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The historical minute as a didactic strategy for the achievement of communicative competence

El minuto histórico como estrategia para el logro de la competencia comunicativa

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ABSTRACT. Introduction. The dynamic nature of architecture as profession demands a shift towards competency-based education to enable relevant performance by future professionals. One of the core competencies is communicative skills, which poses a challenge for teachers dealing with students educated during the pandemic. This study described the implementation of the historical minute dynamic to develop communicative competence. **Methods.** A quasi-experimental, transactional study with a quantitative approach conducted in four sessions within the History of Architecture II class at Universidad Tecnológica Centroamericana (UNITEC) in San Pedro Sula, Honduras. **Results.** The historical minute dynamic enhanced students' verbal fluency despite not influencing their perception of oral expression skills. It strengthened group work capabilities and creativity in realizing ideas. **Conclusion.** The perception of oral expression skills by the students themselves suggests refining the didactic strategies in line with the learning styles, to have a more significant impact on the achievement of communicative competence.

RESUMEN. Introducción. La naturaleza dinámica de la arquitectura como profesión exige un cambio hacia la educación basada en competencias que permitan un desempeño relevante de los futuros profesionales. Una de las competencias centrales es la comunicativa, que plantea un reto para los docentes tratando con estudiantes educados durante la pandemia. El presente estudio describió la implementación de la dinámica el minuto histórico como vía para el desarrollo de la competencia comunicativa. **Métodos.** Estudio cuasiexperimental, transaccional, de enfoque cuantitativo desarrollado en cuatro fases dentro de la clase Historia de la Arquitectura II en la Universidad Tecnológica Centroamericana (UNITEC) en San Pedro Sula Honduras. **Resultados.** La dinámica el minuto histórico favoreció la fluidez verbal de los estudiantes pese a no incidir en la percepción de sus habilidades de expresión oral. Se fortalecieron las capacidades de trabajo en grupo y la creatividad para concretar ideas. **Conclusión.** La percepción de las habilidades de expresión oral por parte de los estudiantes sugiere refinar las estrategias didácticas de acuerdo con los estilos de aprendizaje, para tener un impacto más significativo en el logro de la competencia comunicativa.

1. Introducción

Training in architecture traditionally focuses on developing competencies related to architectural and urban space planning, construction, and management. This includes considerations of ethics, economics, social factors, safety standards, and construction regulations. Proficiency in advanced computer-aided design and architectural representation tools is also crucial (Castaño Perea & de la Fuente, 2013; Puig-Pey, 2017).

However, the dynamic nature of architecture as a profession necessitates a shift toward competency-based education that enables the development of competencies in a holistic sense, relevant to the realities of today. Tuning Educational Structures in Europe project competencies are a dynamic combination of attributes that describe what students can demonstrate at the end of an educational process (Bravo Salinas, 2007). Becoming a comprehensive architect requires developing both technical (graphic expression) and soft skills (active communication), as emphasized by the editorial team of the platform Indeed (Equipo editorial de Indeed, 2023).

Regarding the communicative competencies Concha et al. (2020) states that there are three communication competencies: oral, written, and multimodal through technology. Nowadays, helping to develop such competencies poses a challenge for teachers dealing with students educated during the pandemic, particularly those transitioning from the final years of school to the university life without having developed the soft skills that were expected in the traditional classroom education. This forces teachers and educators to rethink on how to manage these changes as we move towards the post-pandemic era.

Such is the case of the course History of Architecture II, included in the academic program of architecture degree at Universidad Tecnológica Centroamericana (UNITEC), in Honduras, in which it is envisaged that students acquire communicative competence described as individual's ability to effectively engage in linguistic community interactions. Upon returning to face-to-face instruction, weaknesses in the development of communicative competencies have been observed within the student population of the university. This limitation hinders their performance in contexts where such competencies are required. This may be associated with the prevalence of more passive learning styles because of virtual instruction during the pandemic (Leiton et al., 2022; Torres Belma 2020).

This study described the implementation of a teaching-learning dynamic called "historical minute", aimed to enhance the communicative competence in the course of History of Architecture II conducted between January-April 2023. Historical minute is an educational strategy that combines Flipped Learning, Game-Based Learning, and Experiential Learning for the development of communication skills and mastery of architectural technical vocabulary.

2. Methods

This preliminary study was a quasi-experimental, cross sectional, quantitative research conducted in four phases:

1) Determination of students' learning style.
2) Adaptation and implementation of the historical minute dynamic.
3) Application of an instrument to assess the acquisition of communicative competence (pre and post) and the implementation of dynamic.
4) Retesting of learning styles.

The sample consisted of fourteen architecture students, 12 females and 2 males, aged 16 and 20 years in the first and second year of study. All were enrolled in the course History of Architecture II at UNITEC, San Pedro Sula, Honduras. This course is part of the pensum´s theoretical core. The data collection techniques employed were:

a) The self-report VARK test (Fleming & Mills, 1992; VARK Learn Limited, 2023). Respondents answered a series of questions that present hypothetical situations related to their learning style and preferences when acquiring new information. These questions were designed to help determine whether the individual prefers visual (V), auditory (A), reading/writing (R), or kinesthetic (K) learning, or if they had a combination of these styles. From the responses, a learning profile was obtained, indicating which learning preferences the respondent had.

b) Electronic self-reported questionnaire to assess the implementation of the historical minute learning dynamic and communicative competence. The questionnaire was structured into three sections: demographic, assesses students' communication skills (oral, written, and graphic), and students' perception of innovative methods in the classroom, centred on the activity.

c) Systematic observation throughout the development of historical minute dynamic.

The minute dynamics aims to showcase the knowledge acquired in the class through an individual or group presentation lasting 1 minute. The central theme of the "History of Architecture II" class focused on the architectural styles and characteristics from Gothic to Neoclassical in Europe and America. Building upon the weekly lectures provided by the instructor, the construction of a technical vocabulary consisting of 25 terms and employing various resources and strategies from game-based learning, experiences, and the flipped classroom model, students prepared for an oral intervention throughout the ten weeks of the course.

3. Results

3.1. Learning styles

The initial application of the VARK learning styles test showed a predominance of auditory style 6 (42.9%), followed by kinesthetic style 4 (28.6%), visual style 3 (21.4%) and reading and writing style 1 (7.1%) among the students. On the other hand, in the final application of the test, the predominance of kinesthetic style 6 (42.9%) was observed, followed by auditory style 5 (35.7%), visual style 2 (14.3%) and reading and writing style 1 (7.1%).

The slight variation shown towards the kinesthetic style allowed us to think that the dynamics of the historical minute meant an experience of learning by doing, mainly by collective work, rather than an experience centered within the auditory style.

Table 1
Assessments of the dynamics before and after.

	Never		Almost never		Occasionally		Frequently		Always	
Question 6	**Before**	**After**	**Before**	**After**	**Before**	**After**	**Before**	**After**	**Before**	**After**
Frequency of participation in oral discussions in architectural history class	0 (0)	0 (0)	3 (23)	1 (7.1)	9 (69.2)	1 (78.6)	1 (7.7)	1 (7.1)	0 (0)	1 (7.1)
How often do you practice your knowledge by explaining it to others?	1 (7.7)	0 (0)	4 (30.8)	2 (14.3)	7 (53.9)	10 (71.4)	1 (7.7)	2 (14.3)	0 (0)	1 (7.1)
Frequency of studying in a group to review notes	1 (7.7)	0 (0)	7 (53.9)	2 (14.3)	5 (38.5)	4 (28.6)	0 (0)	7 (50)	0 (0)	1 (7.1)

	Organize ideas in a manner		Use appropriate vocabulary		Maintain attention in public		Fluent expression of ideas			
Question 8	**Before**	**After**	**Before**	**After**	**Before**	**After**	**Before**	**After**		
Aspects that are difficult in oral expression	8 (28.6)	9 (28.1)	7 (25)	11 (34.4)	4 (14.3)	3 (9.4)	9 (32.1)	9 (28.1)		

	Very low		Low		Average		High		Very high	
Question 9	**Before**	**After**	**Before**	**After**	**Before**	**After**	**Before**	**After**	**Before**	**After**
Speaking skill levels	0 (0)	0 (0)	4 (30.8)	5 (35.7)	7 (53.8)	7 (50.0)	2 (15.4)	2 (14.3)	0 (0)	0 (0)

	Improves verbal fluency		More confidence when speaking in public		Development of synthesis skills		Stimulates creativity		None	
Question 12	**Before**	**After**	**Before**	**After**	**Before**	**After**	**Before**	**After**	**Before**	**After**
Benefits that the dynamics of the Historical Minute can provide	8 (26.7)	9 (25.0)	10 (33.3)	12 (33.3)	5 (16.7)	6 (16.7)	7 (23.3)	9 (25.0)	0 (0)	0 (0)

	Strengthen speaking skills		Structure concise arguments		Develops communication skills		None			
Question 13	**Before**	**After**	**Before**	**After**	**Before**	**After**	**Before**	**After**		
How can dynamics strengthen oral expression skills?	4 (36.4)	4 (28.6)	3 (27.3)	4 (28.6)	4 (36.4)	6 (42.9)	0 (0)	0 (0)		

Question 14	Promoter	Passive	Detractor							
	Before	**After**	**Before**	**After**	**Before**	**After**				
How much did you enjoy learning about history using dynamics?	1	2	5	8	3	4				

Question 15	Promoter	Passive	Detractor							
	Before	**After**	**Before**	**After**	**Before**	**After**				
How much would I like to continue using dynamics in architecture classes?	3	6	1	5	5	2				

*Note: n = 13 in the before measurement and n = 14 in the subsequent one. This is due to changes in enrolment after starting the course.

3.2. Historical minute dynamics

Throughout the ten weeks, a staggered improvement was observed in the behavior and skills of the students related to collaborative work, the management of technical vocabulary and verbal fluency, with these aspects of communicative competence being the most difficult according to the students. Initially, shyness and nervousness were noted during the presentation of the dynamics individually (short sentences, sometimes read). Subsequently, when they were grouped into pairs or groups, an increase in self-confidence, greater disposition in class and a positive adjustment in their study habits were observed. In terms of communicative competence, the dynamic had a positive impact on the ability to relate to others (to practice their knowledge) and the creative capacities to develop the dynamic each week.

3.3. The historical minute and its relationship with communicative competence

Table 1 shows the assessment (before and after) of both the dynamics and the communicative competence by the students. The dynamic did not affect the students' perception of their oral expression skills. However, students showed improvements in verbal fluency and a greater willingness to participate in discussion activities in class. The mastery of technical vocabulary was the communicational aspect that most limited oral expression. Likewise, the student recognized that dynamics are beneficial to strengthen their communicative competence, as well as their abilities for teamwork, where socio-emotional and communicative skills are decisive.

4. Discussion

This preliminary study implementing the strategy of the historical minute found that the students recognized that it was beneficial for the achievement of verbal fluency skills, increasing participation in oral expression activities in classes, stimulating creativity and concretizing ideas makes evident the need to strengthen the pedagogical-didactic approach based on recognizing learning styles in students.

Communicative competence involves the management of essential knowledge related to verbal fluency, vocabulary management, discourse structuring and precision in the senses that are communicated orally. Within the university environment, the development of this competence has been one of the main challenges for improvement through different pedagogical-didactic devices (Verano-Tacoronte et al., 2016; Gramaglia et al., 2018; Urrego Cano, 2020).

Significant improvements in teamwork skills, peer interaction and communication skills are concomitant with learning styles related to experimentation or learning by doing. From this, it is understood that the dynamics of the historical minute have a positive impact on the adequacy of socio-emotional relationships in contexts of educational interaction.

The adoption of active and participatory methodologies that seek to develop competency elements around communication can, at the same time, have an impact on the interrelationship between peers to mediate the management of knowledge and knowledge in each subject. In this regard, it is still important to consider a perspective of the pedagogical relationship using Flipped Learning to foster autonomy and debate (Doung-In, 2017), Game-Based Learning to improve historical understanding through games (Prensky, 2003), and Experiential Learning to engage students in direct experiences related to history (Kolb, 1984).

5. Conclusion

The dynamics of the historical minute aimed at strengthening communicative competences like verbal fluency, creative ability to express ideas, to strengthen socio-emotional skills that enhance teamwork, as well as participation in class through discussion and debate activities. The auto perception of oral expression skills by the students suggests that teachers should refine the didactic strategies in line with the learning styles, to have a more significant impact on the achievement of communicative competences.

6. Author Contributions

VAOP contributed to the conceptualization of the problem, literature review, and data acquisition in the methodology. OARR contributed to data analysis, discussion, review, and manuscript editing. Both authors approved the final version of the work.

7. Conflicts of Interest

The authors declare no conflicts of interest.

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