

NEURODIDACTIC GUIDE

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Resumen

Basada en principios neurodidácticos para el aprendizaje de lenguas extranjeras, esta guía comienza con una exhaustiva revisión bibliográfica en la que se analizan marcos teóricos y se integran aportaciones de expertos, considerando tanto perspectivas nacionales como internacionales. Posteriormente, se emplea un enfoque de métodos mixtos con énfasis cualitativo, que incorpora un cuestionario de preguntas abiertas, un grupo de discusión y la observación. Estos métodos se aplican a profesores en formación matriculados en el programa de Licenciatura en Lenguas Modernas de la UGC. Los resultados y conclusiones derivados de esta investigación informan y enriquecen las conclusiones generales presentadas en la guía.

Palabras clave:

experiencia pedagógica, lenguas modernas, neurodidáctica, profesores en formación.

Abstract

Based on neurodidactic principles for foreign language learning, this guide begins with a comprehensive literature review that analyzes theoretical frameworks and integrates insights from experts, considering both national and international perspectives. Subsequently, a mixed-methods approach with a qualitative emphasis is employed, incorporating an open-ended questionnaire, a focus group, and observation. These methods are applied to pre-service teachers enrolled in the Bachelor's program in Modern Languages at UGC. The results and conclusions derived from this research inform and enrich the overall findings presented in the guide.

Keywords

modern languages, neurodidactics, pedagogical experience, pre-service teachers.

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1. Neurodidactics

This term was coined in 1988 in Germany, and it is known as the field that combines neuroscience, psychology, and education.

It focuses on neuroeducation to optimize teaching and learning processes by analyzing how the brain works, in order to identify and design educational strategies that enhance cognitive development.

Some core principles are:

- Brain plasticity.
- Emotional engagement.
- Multisensory learning.
- Individual differences.

2. Neurodidactic Strategies?

If you are wondering how to apply neurodidactic strategies in your lessons and teaching practice, you are invited to carefully review the following checklist in Figure 1 and Figure 2 to incorporate it into your daily teaching activities.

Afterward, you will find additional information that illustrates exactly how to implement these strategies effectively.

Enjoy it!

Figure 1. Check List page 1.

Check List - Neurodidactic Strategies

- ☐ 1. Incorporate emotions to facilitate the learning outcomes.
- ☐ 2. Utilize educational settings to increase motivation and engagement.
- ☐ 3. Implement active learning (problem-based learning, projects, cooperative learning).
- ☐ 4. Execute physical exercises or brain activities to stimulate dopamine and serotonin.
- ☐ 5. Apply multisensory learning (artistic and creative activities that involve senses).
- ☐ 6. Increase the use of new technologies.
- ☐ 7. Encourage teamwork and peer interaction to foster social skills.
- ☐ 8. Provide structured support to your students.
- ☐ 9. Do real-life situation activities linked with the students' interests.
- ☐ 10. Share and receive other teachers' ideas and advice.

Source: Own elaboration.

Figure 2. Check List page 2.

Check List - Neurodidactic Strategies

- ☐ 11. Assign more tasks and exercises to be graded during the class rather than homework.
- ☐ 12. Purpose new activities, exercises, or projects in your institution.
- ☐ 13. Have a close talk with students who have low scores or are undisciplined.
- ☐ 14. Take active breaks during your classes for your students and you.
- ☐ 15. Have a list of plan-B activities or exercises in case something goes wrong.
- ☐ 16. Foster students' participation by asking themselves about their interests.
- ☐ 17. Recognize and adapt different strategies to the cognitive diversities.
- ☐ 18. Promote self-reflection among students and their processes.
- ☐ 19. Celebrate and recognize your students' achievements.
- ☐ 20. Keep motivated; remember, you are a unique and incredible teacher.

Source: Own elaboration.

3. How to do it?

3.1. *Incorporate emotions*

Brief checks-in about their feelings, storytelling of personal experiences, role-playing or perspective-taking exercises, journals, mindfulness practices, meditation sessions, students' feedback to your class, drawing, music, drama.

3.2. *Educational settings*

Interdisciplinarity, online platforms, interactive language experiences, real-world language use, cultural experiences (festivals, fairs), forums.

3.3. *Active learning*

Group discussion and debate, travel brochure, video, presentation, blog post, icebreaker (two truths and a lie), journal.

3.4. *Physical exercise*

Vocabulary race, walk and talk, running dictation, exercise stations, charades, yoga, aerobics, gestures, movements.

3.5. *Multisensory learning*

Draw and touch dots, cards with different textures, act stories, board games (scrabble, pictionary, bingo), sing, dance, paint, make collages, read aloud, and make handcrafts.

3.6. *New technology*

Interactive exercises, apps (Duolingo, Memrise), videos (TED Talks), platforms (real-world context, EngageVR), online tools (Google Docs, Padlet), digital stories (Storybird, Adobe Spark), online quizzes, podcast creation (Audacity, GarageBand).

3.7. *Teamwork and peer interaction*

Jigsaw reading, groupal and individual questions, running dictation, role assignments, peer teaching, recent news discussions, collaborative projects, fishbowl discussions, interactive games, reflection sessions, film forums.

3.8. *Structured support*

Scaffolding techniques, communicative tasks, regular feedback and assessment (use of technology), warm-up, icebreaker, cultural integration, reflection sessions, celebrating achievements, students' self-assessment.

3.9. *Real-life activities*

Job interview, order food, trip planning, interviews with locals or native speakers, debate on current issues, authentic material based on cultural issues (news, podcasts, or videos), scavenger hunt, cooking classes, cultural presentations (holidays, traditions),

Find someone who..., virtual field trips (museums, historical sites, cultural events), karaoke, tongue twister, science experiments, art gallery.

3.10. Other teachers' ideas

Collaborative workshops, online forums, social media groups (Edutopia, TeacherTube), peer observation, digital libraries, lunch, coffee, conferences, action research projects, feedback sessions.

3.11. Activities to grade during class

Short presentation, storytelling, debate, explain a concept, role-playing, quizzes, games, literary circles, creative writing workshops, language labs, competitions.

3.12. New projects or activities in the institution

Identify needs and goals, research best practices, develop a clear proposal, pilot the project, use collaborative tools, incorporate active learning strategies, provide assessment criteria, and share successful stories.

3.13. Close talk with students

Safe and supportive environment (trust, feel to express, no judgment, open body language, calm tone), private meeting, listen actively, identify underlying issues (personal, time management struggles, learning difficulties), set goals together, offer additional support, encourage self-reflection, celebrate small successes, follow-up regularly.

3.14. Active breaks

Stretch and speak, movement-based vocabulary, quick role plays, physical response activities, brain teasers or puzzles, active listening, mindfulness, deep breathing, slow body movements, go outside the classroom.

3.15. Plan-B activities

Vocabulary flashcards, spelling races, correct word definition, matching, crosswords, lyrics, short discussion, word search, grammar review, story spoiler, trivia questions.

3.16. Foster students' participation

Collaboration and respect, stimulating critical thinking, polls, offering choices in activities, regular feedback, movement breaks, preferences, and interests (film, music, food, vacation).

3.17. Cognitive diversities

Assessments (identify strengths and weaknesses), collaborative learning, hands-on activities, technology integration, helping them be autonomous, flexible grouping, supportive environment, training yourself about it.

3.18. Self-reflection

Journal (experiences, challenges, successes), guided and reflection questions, goal-setting session, exposing feelings (poetry, art), pause points to reflect, reflective culture.

3.19. Celebrate students' achievements

Award, certificate, sincere feedback, class celebration, snack, game, peer recognition, performance, ceremony, positive notes, honor diversity.

3.20. Keep motivated

Self-care (sleep, eat, rest), SMART goals, self-reflection, meditation, exercise, uplift your mood, connect with colleagues, be dynamic, new teaching methods, focus on your students' success, workshops, conferences, online courses, gratitude.

Finally, to maximize the explanation of the strategies and find more examples, you can consult the references.

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