

Original Research

Applying the cognitive congruence principle to target language training

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Though the cognitive congruence principle has been studied and used in education, the problem of designing technologies for its integration and functioning, particularly in target language training, remains open. In training within the learning process, i.e., exploring learned material rather than introducing it, educators may think congruence tutoring will fit as a tool for applying this principle. By developing a cognitive congruence-performing model, the study aims to objectivise cognitive congruence, i.e., involve aligning learning goals with learning experience processing, student abilities or learning styles with instructional design, and tutoring with tutoring and delivering to the educational cluster. Here, the question arises of why and how the cognitive congruence principle can reconfigure the learning experience. The process-oriented method establishes the importance of dynamics, cooperation, and transformation as well as teaching, tutoring, and tutoring processes to produce the cognitive congruence model performance. It refers to methodological triangulation within the method that covers the exploratory data analysis: process tracing, process screening, and process evaluation. The model and instructions as congruence research application results in facilitating knowledge, imparting and enhancing the cognitive experience in students' chosen field; ensuring alignment with the educational milieu, procedure, content, and outcomes and integrating teaching and learning strategies; giving new momentum to decision-making skills via increasing collective thinking and streamline complex problem-solving, cultural acceptance, social responsibility, and self-assessment. The frame-alignment entity establishes a workable and eligible integral pattern for discussion and creative use. Education congruence is adaptable to practical guidelines for planning and implementing enrichment training and learning systems in intercultural and interdisciplinary communication teach-in environments.

KEYWORDS: cognitive congruence principle, cognitive interview, cognitive thinking, instructional design, learning style, process-oriented approach



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1. INTRODUCTION

The involvement of students in authentic, practical activities in the chosen profile remains a priority direction of university education, corresponding to professional standard. It presumes various forms and can be embodied in practice-oriented initiatives depending on target settings, materials and technical resources, and possibly the contractual business solutions of an educational institution. Thus, in the 1970s and later years, the training of future teachers of Russian as a foreign language provided for the assignment of the local students starting from the first year of studies to groups of international students of the preparatory faculty and their active engagement in the curricular and extracurricular activities of the sponsored division under the guidance of the instructor of the anchored group and monitoring of the educationalist. Their mission statement was as follows: (1) passive practice (systematic attendance, transcription, and class analysis); (2) pre-planned joint homework completion; (3) assistance with planning for various events; (4) arranging

co-curricular field trips; and (5) immersing foreign students in the native language environment and further still, for students in their senior year, (6) lesson planning and delivery; and (7) substitute teaching (in exceptional cases). This action increased the language learners' communicative competence level, on the one hand, and, on the other hand, encouraged Russian students to perceive university education as the first stage in entering the profession of language teaching, to recognise their social significance, and, respectively, to be motivated to study. Thus, a Russian student could become an acting teacher, to be more exact, a tutor or mentor for a foreigner starting to learn a new language and culture. Because all parties are working toward a shared goal, we can now describe that form of cooperation in the referred learning environment as congruent.

This paper argues that, by underpinning the cognitive approach, building congruence among teacher candidates in actual cross-disciplinary courses proves highly efficient within the framework of an educational programme that excludes fields

like pedagogy and educational psychology as well as the teaching practicum. It is about a curriculum approved by one of the international educational institutions for professional training in *language, literature, and civilisation* in the target language, in our case, Russian, out of the linguo-cultural environment.

According to the article's intent, target language learning is learning another language that a person studies and practises to use in more freely pursued activities for professional purposes. The positive effect of such learning is achieved to a greater extent when facilitating the emergence of student learning goals in classes of related disciplines and, correspondingly, intersubject communications, with careful attention to pedagogical praxis through communication and contextualisation. It helps promote a dynamic and adaptive environment for training learned material by identifying and coordinating conceptual areas for improvement and aligning them congruently.

Due to these perspectives, vectoring mindfulness as a professional skill shows better adjustments through process-oriented methodologies for learning, where instruction comes from *'teaching thinking strategies and domain-specific knowledge in coherence'* (Vermunt & Verloop, 1995, p. 325). The methodology originates with goals, matches practical circumstances, delivers the prospect for self-reflection, and sets priorities for supporting psychological health and positive thinking integrally. The design of one such instruction fits into developing an associated, process-oriented model for the congruent tutorial. Indeed, this is the purpose of the present article.

2. MATERIAL AND METHODS

The process-oriented method objectifies some considerations for pragmatic teaching and learning, making them feasible strategies for instructors to utilise in their classrooms. It also meets the current research objectives by establishing a predictive modelling procedure for cognitive congruence tutoring.

In the first instance, it directs the choice of an appropriate presentation of instructions and enables learning upon the congruence principle, allowing for links between the process relations in the *teacher-tutor* and *tutor-tutee* systems that underlie these instructional actions. Here, the congruence principle may help explain how to involve a teacher in coaching tutors. By instructing the tutor on, for example, how to ask the tutee a question or outline a concept and give a problem to solve, the teacher ensures that the tutor provides prompt and positive feedback when the tutee answers correctly and gives corrective feedback when the answer is incorrect.

Since this study points to dynamics, cooperation, and changes and examines how and why things happen via congruent target language learning, we can use the process-oriented method as a research approach to address our application and adaptation concerns. It refers to accomplishing the exploratory problem through the use of a particular methodological triangulation *within the method*, covering qualitative data: (1) process tracing: collecting and controlling facts that support or contradict cause-and-effect relationships (between activities and out-

comes); (2) process screening: revealing the actual behaviour and performance of processes, as well as identifying bias, constraints, or invalidities; (3) process evaluating: stipulating feedback on the quality, apprehensibility, and persuasion of course design and delivery or course intervention.

Importantly, the method, as applied, is centred on the individuals and their unfolding experiences rather than attending to their process as a group. It solely enhances its impact on cooperative decisive processing skills. This position, we argue, becomes an alternative but comparable response to Cohen's (2004) study that used a process-oriented method to describe the teaching of counselling skills in a group. Both approaches explore diverse perspectives that value personal and professional growth and integrative learning theory and practice.

Incidentally, the latter translates into the fact that process-oriented research encompasses, proportionately to the process-oriented learning method, prototyping and adjusting the instructional design, i.e., the conception and transfiguration of a tutorial structure that will sustain congruent learning. For our academic pursuits, instructional design compensates a particular educational system or process by emphasising interdisciplinary learning and helping students understand how different academic areas and topics overlap. By exploring the connections across disciplines like linguistics, literature, philosophy, and history, students can attain a more meaningful sense of how different fields of study contribute to our collective knowledge and see the relevance of seemingly unrelated topics to their lives, future goals, and societal issues. In a teach-in situation, complex problem-solving, for example, enriching cultural knowledge, having social responsibility, and using self-assessments, will have a facilitatory effect if a literature session on, say, *Hadji Murat* by Leo Tolstoy is aligned with the learning objectives of a unit on actual Russian civilisation at the time and morality in different contexts.

So, the process-oriented approach permits practical guidelines for planning and implementing learning systems to proceed in parallel with research.

Analogously to the process-oriented method, the congruence principle displays research value alongside its educative or cognitive value. This principle fixes the rules of the process-oriented instruction theory that *'is derived from psychological research on the way students learn and on the interplay between self-regulation and external regulation of learning'* (Vermunt & Verloop, 1995, p. 325). Due to this, the instructional design retains a systematicity that expresses its equivalence relation to the set of learning process components, which, in their part, stand in a consistent position with each other. It means that instructional design reveals its congruence with (1) educational structure, educatory procedure, educative content, and (2) educator and educatees. In this regard, it makes possible the integration of the following: (1) teaching/tutoring and learning strategies that build on goal-driven question-and-answer patterns; (2) instructing/acquiring mechanisms and topical subject-matter competency; and (3) experiencing cognitive thinking and curriculum-based language learning.

When the educator launches an instructional design, the congruence principle ensures the alignment of (a) the student's self-concept manifesting with the issue under discussion and verbal or nonverbal behaviour and (b) the student's cognitive learning style compared with the learning style of others'. What needs to be understood is that applying the principle of cognitive congruence for developing the instructional design in learning the target language focuses, sectionally, on the collective self (social congruence), relational self (peer congruence), and individual self, or self-concept (ego congruence).

Thus, the process-oriented method and the principle of congruence in sectional learning create a mutually beneficial relationship where tutors and tutees get leverage from their interaction (two-way feedback or cogent communication) and cooperation (consciously refraining from different mindset obstructions). Mentors gain pedagogical experience and a broadened awareness of their chosen field through tutoring. In contrast, the learners receive guidance, support, and exposure to constructive linguistic and cultural contexts (including arts, civilisation, and religion).

3. THEORETICAL BACKGROUND

3.1. Psychological basis of cognitive congruence

Cognitive congruence refers to the alignment of mental frameworks and knowledge bases, which facilitates effective communication and comprehension. Applying the cognitive congruence principle to the target language training process involves the concept of shared knowledge and understanding between language learners and their tutors or peers. In this light, the theoretical background for studying this phenomenon or construct of learning theory derives from psychological, linguistic, and organisational foundations since cognitive congruence characterises personal enhancement as well as social interactions through consistency between the cognitive structures of one or more individuals, whilst language provides various means to induce and maintain this consistency.

Osgood and Tannenbaum's study (1955) discusses the magnitude and distribution of pressure toward congruity, the principle of congruity (or congruence) in human thinking, and the direction of attitude change. They stated the principle of congruity as changes in evaluation that regularly move '*in the direction of increased congruity with the existing frame of reference*' (Osgood & Tannenbaum, 1955, p. 43). In our research, this finding is meaningful insofar as an individual, although tending to change thinking toward the instructional side, can nevertheless endeavour to adjust their attitudes in such a way as to align with their current beliefs and values when faced with a message '*which relates two or more objects of judgment via an assertion*' (Osgood & Tannenbaum, 1955, p. 43).

In educational psychology, Vygotsky (1979) reflected '*central tenets of his cognitive theory: the transformation of an interpersonal (social) process to an intrapersonal one; the stages of internalization; and the role of experienced learners*' (Vygotsky, 1979, p. 131) through the conception of interaction between learning

and development known as the zone of proximal development since 1932–1934. '*It is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers*' (Vygotsky, 1979, p. 86).

3.2. Psychotherapeutic foundations

With his theory of congruence in the psychotherapeutic relationship, also called authenticity, Rogers (1961) grounded rules that qualify as infallible across fields of adjacency for this element of inner orientation. According to him, the term *congruence* describes these conditions.

Integration. When a therapist '*is what he is*', i.e., if, in the relationship with the client, a therapist is '*more genuine and congruent*', '*the more probability there is that change in personality in the client will occur*' (Rogers, 1961, p. 62). It means '*that the feelings the therapist is experiencing are available to him, available to his awareness, and he is able to live these feelings, be them, and able to communicate them if appropriate*' (Rogers, 1961, p. 61).

Unconditional positive regard: '*When the therapist is experiencing a warm, positive and acceptant attitude toward what is in the client, this facilitates change*' (Rogers, 1961, p. 62).

Empathic understanding: '*When the therapist is sensing the feelings and personal meanings which the client is experiencing in each moment, when he can perceive these from inside, as they seem to the client, and when he can successfully communicate something of that understanding to his client*' (Rogers, 1961, p. 62).

Essentially, Rogers sees congruence as the consistency of emotional experiences with awareness and verbal or non-verbal expression. Incongruence, at that rate, is a discrepancy between feelings and awareness of them, between awareness and expression of those feelings.

3.3. Linguistic factor of cognitive congruence

The question area limits the linguistic rationale of the cognitive congruence principle with its significant generalisation, which resolves itself in (1) the role of language in forming cognition and (2) the usage-based nature of language, allowing for pragmatics and context dependence. In this regard, we draw on the ideas postulated in cognitive linguistics about the relationship between language and thought (e.g., Vygotsky, 1986) and the interconnectedness of grammar, semantics, and lexicon (in their conjunction) with cognitive abilities (Langacker, 2008). As language is not only an integral part of our cognitions but also of our dominant way of relating to the world, it is vital to remember that linguistic competence must be a system continually shaped, from inception, by linguistic usage events (Barlow & Kemmer, 2000) and '*humans deploy (or learn to deploy) language in order to create shared meaning*' (Ortego et al., 2016, p. 1). Meanings, therefore, are conveyed through real-life usage, and when attaching them to words, we can interpret changes they undergo, making language metaphorical or conceptualised. It is important to note that metaphors and concepts help establish

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Linguistic value also covers the problem of what language teachers think, know, believe, and do in the classroom and how these mental constructs relate to their teaching practices and influence instructional decisions for tutors and tutees. Borg (2003) provides a comprehensive overview of teacher cognition in language teaching that can be useful for levelling trainees' and teachers' beliefs, particularly regarding vocabulary, grammar, and intelligence (precisely, metalanguage and grammatical terminology circulated).

3.4. Corporate theories and practices of congruence achievement

In this study, reliance on the value settings of corporate theories (e.g., Nadler & Tushman, 1980; Pasmore, 2021) and allowance for practical input of experts (e.g., García-Mas et al., 2019) are not random.

Nadler and Tushman (1980) developed (a) the conception of *congruence* or *fit* between different components within an organisation, such as the task and the individuals (people), organisational arrangements and the informal organisation, and the culture of the organisation; and (b) Congruence Model as a diagnostic tool that helps organisations assess whether their strategy straightens up their tasks, people, structure, and culture.

Contributors explaining the concepts of congruence and fit in accordance with the level of congruence in the beliefs within a working team environment *'revealed that the greatest amount of asymmetry was observed in Global Cooperation and Emotional Cooperation, while less asymmetry was found in Personal Growth, and good congruence–fit in Conditioned Cooperation'* (García-Mas et al., 2019).

Other researchers investigating this issue highlight the dependence of problem areas in organisational development on the management of change (Szabla, 2021). These practical implications of cognitive congruence for manager–coach and team-member cooperation and for person–organisation model improvement are useful for us because they can indicate congruence intensity between the value of learning and individual and group success, too.

The educational environment is a pre-professional socialisation platform. Nowadays, it is common knowledge that employers primarily test their applicants for the availability of soft skills such as active listening, communication, teamwork, problem-solving, time management, critical thinking, decision-making, organisational skills, stress management, adaptability, conflict management, empathy, leadership, creativity, resourcefulness, persuasion, and openness to criticism (Coursera, 2023). In favouring education as the basis for forming those skills, without which it is impossible to become in-demand in a modern technology-driven society, a compelling need for teaching them to the young generation apart from their purposes emerges. Undoubtedly, one of them is cognitive congruence because, like soft skills, its dimension prefigures a set of personality traits that determine how effectively individuals can interact in groups and resolve conflicts and how they can approve themselves in any industry or profession. In a way, congruence encompasses the two hypostases of persuasion – conviction (belief of rightness) and persuasiveness (linguistic manipulation). Using both in the training course affects the students' behaviour and accustoms them to empathy. By inference, when crafting tutorial guidance, teachers should keep in mind the idea of combining learning and action.

3.5. Implementing the cognitive congruence principle within the educational cluster

In contemporary research on educational learning, cognitive congruence appears to be interpreted in connection with a problem-based learning environment (Schmidt & Moust, 1995; Williams et al., 2011), with cognitive and social congruence differentiation (Loda et al., 2022) and contextualised in peer-assisted learning (Lockspeiser et al., 2008; Loda et al., 2020), or regarding the compatibility or alignment between student-regulation and teacher-regulation of the learning activities (Schunk & Zimmerman, 1998; Vermunt & Verloop, 1999). The authors of such studies conclude that cognitive congruence refers to the alignment or similarity in knowledge, understanding, and thinking between student tutors and tutees in a peer tutoring context. It involves student tutors having a shared knowledge framework with tutees and using familiar language and comprehensible explanations of their learning needs and difficulties. Cognitive congruence is viewed as a key factor in an efficient and effective peer-assisted learning experience, as it fosters knowledge transfer and improves outcomes. Social congruence is another prominent factor that refers to the similarity in social roles, expectations, and interactions between student tutors and tutees. It involves creating a non-judgmental, informal, and supportive learning atmosphere that enhances motivation, confidence, and satisfaction among learners. Furthermore, in instructional design, cognitive congruence rests on Bloom's Taxonomy (Bloom & Krathwohl, 1956) since it offers a framework for classifying and categorising goals and objectives by the skill level needed to achieve desired learning outcomes (Asunda & Ware, 2015). They address the challenges and opportunities in integrating technology education with engineering design.

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The cognitive congruence principle facilitated knowledge acquisition among students with a few subject specialisms. The congruent learning systems survey spread to students of integrated STEM subjects (science, technology, engineering, and mathematics) (Asunda & Ware, 2015), students of medical, health science, polytechnic, law, and paramedic education (Loda et al., 2019), students of medicine and dentistry (Loda et al., 2020), and students of psychology (Loda et al., 2022).

In the first instance, the novelty of studying the usability potential of the cognitive congruence principle lies in the choice of the sphere of its application, namely teaching a foreign language as the language for a future career. The premise is that when educating specialities like linguistics and literature in our situation, we are first and foremost training communication in the language specific to the field. Secondly, the cognitive congruence concept represents an intellectualised form of communicating in a linguo-cultural context. Thirdly, cognitive congruence as a learning factor connotes the tutor's cognitive interview with the tutee. Fourthly, the instructional design of a subject course (linguistic or literary) with a focal point on cognitive congruence as a formative assignment for prospective professionals becomes an integral part of the learning process.

4. STUDY AND RESULTS

Theoretically, the cognitive congruence conception is an intelligent compatibility modelling of activities with instructional decisions in the *student tutor–student tutee–student group* system in a real academic session pre-planned by the teacher. In practice, the cognitive congruence conception serves as a powerful tool for enhancing learning experiences in a classroom setting. Applying the cognitive congruence principle to targeted language learning resulted in generating contingent learning content and creating a maximised engagement and comprehension environment. This effect succeeded by strategically aligning guidelines and activities to the individual student's cognitive abilities and learning styles.

In keeping with the latter, it is logical to assume that animating the inner core of the learning congruence model involves proficiency in a certain amount of knowledge of the answers to the questions, how the students are processing experiences and

information and how they are structuring and retaining information contents. Cognitive styles are at issue here, and these are some examples featuring different styles: Do students need to visualise the task before starting? Do they adequately comprehend information by listening? Do they need to write down and analyse what they have heard or read a text for thorough understanding? Do they approach learning and teaching sequentially or randomly? Do they work quickly or deliberately? Identifying the types of learners is naturally unpredictable when an instructor begins working with a group. According to our experience, pre-designing assignments for students concerning the *wholist-analytical, verbaliser-imager* dimensions of their cognitive styles (in Sadler-Smith and Riding's (1999) terminology) becomes a prerequisite for implementing this factor. For assignments to be appropriately challenging, the teacher relies on the student's cognitive abilities.

By presenting assignments specific to the student's *zone of proximal development*, the teacher creates a stimulating classroom environment for engaging students in meaningful discussions on relevant topics. The tutor's role under such conditions grows more complex, as it is no longer limited to activation of the operating process with trainees who have low motivational and goal-oriented attitudes and conservative learning strategies. It extends to striving to align the tutees' actual knowledge with the level set by the curriculum, i.e., as far as feasible, to make students' knowledge congruent with the tutor's own. Through student tutoring, tutees, in return, start thinking critically about their knowledge and subject matter and, thus, gain a deeper level of language comprehension and attainment. By inference, such an intake can be productive if students are ready to stabilise, lesson by lesson, their consciousness level in being congruent with the learning environment.

Moreover, assignments help the teacher discern someone's cognitive type of thinking. For example, by having students analyse a literary work, the teacher will automatically discover creative, goal-setting, logical, rational, or problem-solving thinkers.

A student can be creative in being busy with the task by exploring different perspectives and interpretations (such as the author's intention, historical context, cultural background, the genre conventions), comparing and contrasting the text with other texts and applying creative writing techniques to it (rewriting, adapting, or transforming it).

A goal-setting thinker is someone who employs goal-setting strategies to accomplish intended results. For example, they can set the objective to explore the woman's destiny in *The Blizzard* by A. S. Pushkin, key points to identify and compare the main female characters in other novels, and initiatives to write summaries on Russian women's destiny concept in Pushkin's perception.

As logical thinkers, they need to follow some steps for their thoughts and arguments to be systematised (to identify literary devices, come up with the main idea and facts, provide some background information on the text and the author, structure the body of the analysis, make a synthesis of the arguments, and

show how they contribute to their overall interpretation of the text). So, a pragmatist will find a cause-and-effect link in the events narrated by the author in the very *Blizzard* and the actions of the central characters to substantiate the non-randomness of the intersection, years later, of the destinies of young people married under unusual circumstances.

A rational thinker uses facts, logic, and data to analyse a literary work rather than relying on emotions and personal bias. They might ascertain the writer's principal idea and theme and then estimate the powers with which he reinforces the narrative, characters, actions, style, and symbolism. In illustration of the latter, the analyst delves into how Dostoyevsky shadows the presence of Jesus Christ in *Crime and Punishment*. As to Pushkin's *Blizzard*, thinkers of this type would attribute everything that was to happen in this novel to the natural force and explain a sudden outbreak of a snowstorm at a character's most crucial moment as an omen.

A problem-solving thinker combines the creative and critical skills of identifying the main problem or conflict the author presents in the work, inquiring into its causes, effects, and possible resolutions or generating alternative solutions or scenarios that could address the problem or conflict, and evaluate their feasibility, desirability, and consequences. For example, a problem-solver justifies the unfavourable turn of the fate of the protagonist of Pushkin's novel if the blizzard had not hindered her beloved from reaching the church, and they would have been married.

All these observations frame the instructional design process for the cognitive congruence development course.

The instructional design process starts by identifying the overarching learning goals that each participant in the learning process seeks to accomplish. Because their goals can coincide and diverge, the next step is to analyse the target audience. After clarifying their range of demands and performance abilities, the instructional designer moves on to a course plan that incites congruent communication (as a primary learning objective) through exchanging ideas and, just as likely, cooperation. Those procedures occur to lay out students' roles and responsibilities while assigning each communicator a distinctive contribution to share.

In creating content and screening it using learning tools, including online ones, the educator considers cognitive accessibility, topical variability, decision alternatives, cultural compatibility, disciplinary cross-over of learning units activated during tutor-tutee communication, and relevance to real-life and professional situations.

Developing intercultural awareness and sensitivity among learners requires incorporating cultural aspects of the target language and social sphere into the curriculum. In Pushkin's novel *The Blizzard*, the protagonist's behaviour provides meaningful insight. On the one hand, she rejects the social conventions of the day, which require her to get married for convenience and to please her parents. She remains loyal to her family and social class traditions and values, adhering to moral principles that govern male-female relationships. Transferring the discussion on

this topic to the native culture of students makes it more meaningful. Plus, content presentation in a format usable for uploading to an educational platform – for instance, creating digital resources such as videos, animations, podcasts, and simulations (role play) further to the textual narratives with lexical-grammatic support – would be advantageous. It allows tutors to stand ready to manage content while adapting it to their learning style and manipulating the tutoring process for their individual needs. Since tutors are more engaged in reflective and metacognitive activities, they gather the most relevant and challenging information or choose provocative behaviour (for example, using the Socratic method and asking a question like *Were there any precedents of Raskolnikov's thinking in your cultural evolution?*) that early on results in a counteractive effect but can finally lead the tutee to an undivided opinion. The content, for the second time, should be easily transferable to other educational media. After the initial content creation, the instructional designer conducts formative evaluations, gathering participant feedback. Moreover, iterative feedback loops ensure that content and instructional media are continually improved and adjusted to close the gaps.

The stage of instructional design implementation in the learning environment seems to be developing the realm of valuable learning in a congruent communicative format. Once the content and materials are delivered, they get regenerated throughout the learning process dialogised.

Question-and-answer modes of communication help foster a sense of community because they provide opportunities for individuals – tutors and tutees – to convey their thoughts, obtain reactions, criticise, or appreciate opinions, and brainstorm solutions cooperatively, making discourse actions more heartfelt, outspoken, and convergent or consensual. In other words, students acquire the essential skills for functional cooperation and group work when taking on active roles in their learning.

To sum up, the process of instructional design presupposes the identification of learning goals and the analysis of the target audience. It comes with the development of learning objectives, the revision of instructional materials, the design of content, and the subsequent review and refinement of both instructions and materials after implementation. We should add that this process work sequence is in current use in the vocational training industry ADDIE model, striving to identify on-the-job performance, originally *Interservice Procedures for Instructional Systems Development* that form one unit from five phases: analyse, design, develop, implement, and control (Branson et al., 1975, p. 2), or evaluate.

For initiating academic activities, the teacher starts by pre-planning the session, considering the students' diverse competencies, what drives them, and their interests. All instructional materials get carefully examined and designed so that the offering might be acceptable and thus fully effective (a) to provide learners with an opportunity to choose topics and tasks and (b) to accord with different learning preferences, such as visual, auditory, read/write, or kinaesthetic.

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For example, the teacher may incorporate some aids that can introduce visual and auditory input such as images, videos, or podcasts and cultural experiences and reflecting information sources to make the content more accessible and engaging. Students are incentivised to concentrate either on the concrete item of the topic or on the broad idea. The same is true for assignments. So, if the topic for the students in the third year of their bachelor's degree, say, in literature is the biography of Nikolai Gogol, the teacher can set a task based on reading a textbook text or watching the video film *Gogol the Bird*: 1) Write an essay or 2) Prepare a *PowerPoint* presentation about Gogol's career as a writer or his worldview, etc. The teacher also keeps in mind kinaesthetic learning styles and gives an appropriate task to those students who, for example, draw (sketch scenes from what they have read or watched and write comments on them). Depending on the assignment selected, the students then decide on the training applications for preparing their class topic.

Focusing on the design of free-choice assignments helps the teacher at that stage as well when working on creating an engaging and motivating learning environment. In other words, the instructor thinks of ways to create an atmosphere of freedom that poses no penalty for making errors and encourages cooperation and risk-taking while leveraging the *student tutor-student tutee-student group* model. Within the model proposed, cooperative communication is integral to cognitive congruence training. Students are encouraged to work together in a group, with more knowledgeable peers acting as tutors and less experienced peers as tutees. The teacher maintains that the responsibilities within the group get the right balance with an appreciation of students' strengths and weaknesses. In this way, each student can benefit from the collective knowledge and skills of the group members, inciting a sense of shared learning and collaboration. This setup allows for peer learning, where tutors explain concepts, provide guidance, and facilitate communication. By engaging in cooperative activities, i.e., discussions and debates, students begin to distinguish misinterpretations of the subject matter.

At the same time, the teacher thinks over clear instructions to give to tutors and orients them toward the communicative activation of the potentialities of the mentees. For example, they (1) outline the problems of the lesson (such as the analysis of a literary work to write an essay), (2) suggest trying for a learning environment where mentees can take risks without fear of failure and giving hints, explanations, or demonstrations, (3) advise

being patient and understanding, tipping mentees off about reaching their goals without being overly directive, (4) stress raising a growth mindset and getting mentees to learn the skills needed to succeed in their chosen field and develop problem-solving skills, (5) remind about the importance of providing constructive feedback, (6) specify that they need to take care to ensure that their mentees stay focused, and, in consideration of the premises, (7) prompt a question-and-answer character of speech behaviour, also welcoming the regular questions along the lines of these: Who agrees? Who disagrees? What other opinion on this matter? Who does not understand? What is unclear? – to attract all group members into communication so that they could reflect on their learning process.

The question appears as a sense-giving trigger for self-expression in intellectual and communicative practice. The answer, in turn, will be the recognition of the intentional (purposeful, conscious) attitudes of the questioner, the ideational evocation of the intentional (sense-bearing, thinkable, conceptual) definitions of the word capacity, and the verbal or non-verbal reacting of the answerer in conformity with their cognitive attitude. In our view, questions and answers are the sort of learning system that fulfils a task for the proliferation of collective thinking in a congruent approach to language learning. They enhance experiences and develop constructive feedback and previously specified skills, mostly active listening, empathy, and group processing in general.

The propensity for congruence manifests itself in the form of intellectualising the communication, or communicative adaptation, of any ideas, whether fiction or realities, so that expressing a certain degree of adequacy of moods and beliefs of the students to the object under study occurs. Against this background, intellectualisation objectifies the commuting of an event-consequential picture of the world in an imaginative, authorial representation into an experimental-creative one and actualises one of its gamified ways, namely the interview.

This form will be acceptable to graduate students because of its inherent complexity: solving challenging problems; inconsistencies in understanding; cognitive demands on both the interviewer and interviewee in active listening, critical thinking, and effective communication that are higher than those for undergraduates.

In the course of literature in the master's programme in intercultural communication, the student tutor gets an opportunity to work out interview questions autonomously and preliminarily for the student tutee who would act as one of the characters of the studied novels. For example, an interview with hypothetical interlocutor Raskolnikov proved practical in the permutation of *Crime and Punishment* by Dostoyevsky according to students' cultural and social assumptions. Such an interview elicits associations with the cognitive one primarily because the term *cognitive* within this concept reflects its foundation in cognitive psychology, which focuses on how people perceive, think, and remember information. The arguments for believing that such interviewing is cognitive are then as follows.

1. Use of cognitive strategies. The cognitive interview incorporates asking open-ended questions, encouraging the interviewee to provide a detailed narrative, employing mental transformation in learning situations, and perceiving or associating oneself in the hero's shoes.

2. Emphasis on memory processes. Cognitive interviewing concentrates on attention, encoding, and retrieval.

3. Retrieval of stored information. The cognitive interview organises the multiple retrieved pieces of information to create a coherent structure by encouraging the interviewee to mentally restore the story episode and recollect desired contextual details before making a final judgment.

Throughout the academic session, the teacher continuously assesses the student tutors' and student tutees' performance, providing timely feedback and recommendations, not forgetting the learning objectives. This feedback loop is crucial for promoting metacognition as students reflect on their learning processes, making adjustments accordingly. When combining curriculum-based language learning with cognitive thinking, students enhance their metacognitive abilities involving self-reflection, self-regulation, and monitoring learning progress. Therefore, they start to evaluate their strengths and weaknesses in language training and programming (i.e., learning through the instructional programme), which allows them to make positive developments and empowers them to take ownership of their learning pathway.

Lastly, the teacher reflects on their practice to identify areas for repositioning target capabilities to optimise their instructional operations.

The practices of harmonising mental or cognitive processes outlined above constitute, as it were, a vector combination of training subjects' reflections and metacognitive strategies for replicating knowledge, cognition patterns, and activities. So, attaining the perfection of cognitive congruence requires the vectorial combination of teacher, student tutor, and student tutee metacognitions, especially as they relate to a cooperative and supportive environment between teachers and students, on the one hand, and student mindfulness and outcomes, on the other.

According to the methodological grounds for the cognitive congruence principle application in education and its participants' constructive actions, there is a topical question about the ideation of a model that can accommodate all components of the learning process and move it closer to student readiness to be flexible and, if possible, congruent to perceiving, experiencing, and communicating conceptual information.

In keeping with our stance and subsequently adhering to the instructional design, the teacher will meet this challenging task and line up the educational curriculum (including subject matter ideas, i.e., topics or themes, and learning goals) and training material, correlating all of them with guidelines and long-term learning results. That is the path the teacher takes to get a methodological apparatus squared away, intending to deploy the *student tutor–student tutee–student group* model according to the cognitive congruence principle and form the outer boundary

of its functioning. The model turns behavioural when the teacher, so to speak, plugs in the human factor assessment criteria, namely the level of cognitive experience of individual learners. The human factor assessment criterion stems from the *Human Factors Analysis and Classification System* developed for investigating human aviation-related accident or incident causation (Shappell & Wiegmann, 2001). For our purposes, it allows us to identify, assess, and reduce the hazards of incongruent behaviour during learning activities in whole or in part, for one thing, in academic discourse. Thereupon, we must heed the argued construal meaning of the term *cognitive experience*, which 'is a psychological basis of intellectual giftedness and a type of representation (i.e., how an individual sees, understands, and interprets what is going on in the surrounding reality) and is a proto-phenomenon of the intellectual life of a person' (Shavinina & Kholodnaja, 1996), but with some salient complement.

Under most circumstances, students are supposed to have similar experiences through combining in the same educational cluster. Nevertheless, it is common to see average and higher levels due to their innate abilities, as indicated above, and previous local educational conditioning. Regardless of the position of equal social congruence, students with diverging levels of cognitive experience will invariably be incongruent with each other in the knowledge dimension and storage means. It follows that students with unconventional study habits and aptitudes account for a potential pool of student tutor candidates, as do others who are student tutees.

In general terms, cognitive experiences are foremost experiences of knowing, and, as part of the model *student tutor–student tutee–student group*, they undergo a series of transformations through subliminal or supraliminal adaptation, causing a partial reorientation toward the telic state and new channels for data entry. When coupled, the telic state and revised input information yield another cognitive experience that is explicitly neurally anchored. The last-mentioned aspect is not the subject to discuss now (for details, see Arlt et al., 2022). The issue of congruence flexibility, in some sense, looms here. It is fitting that this term is common in organisational theory and describes the degree to which an organisation is deft in balancing the need for consistency and stability with the need for change and adaptation (Wright & Snell, 1998). The cognitive flexibility in this setting becomes a motive power for interactive learning activities. The learning process acts as a conduit for shaping the congruent experience, which, in contrast, functions as an outlet, evolving into one of the results of a congruent learning circuit. In this perspective, cognitive congruence over time will be a tool for transitioning from hardline views to tolerance, criticism, and cooperativeness and from cooperativeness (plus meta-criticism) to creativity. This conclusion is because cooperativeness implies joint decision-making. And since the decision-making process predetermines hypothesising and giving a prioritised and, at the same time, odd idea, cooperativeness within the outlined model makes it an optimal environment for stimulating self-critiquing and creative thinking.

For the cases considered, the congruence learning model discussed in the study represents functional consistency between instructional and learning units such as the following (Figure 1).

1. Subject-to-subject training relationships: *student tutor–student tutee–student group* activities.
2. Concurrent factors that influence lineup membership: instructor’s activities (directive counselling) and students’ cognitive experiences.
3. Teaching resources, i.e., what constitutes the object of controlled cognition and what determines the substantial characteristics of subject–subject cooperation: educational curriculum and instructional materials.
4. End effect: outcomes plus congruent experiences.

In interaction, all these components establish a so-called frame-alignment system. While remaining discussion-based, it has shown itself in practice to be workable and eligible for creative use. In addition, as a result of individual errors, fatigue, stress, cultural thought patterns, stigmas, maladaptive thoughts, characterological constitution, temperament incompatibility, mindlessness, mindfulness, and other factors, incongruence can affect students learning performance and performance learning systems muddling through performance objectives and performance levels. If so, the model components should command reserves to balance intense situations and relaxation, for example, during game training. Role-playing scenarios, cognitive interviewing, creative assignments for videos and podcasts, – all neutralise conflict and discordant behaviours.

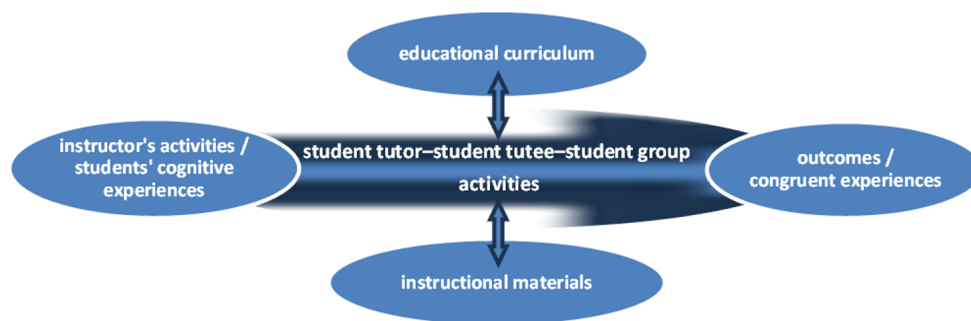


Figure 1. Congruence learning model

5. DISCUSSION

In this article, the cognitive congruence principle merges with the idea that learning is more effective when the instructional method matches the learner’s cognitive styles and abilities. In processing and systematising information, it is advisable to equip them with different options and supports to engage in cooperative communication. In pursuance of the instructor’s conceived strategies, the class strategies of the students set the training process scenarios under which problems of subject-oriented model building and subject-object relations find congruent solutions. Through interactions between students with discrepant goals, peer tutoring, and self-regulation, they can specifically develop a deeper understanding of the subject matter and generally foster educational capabilities (e.g., loyalty and recognition, cognitive thinking and reconfiguring alternative decisions).

The congruence between experiencing cognitive thinking and using instructional patterns has representative results along the lines of (1) enhancing cognitive skills for training language: analytical extrapolation, logical reasoning, critical thinking, and decision-making; (2) improving language acquisition, i.e., grammar and vocabulary when communicating ideas; (3) harnessing focused mindset, i.e., the facility to concentrate for long periods on task performance; (4) developing problem-solving skills transferable to other areas of life: identifying regularities, break-

ing down complex problems, and finding practical solutions; and (5) exercising in metacognition: self-reflection, self-regulation, monitoring tutoring progress.

In general terms, analysing congruence allows us to access the potency of the learning environment. So, the main points discussed in the article revolve around instructional design, effective communication, metacognitive skills, and the role of assessment and feedback in promoting learning. Specifically, these include (1) the importance of preplanning academic activities, considering students’ competencies, interests, and learning preferences; (2) the introduction of instructional materials that cater to different learning styles, incorporating visual and auditory aids; (3) the provision of choice in assignments that allows students to choose topics and tasks that interest them; (4) the consideration of kinaesthetic learning styles and the inclusion of appropriate tasks for those students; (5) the prominence of feedback loops and formative evaluations to improve instructional content and materials; (6) the role of instructional design in creating an engaging and motivating learning environment; (7) the tailoring of question-and-answer modes of communication to foster a sense of community and encourage cooperative learning; (8) the process-oriented approach to instructional design that focuses on individual experiences and interdisciplinary learning; (9) the selection of digital resources and adaptive tutoring processes to

cater to individual learning needs; (10) the integration of cognitive strategies and memory processes in cognitive interviewing; (11) the continuous assessment of student performance and the importance of feedback in promoting metacognition and self-regulated learning.

The relevance of these main points to the overall discussion is that they reveal effective instructional design practices and strategies that can enhance student engagement, motivation, and learning outcomes. They emphasise the importance of considering individual differences and preferences, promoting active learning and cooperation, and fostering metacognitive skills. Additionally, the article discusses the role of instructional design in creating a meaningful and interdisciplinary learning experience for students.

Nevertheless, some potential counterarguments or limitations to the cognitive congruence principle must be acknowledged, in particular the following.

1. Individual differences. One limitation could be that individuals have cognitive structures, learning styles, and preferences which do not match their individual needs, abilities, or goals. These may lead to frustration, confusion, or resistance from the learners and reduce their motivation and engagement. It may not be possible to achieve complete congruence among all learners. According to Dunn et al. (2015), cognitive congruence between teachers and students is not always desirable or beneficial, and cognitive diversity may scarcely enhance learning outcomes. There can be no unambiguous embodiment of the cognitive congruence principle. Some learners may struggle to align their cognitive frameworks with the instructional design or the goals of the learning experience.

2. Cultural and linguistic diversity. The cognitive congruence principle may face challenges in culturally and linguistically diverse learning environments. Different cultural backgrounds and languages can influence the interpretation of concepts, making it difficult to achieve complete congruence.

3. Subjectivity and interpretation. Cognitive congruence relies on shared information and understanding. However, individuals may interpret and understand concepts differently based on prior knowledge, experiences, and perspectives. This subjectivity can hinder the attainment of complete congruence.

4. Time and resource constraints. Implementing the cognitive congruence principle may require significant time and resources. It may vary depending on their prior knowledge, skills, and interests. If the cognitive load is too high or too low, the students may experience cognitive overload or underload, which impairs their learning performance and satisfaction. It looks as though the curriculum settings normalise the influence of the cognitive congruence principle adoption that is allegedly not proportional to learning opportunities for students, more so as students experience it when training the taught material.

5. Ethical considerations. Applying cognitive congruence to language training raises ethical issues. It is necessary to remember that the model respects the learners' autonomy and does not infringe upon their individual needs, abilities, or goals.

To mitigate or address these possible limitations, the following strategies respectively can be considered.

1. Differentiated instruction. Recognise and accommodate individual differences by providing flexible learning opportunities and adapting comprehensive measures to meet diverse learner needs. It could involve offering various learning pathways, providing additional resources, and incorporating different modalities of instruction.

2. Culturally responsive teaching. Foster an inclusive learning environment that values and incorporates diverse cultural perspectives. Encourage open discussions and promote cultural sensitivity to enhance understanding and reduce cultural barriers to cognitive congruence.

3. Active learning and formative assessment. Engage learners in active learning activities that pertain to critical thinking, problem-solving, and reflection. Regularly assess and provide feedback on learners' progress to address misconceptions and adjust instructional strategies accordingly. Promote an individualised or personalised approach with the attributes, activities, and task complexity opted for progress (decided between alternatives) or self-chosen by students. On a case-by-case basis, it is preferable to do it accurately, especially without tendentious interpretations.

4. Balancing cognitive demands and the support provided in the tutor-tutee relationship. Align the instructional design, learning goals, and individual learner needs in a time-efficient manner, especially in large classrooms or online learning environments. A limited solution for this may come from cognitive load theory. Sweller (1988), who developed it out of a study of problem-solving, argued that instructional design can cope with the cognitive load in learners. More recent studies on instructional methods (Van Merriënboer & Sweller, 2005) and *'the measurement techniques and measures used for cognitive load types'* (Orru & Longo, 2019, p. 23) might also be instrumental in discussing load misallocation prevention and, on the back of it, learning outcomes enumeration. So, at the start of the course, creating a learning outcomes enumeration proves to be a qualifying condition for guidance structure and content commensurability to students' cognitive resources. For example, such inputs are experience, intellectual and emotional influences on learning, mindfulness, sociability, communicative competence, and task-relevant knowledge. Teachers can calculate a quantitative comparison between the out-of-class workload rate upon target language learning with an emphasis on cognitive congruence and the amount of total effort devoted to academic mental activity for a student. A helpful tool to assist them in this endeavour is the Course Workload Estimator designed for the Rice University Center for Teaching Excellence (Barre & Esarey, 2023). From this perspective, narrowing or widening the scope of the material and tasks for classroom training will level out different types of speech and optimise retention. At each session, teachers carefully monitor the psychological mood of the students and make appropriate adjustments to the training process accordingly.

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5. Assessing cognitive processes. Control the effects of cognitive congruence on learning outcomes. This problem entails studying it with other factors, such as affective, attitudinal, social, cultural, or contextual influences. Such a case is especially true about decision-making, say, in abstraction from a purely linguistic aspect but in the light of a moral one. In this situation, we can refer to the model of decision-making suggested in business ethics as 'a process that involves being present in the moment and mindful, having a holistic view of the situation through the inclusion of passion and emotion, and engaging in the habit of practice can enhance our decision-making about ethical issues' (Elm, 2019, p. 167). Still, due to the factors mentioned, students are often reluctant to be prompted to express their opinions on moral issues. The latency of ethics under such circumstances has the potential to be offenceless by the role-playing of training situations. The cognitive congruence, thus taking a veiled form, results only from the tutoring function.

It is important to note that these strategies are suggestions. When speaking of the restrictions in using the cognitive congruence model, one should be aware that it is a tool for analysing student group or training problems and a manageable starting point for transforming performance. It does recommend neither the best educational culture, the best course structure, nor any one-box solution in choosing methodological techniques. The model focuses principally on the internal learning environment and fractionally helps consider what happens outside the group and individuals. It is the instructional approach for aligning the learning process, structure, and culture.

The cognitive congruence model has practical implications in target language training. These are especially true for cooperation and peer learning.

Tutors identify the areas of congruence and incongruence by evaluating their cognitive structures, styles, and techniques and those of their tutees. Tutees assess and expand their cognitive structures, styles, and activities while comparing them with their teachers or peers. Tutees then seek to enhance their cognitive congruence with their teachers or peers by learning from them, asking questions, sharing opinions, or seeking feedback. Exposing themselves to various sources of input, output, and interaction in the target language and culture aids learners in generating new views and challenging their way of thinking.

Teachers and learners can use various tools and techniques to measure and improve their cognitive congruence, such as questionnaires, interviews, observations, reflections, portfolios, or peer-assisted learning. Educators and students can monitor their cognitive congruence, analyse their target language learning objectives, and grow in self-awareness due to the implementation of these resources and methodologies.

Real-world applications of the cognitive congruence model in target language training have discussion perspectives, too. In this case, the first assumption is that the model provides a basis for explaining how individuals process information and make decisions based on their mental models and the degree of fit between them and the external reality. This model can be applied to understand how learners acquire and use a new language in different contexts and situations.

One possible application is to design and evaluate learning activities that promote cognitive and social congruence between learners and native speakers. For example, learners can engage in authentic tasks that require them to communicate with native speakers using the target language, such as conducting interviews. This task can help learners develop and update their mental models of the target language and culture as it also receives feedback and guidance from native speakers. The cognitive congruence model can also help assess the effectiveness of similar assignments by measuring the degree of congruence between the student mental models and the external reality of the target language and culture.

Another possible application of the cognitive congruence model in target language training is to facilitate cross-cultural language learning, which involves interpreting and understanding the meanings and values of different cultures through the target language. For example, learners can explore and compare the similarities and differences between their culture of origin and the target culture, such as the norms, beliefs, values, and practices. These activities can help learners expand and refine their mental models of the target language and culture and develop intercultural competence and awareness. The cognitive congruence model can also help monitor and support the cross-cultural language learning process by identifying and resolving the potential sources of cognitive dissonance. This discomfort can be caused by holding conflicting beliefs or encountering inconsistent information.

In general, the model encourages participants to engage in open and respectful dialogue, allowing for the exploration of different viewpoints and the opportunity to learn from one another. The model aims to bring creativity, individual expression, cooperation, and intercultural sensitivity to the external reality.

Educators can align their instructional practices with students' cognitive processes and metacognitive strategies when incorporating the principles of cognitive congruence in their teaching methodologies. Educators then adjust their methods, materials, and feedback to suit the cognitive characteristics of the students or help them develop new or different cognitive structures, styles, and strategies that are more congruent with

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the target language and culture. They can use various methods and materials that match personal cognitive preferences and tendencies, such as concrete props and visual aids, short and action-oriented instructions, multimedia learning, dual coding, interleaved practice, retrieval practice, managing cognitive load, working with schemas, etc. In this way, educators help the learners expand their cognitive structures, styles, and strategies by exposing them to different sources of input, output, and interaction in the target language and culture, such as authentic texts, audio-visual materials, cultural artefacts, native speakers, etc.

In fact, it requires providing ongoing professional development opportunities for educators to enhance their understanding of cognitive congruence and develop effective instructional practices. They can include training on cultural competence, differentiated instruction, and formative assessment techniques.

6. CONCLUSION

The cognitive congruence conception fulfils the function of a guiding principle for teachers to create a supportive and engaging learning environment. The congruence learning mechanism, here, refers to the intellectual process of reinforcing or transferring knowledge and persuasion.

The original aim of the study is to develop a cognitive congruence-performing model for target language training. The paper seeks to objectivise the cognitive congruence principle of model building by aligning learning goals with learning experience processing, student abilities or learning styles with instructional design, and tutoring with tuteeing and delivering to the educational cluster. A process-oriented tactics featuring dynamics, cooperation, and transformation in the teaching, tutoring, and tuteeing processes serve to address this aim. The method involves exploratory data analysis, including process tracing, process screening, and process evaluation. The study seeks to facilitate knowledge, upgrade the cognitive experience, confirm

alignment with the educational surroundings, and integrate approaches to instruction and learning with the implementation of this methodology.

The key results of the study on applying the cognitive congruence principle to target language training are as follows.

1. The model establishes a frame-alignment system that promotes functional consistency between instructional and learning units.

2. The model considers subject-to-subject training relationships, concurrent factors influencing line-up membership, teaching resources, and end effects.

3. Incongruence can negatively affect students' learning performance, but the model components can help balance intense situations and promote cooperation.

4. The cognitive congruence principle suggests that learning is more effective when the instructional method matches the learners' cognitive styles and abilities.

5. The cognitive interview, which incorporates cognitive strategies and emphasises memory processes, can enhance information processing and systematising.

6. Continuous assessment, feedback, and metacognition are crucial for promoting students' reflection, self-regulation, and monitoring of learning progress.

7. The process-oriented approach and the congruence principle offer practical guidelines for planning and implementing learning systems.

8. The congruence principle aligns learning goals with learning experience processing, instructional design with student abilities or learning styles, and tutoring with tuteeing.

9. The cognitive congruence model enhances knowledge acquisition, decision-making skills, and complex problem-solving.

10. The model facilitates cultural acceptance, social responsibility, and self-assessment in students' chosen fields.

These results highlight the importance of aligning instructional methods with learners' cognitive styles and abilities to enhance learning outcomes and promote metacognitive abilities. Modelling the behaviours and skills – the teacher wants their learners to adopt – while demonstrating how they relate to real-world scenarios will help them acquire the know-how to be or feel congruent. The cognitive congruence model is an aligning tool for formative assignments in the learning process. When the learning process integrates communication in linguo-cultural and interdisciplinary contexts, the model contributes to intercultural awareness, the meaningfulness effect in handling concepts, and sensitivity among students. Learning under these modalities requires a qualitative change toward congruence.

Prospects for further research in this field should continue to expand our understanding of the principle of cognitive congruence and its implications for language training and encompass the ethical issues of its application in specified linguo-cultural spaces and recommendations for online adaptation. Even more, experimentation may be needed to fully understand and address the limitations and counterarguments to the cognitive congruence principle.

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