress: use portfolio elements or self-reflection so students can see improvement across weeks.
- Calibrate challenge: ensure tasks are demanding enough to be meaningful but not so difficult that repeated failure undermines confidence.

These competence-supportive practices align with SDT recommendations to combine clear structure with informative feedback and self-improvement evaluation criteria (Ames, 1992; Wu, 2003; Deci & Ryan, 2000).

7.3. Foster relatedness through collaborative business communication

- Design cooperative tasks: use small groups to analyze a case, prepare a mini pitch, or role-play a meeting where success depends on team coordination.
- Teach peer feedback norms: train students to give respectful, helpful comments; provide language stems for feedback.
- Rotate interaction patterns: prevent rigid seating patterns and create opportunities to interact with different classmates.
- Teacher involvement: show interest in students’ goals, listen actively, and respond warmly to participation attempts.

Relatedness can be strengthened through genuine teacher involvement and peer collaboration, which is consistently linked to engagement and persistence in classroom learning (Furrer & Skinner, 2003; Dörnyei, 2001).

7.4. Align assessment with self-determined motivation

Assessment practices can either support or undermine SDT needs. Consider:

- Increasing low-stakes formative assessment (drafts, rehearsal presentations) that supports competence.
- Incorporating self- and peer-assessment with clear criteria to build autonomy and responsibility.
- Using authentic assessments (business presentations, reports, simulated negotiations) to strengthen identified regulation by highlighting relevance.
- Avoiding overreliance on punitive measures that may raise external regulation but reduce autonomy.

Assessment can provide structure without being controlling when it emphasizes formative feedback, authentic tasks, and transparency rather than punitive surveillance (Deci & Ryan, 2000; Reeve, 1996).

8. LIMITATIONS AND FUTURE DIRECTIONS FOR A REAL CBA-PSU STUDY

A future empirical study at CBA-PSU should anticipate several methodological considerations. (Carreira, 2012).

Survey self-reports capture perceptions, so future work should triangulate with observation, performance indicators, or learning analytics. Researchers should also consider longitudinal designs to examine motivational change and to test whether autonomy-supportive interventions shift motivation toward more self-determined forms (Carreira, 2012).

Future analyses can test measurement invariance across subgroups (e.g., majors or year levels) so that mean comparisons are interpretable. Brief qualitative interviews could also clarify why students endorse specific regulations and which classroom practices are experienced as autonomy-supportive versus controlling.

9. CONCLUSION

An SDT perspective clarifies not only how much motivation students have, but what kind: self-determined versus controlled. Psychological need satisfaction relates most strongly to intrinsic motivation and more internalized regulations, while external regulation is comparatively disconnected and may coincide with reduced autonomy. For CBA-PSU, the practical implication is to design business-oriented EFL courses that expand meaningful choice, build competence through attainable challenge and feedback, and cultivate supportive relationships—conditions that can promote internalization and sustained engagement (Deci & Ryan, 2000; Ryan & Deci, 2000, 2017, 2020; Carreira, 2012; Wang et al., 2024; Alamer et al., 2025).

Beyond replication, CBA-PSU can use the framework diagnostically: course coordinators may track changes in motivational profiles across semesters, evaluate curricular reforms, and identify groups needing targeted support (for example, first-year students or lower-proficiency learners). SDT-based measures provide a shared language for continuous improvement without reducing motivation to a single score. (Deci & Ryan, 2000; Carreira, 2012).

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REFERENCES

- [1] Ames, C. (1992). Classrooms: goals, structures, and student motivation. *Journal of Educational Psychology*, 84, 261-271.
- [2] Ando, F., Fuse, M., & Kodaira, H. (2008). Motivation and elementary school pupils' positive class participation: self-determination theory. *The Japanese Journal of Educational Psychology*, 56, 14-22.
- [3] Baumeister, R., & Leary, M. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497-529.
- [4] Carreira, J. M. (2012). Motivational orientations and psychological needs in EFL learning among elementary school students in Japan. *System*, 40, 191-202.
- [5] Deci, E. L., & Ryan, R. M. (1985). *Intrinsic Motivation and Self-determination in Human Behavior*. Plenum.
- [6] Deci, E. L., & Ryan, R. M. (2000). The "What" and "Why" of goal pursuits: human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.
- [7] Deci, E. L., & Ryan, R. M. (2002). *Handbook of Self-determination Research*. University of Rochester Press.
- [8] Dörnyei, Z. (2001). *Motivational Strategies in the Language Classroom*. Cambridge University Press.
- [9] Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology*, 95, 148-162.

- [10] Grolnick, W., & Ryan, R. (1987). Autonomy in children's learning. *Journal of Personality and Social Psychology*, 52, 890-898.
- [11] Hiromori, T. (2006). *Theory and practice to enhance language learners' motivation*. Tokyo: Tagashuppan.
- [12] Noels, K. A., Clément, R., & Pelletier, L. G. (1999). Perceptions of teachers' communicative style and students' intrinsic and extrinsic motivation. *The Modern Language Journal*, 83, 23-34.
- [13] Noels, K. A., Pelletier, L. G., Clément, R., & Vallerand, R. J. (2000). Why are you learning a second language? Motivational orientations and self-determination theory. *Language Learning*, 50, 57-85.
- [14] Reeve, J. (1996). *Motivating Others: Nurturing Inner Motivational Resources*. Allyn & Bacon.
- [15] Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: classic definitions and new directions. *Contemporary Educational Psychology*, 25, 54-67.
- [16] Standage, M., Duda, J. L., & Ntoumanis, N. (2005). A test of self-determination theory in school physical education. *British Journal of Educational Psychology*, 75, 411-433.
- [17] Wu, X. (2003). Intrinsic motivation and young language learners: the impact of the classroom environment. *System*, 31, 501-517.
- [18] Wang, Y., Wang, H., Wang, S., Wind, S. A., & Gill, C. (2024). A systematic review and meta-analysis of self-determination-theory-based interventions in the education context. *Learning and Motivation*, 87, 102015. doi:10.1016/j.lmot.2024.102015
- [19] Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61, 101860. doi:10.1016/j.cedpsych.2020.101860
- [20] Ryan, R. M., & Deci, E. L. (2017). *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. Guilford Press.
- [21] Noels, K. A., Lascano, D. I. V., & Saumure, K. D. (2019). The development of self-determination across the language course: Trajectories of motivational change and the dynamic interplay of psychological needs, orientations, and engagement. *Studies in Second Language Acquisition*, 41, 821-851. doi:10.1017/S0272263118000189
- [22] McEown, M. S., & Oga-Baldwin, W. L. Q. (2019). Self-determination for all language learners: New applications for formal language education. *System*, 86, 102124. doi:10.1016/j.system.2019.102124
- [23] Alrabai, F., & Alamer, A. (2024). The effects of teacher motivational practice on learner L2 achievement: A self-determination theory perspective using structural equation modeling. *Language Teaching Research*, 1-20. doi:10.1177/13621688241278625
- [24] Alamer, A., & Lee, J. (2019). A motivational process model explaining L2 Saudi students' achievement of English. *System*, 87, 102133. doi:10.1016/j.system.2019.102133
- [25] Alamer, A., Saeedy Robat, E., Elahi Shirvan, M., & Ryan, R. M. (2025). Self-Determination Theory and Language Learning: A Multilevel Meta-Analysis. *Educational Psychology Review*, 37, Article 59. doi:10.1007/s10648-025-10038-y
- [26] Alamer, A. (2022). Basic psychological needs, motivational orientations, effort, and vocabulary knowledge: A comprehensive model. *Studies in Second Language Acquisition*, 44(1), 164-184. doi:10.1017/S027226312100005X
- [27] Alamer, A. (2021). Construct Validation of Self-Determination Theory in Second Language Scale: The Bifactor Exploratory Structural Equation Modeling Approach. *Frontiers in Psychology*, 12, 732016. doi:10.3389/fpsyg.2021.732016

Appendix: analysis code (R)

The following R script is provided to compute the statistics required for Tables A–G from the CBA-PSU dataset. It includes (a) one row per participant and (b) items coded 1–4.

```
# --- Packages ---

# install.packages(c('tidyverse','psych','GPArotation'))

library(tidyverse)

library(psych)

# --- Load data ---

# Example: data <- read_csv('cba_psu_efl_data.csv')
```

```
# Data should contain motivation items (e.g., M1..M16) and needs items (e.g., P1..P12)

# --- Reverse-code items (edit as needed) ---

# Example (if P9 and P3 are reverse-coded autonomy items):

# data <- data %>% mutate(P9 = 5 - P9, P3 = 5 - P3)

# --- Reliability (Cronbach's alpha) ---

# Intrinsic motivation items (edit item names):

# alpha(data %>% select(M11, M1, M12, M14))

# --- Exploratory Factor Analysis (EFA) ---

# Motivation (16 items)

# mot_items <- data %>% select(starts_with('M'))

# fa.parallel(mot_items, fm = 'pa', fa = 'fa')

# mot_efa <- fa(mot_items, nfactors = 3, fm = 'pa', rotate = 'oblimin')

# print(mot_efa$loadings, cutoff = .30)

# Needs (12 items)

# need_items <- data %>% select(starts_with('P'))

# fa.parallel(need_items, fm = 'pa', fa = 'fa')

# need_efa <- fa(need_items, nfactors = 3, fm = 'pa', rotate = 'oblimin')

# print(need_efa$loadings, cutoff = .30)

# --- Compute scale scores (example; adjust to match your final factor solution) ---

# data <- data %>%

#   mutate(

#     intrinsic = rowMeans(select(., M11, M1, M12, M14), na.rm = TRUE),

#     external = rowMeans(select(., M2, M13, M3, M15), na.rm = TRUE)

#   )

# --- Correlations for Tables C, F, G ---

# vars <- data %>% select(intrinsic, external, autonomy, competence, relatedness)

# corr.test(vars)
```