

Pedagogical Model Based on Edgar Morín's Complex Thought in School Management

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ABSTRACT

The objective of this research was to propose a pedagogical model based on the complex thinking of Édgar Morín to strengthen the School Management of the Ángel Polibio Chávez Educational Unit, Ecuador. This research was of an applied type, descriptive scope, quantitative approach and non-experimental design; the non-random sample for convenience. The research technique used was the survey and the instrument a questionnaire composed of 24 closed polytomous items on a Likert scale, Cronbach's alpha consistency 0.895; Within the framework of the study variable and for each of its dimensions, the results found showed that 37% is at a low level, 60% at a medium level and 3% at a high level, from which it is inferred that the school management of The educational unit must be strengthened through the pedagogical model, which is based on the theory of complex thought and the seven necessary knowledge for the education of the future, emphasizing the principles of pertinent knowledge, teaching human understanding and the ethics of gender. What will motivate students the value of learning and the importance of knowledge, contrast concepts in search of relevance and respect the human condition.

Keywords: Axiological, Relevant knowledge, School management, Complex thinking, Seven knowledge

INTRODUCTION

The educational system has evolved through teachers eager to transmit knowledge through a conductive approach, hoping to obtain good results with the applied learning methodology. Despite the constant methodological changes to improve the educational process, the traditionalist model is still present in these environments; To achieve the long-awaited knowledge management, the teacher must focus on designing a model in the student to achieve the understanding and application of knowledge, at all levels of education (Fierro-Saltos, 2019). The education that the government of Ecuador implements considers that the construction of knowledge in any context must start from simple thinking willing to acquire new ideas that through education become skills which lead to accepting a transdisciplinary posture with

features of rigor, tolerant and open in both educators and learners, both can face reality building a practical education tailored to all.

In the case of the Ángel Polibio Chávez Millennium Educational Unit, it has a high number of teachers with low knowledge in didactics or pedagogy, this happens because they are professionals in profiles unrelated to educational work; There is no proper accompaniment and supervision of teachers by academic authorities. In addition, the educational unit has several school levels from initial to the Unified General and Technical Baccalaureate; they do not have adequate articulation between levels, the proposal of the Ministry of Education is old and the educational model implemented in the institution lacks relevance and contextualization to the medium. Relevance in education emanates regularly among teachers and thinkers, intervention is necessary to help students generate links between what they learn in the educational unit and their reality, this translates into the way that this motivation should be related to the educational productivity (Albrecht & Karabenick, 2018). In this context, the research problem was how a pedagogical model based on the complex thought of Edgar Morín will strengthen school management in the Ángel Polibio Chávez Ecuador Millennium Educational Unit in the year 2020?

The present investigation was of an applied type, the scope of the investigation was of a descriptive type. The quantitative approach was used with a non-experimental cross-sectional design. A non-probabilistic sampling was applied for convenience, therefore, for this study the unit of analysis is made up of 30 students between 14 and 17 years old, second year of the 2nd unified general high school section B. The procedure applied to characterize the School Management and consolidating the instrument was by inspecting the weaknesses perceived during school learning in the institution, which was a guide for the search for the concepts related to the dependent variable and their respective definitions, which was contextualized in the context of the pandemic. and of the cognitive process applied in the guide of the student towards the construction of his own knowledge (Guevara, 2019). It was applied with a questionnaire with the reliability and consistency of the research instrument, this was carried out through descriptive statistics with Cronbach's alpha, which yielded a coefficient of 0.895, placing it in an excellent range.

The data obtained through the virtual application of the instrument were obtained with the correlation between the variable with its dimensions, the results can range from moderate to very high, which indicates that the correlation is positive. When the correlation is in the range 0 to 0.25 the relationship is null, between 0.26 and 0.5 it maintains a weak relationship, when it is between 0.51 to 0.75 the relationship is moderate and with a range of 0.76 to 1, the relationship is strong and positive.

School Management and the pedagogical dimension maintain a very high positive relationship with a coefficient of 0.900, while the relationship of the variable with the educational quality dimension is evidenced with the value of 0.733, which presents a high correlation; but the formative evaluation dimension presents a very high positive relationship with 0.809; while

Table 1. Dependent variable correlations and their dimensions.

		School Management	D1: Pedagogical	D 2: Educational Quality	D 3: Formative Assessment	D 4: Student Counseling
School Management	Pearson correlation	1	.900**	.733**	.809**	.451*
	Next (2-sided)		0.000	0.000	0.000	0.012
D 1: Pedagogical	Pearson correlation	.900**	1	.542**	.646**	0.273
	Next (2-sided)	0.000		0.002	0.000	0.145
D 2: Educational Quality	Pearson correlation	.733**	.542**	1	.370*	0.127
	Next (2-sided)	0.000	0.002		0.044	0.505
D 3: Formative Assessment	Pearson correlation	.809**	.646**	.370*	1	.383*
	Next (2-sided)	0.000	0.000	0.044		0.037
D 4: Student Counseling	Pearson correlation	.451*	0.273	0.127	.383*	1
	Next (2-sided)	0.012	0.145	0.505	0.037	

in the student counseling dimension, the correlation with the dependent variable is moderate with 0.451. The level of the students' learning process and the effect on academic performance was very low. In consideration of the results, a proposal is proposed centered on the thought of Edgar Morín and his seven knowledges of an education of the future, this model leads the teacher towards the elaboration of didactic tools to train students with structured, scientific knowledge and at the same time with a base directed to feeling sensitive for a harmonious relationship with the educational community and society. From this conception, the different dimensions that make up the independent variable are revealed, being fundamental pillars for a scientific and evaluative construct of knowledge, such as pertinent knowledge, teaching understanding, and gender ethics.

The graphic synthesis of the pedagogical model based on the complex thought of Édgar Morín to strengthen the School Management of the Ángel Polibio Chávez Educational Unit, clearly evidences the complex thought in three dimensions (Pertinent knowledge, teaching the understanding and ethics of the human race), as basis of the theoretical foundation, thus strengthening school management in the dimensions (pedagogical, educational quality, formative evaluation and student counseling). The objective of the study was to propose a pedagogical model based on the complex thinking of Édgar Morín to strengthen the School Management of the Ángel Polibio Chávez Educational Unit, Ecuador. According to the above, it is necessary for teachers to manage changes in their teaching methodology and implement the pedagogical model based on the complex thinking of Edgar Morín and to instill awareness in students about the value and importance of managing their knowledge, away from misconceptions that they maintain students in conformist zones.

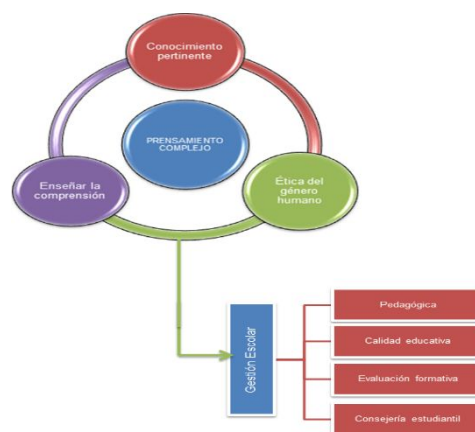


Figure 1: Pedagogical model based on the complex thought of Édgar Morín to strengthen the school management of the Ángel Polibio Cháves educational unit.

The results found at the level of the dependent variable are located at a medium level with 60%, which infers that it is necessary to improve the learning process by applying a different model so that students achieve better academic performance, this finding is contrasted with the data from those surveyed in the school management dimension. On the contrary, it differs from what was found by Apolinario (2020) in his results there was a high level with 90%. Based on the foregoing and observing the similar results, it is inferred that the more optimal the school management is, the students will in turn have optimal results in the learning obtained.

In the same way, the results obtained for the pedagogical dimension are located at a low level with 60%, this indicates that the pedagogical dimension must be strengthened by applying strategies that reinforce the academic process, the applied pedagogy is not adequate and is in disagreement with the educational model. constructivist because it is oriented in the opposite direction to the planning carried out. On the contrary, it differs from Cruzalegui (2020) who in his research obtained that 65.8% had a good level (Guevara, 2014).

The results and conclusions presented manage reflection on the pedagogical change that must be carried out by the teacher managed by the director in communion with the educational community, corrections in an appropriate time serve to improve the learning process. Everything exposed and analyzed is supported by Guerriero (2017); Loaiza (2018); (Silva, 2020) who argues that educators are the ones who should specialize in educational work and manage knowledge with relevance to the learner, given that a good pedagogy generated with humanism promotes social equity, developing skills in students to achieve educational inclusion clearing the path of knowledge, free of exclusive obstacles.

In addition to this, the results obtained for the educational quality dimension were located at a medium level with 43%, with this result it is inferred that the educational quality of being strengthened to go from medium to high level. With the above, it is concluded that the need to maintain high levels of

quality in education, in the case of moderate data, teachers must change the learning strategy and achieve progress from moderate quality to high quality, with good education the system is strengthened. productive and school permanence is guaranteed.

Regarding the formative evaluation dimension, the findings show that the low level predominates with 57%. In contrast, it differs from what was found by Rosales (2018) presents a high level of 80%. Formative evaluation is essential during the learning process, training with authentic activities allows the learner to manage knowledge that later transfers it to their daily context.

In relation to the Student Counseling dimension, the results obtained indicate that the management of the DECE towards pedagogical support is not sufficient, this can be observed at the low level with 53% and verified in the results referring specifically to the student counseling of the educational institution. Similarly, at the low level Coronel (2016) in his study, when estimating the extent that the DECE implements processes for educational improvement, he finally maintains that management is not enough, therefore the proposed purpose is not specified, with this it is inferred that the work of the DECE, since it is not enough, presents a low level of performance. The data found in the investigation generates a counterpart and differs with the proposed objective when implementing the Student Counseling Departments - DECE, which says: promoting the comprehensive training of students to achieve personal development is their academic process (SNI, 2021). The argument is corroborated by Rodríguez et al. (2018) who in the publication of his scientific article exposes, the main activity of the professional in the DECE lies in the orientation of the students to their harmonic development; which is inferred that this development refers to learning and the relationship with the members of the community.

Regarding the inferential analysis, the correlation between the study variable School Management and the pedagogical dimension showed a high relationship with a coefficient of 0.900, with this it is inferred that despite the fact that teachers apply their knowledge, it is necessary that their pedagogical skills and that they strengthen the means with which they conduct knowledge, the above is reaffirmed by Touriñán (2019) expresses that pedagogy in education is a fundamental basis for improving knowledge and consolidating quality in learning, it is directly dependent on the quality of the teacher despite being a teacher. process shared by the educational community, education depends directly on the teaching staff.

Similarly, the correlation of school management with the educational quality dimension yielded a coefficient of 0.733; good school management results in the improvement of educational quality for this achievement the intervention of the community. The aforementioned is supported by what was mentioned by Castelló-Climent and Hidalgo-Cabrillana (2012) where they emphasize that educational quality is the path through which the increase in human talent is traveled and this in turn intensifies social investment with the development of professional talent.

Regarding the correlation of the variable with the formative evaluation dimension, it indicates a positive relationship, the formative evaluation is the axis of the educational process, every educator must plan authentic activities

that are both evaluated and self-evaluated by the student with emphasis on the link to the In reality, this entire learning process activates the participation of the students and manages positive emotions that allow the consolidation of permanent knowledge in the students. This is reinforced by Joya (2020) who, in the publication of her article, maintains that every educator must carry out formative evaluation during learning sessions to ensure that students consolidate the skills developed during the day to induce active student participation.

Finally, the correlation of the student counseling dimension with the study variable is moderate; It is important that the DECE activate its processes with greater emphasis on the pedagogical component, currently the DECE dedicates most of its time only to the protection of the student. This argument is confirmed by what was mentioned by Rodríguez et al. (2018) who emphasizes that the purpose of the student counselor is to guide and guide students towards the harmonious development of their cognitive abilities to improve learning and provide pedagogical support to the teacher.

It is estimated that the strength of the methodology defined for this research where the descriptive scope is used allows confirming what happens in the institution in which the study is carried out, being quantitative, the relative value of the causes that cause the problem is estimated. among the weaknesses is the non-experimental design which only raises the proposal as a possible solution to be taken as a reference and a pedagogue will carry out a new feasibility study after its application, among the weaknesses the non-face-to-face educational process is estimated, the same one that was a factor that hindered the realization of a quasi-experimental type experimental design.

CONCLUSION

The state in which school management is found and how it is related to the pedagogical activity in the Ángel Polibio Chaves Educational Unit was established, with which the impact it has on the learning process and what actions should be taken was known. to improve teaching performance and cognitive development of the student. Similarly, in this study, school management was characterized epistemologically, with which it was possible to clearly understand the aspects that make up the management process, knowledge management in the context of pedagogical, didactic and humanistic actions, including the theoretical bases of thought. complex of Edgar Morín and his seven knowledges, by incorporating Morín's theory, the student is induced to give greater importance to knowledge and value its relevance.

In the same sense, the design of the proposed educational model was finalized. This study emerged from the problem detected by the high number of professionals in other disciplines who practice teaching, being unrelated to pedagogical training, they need the respective didactic support. Finally, given the above, it is estimated that, by applying the pedagogical model based on the complex thought of Morín and the seven knowledges necessary for the education of the future; the value of learning and the importance of knowledge in their lives is provoked in students, contrasting concepts and

definitions in search of relevance and respecting the human condition in all areas in which it is developed.

REFERENCES

- Albrecht, J., & Karabenick, S. (2018). Relevance for Learning and Motivation in Education. *The Journal of Experimental Education*, 86 (1), 1–10. <https://www.tandfonline.com/doi/pdf/10.1080/00220973.2017.1380593?needAccess=true>
- Apolinario, N. (2021). School management and teaching practice at the “José Miguel García Moreno” Fiscal Basic School Guayaquil, Ecuador, 2020 [César Vallejo University]. https://repositorio.ucv.edu.pe/bitstream/handle/20.500.12692/57095/Apolinario_BNE-SD.pdf?sequence=1&isAllowed=y
- Castelló, A., & Hidalgo, A. (2012). The role of educational quality and quantity in the process of economic development. *Economics of Education Review*, 31 (4), 391–409. <https://www.sciencedirect.com/science/article/abs/pii/S0272775711001762>
- Colonel, M. (2015). The efficiency of the student counseling department at the Mena del Hierro educational institution [Equinoctial Technological University]. http://repositorio.ute.edu.ec/bitstream/123456789/16492/1/64843_1.pdf
- Cruzalegui, R. (2021). Pedagogical management and inclusive education in primary school teachers in institutions of the district of Carabayllo - UGEL 04 Comas, 2020 [Universidad César Vallejo]. https://repositorio.ucv.edu.pe/bitstream/handle/20.500.12692/61248/Cruzalegui_DR-SD.pdf?sequence=1&isAllowed=y
- Fierro-Saltos, W., Sanz, C., Zangara, A., Guevara, C., Arias-Flores, H., Castillo-Salazar, D., ... & Yandún-Velasteguí, M. (2019, September). Autonomous learning mediated by digital technology processes in higher education: A systematic review. In *International Conference on Human Systems Engineering and Design: Future Trends and Applications* (pp. 65–71). Springer, Cham.
- Guevara, C., Sanchez-Gordon, S., Arias-Flores, H., Varela-Aldás, J., Castillo-Salazar, D., Borja, M., ... & Yandún-Velasteguí, M. (2019, September). Detection of student behavior profiles applying neural networks and decision trees. In *International Conference on Human Systems Engineering and Design: Future Trends and Applications* (pp. 591–597). Springer, Cham.
- Guevara, C., Santos, M., & López, V. (2014, August). Data leakage detection algorithm based on sequences of activities. In *Proceedings of the 17th International Symposium Research in Attacks, Intrusions and Defenses RAID* (Vol. 8688, pp. 477–478).
- Guerrero, S. (2017). Pedagogical Knowledge and the Changing Nature of the Teaching Profession. OECD. <https://doi.org/10.1787/9789264270695-en>
- Jewel, M. (2020). Formative evaluation, an effective practice in teaching performance. *Scientific Magazine*, 5 (16), 179–193. <https://doi.org/10.29394/Scientific.issn.~2542--2987.2020.5.16.9.~179--193>
- Loaiza, Y. (2018). Editorial - Teachers and pedagogy. *Latin American Journal of Educational Studies*, 14 (1), 7–13. <https://www.redalyc.org/journal/1341/134156702001/html/>
- Ministry of Education of Ecuador. (2021). Department of Student Counseling. Ministry of Education. <https://educacion.gob.ec/departamento-de-consejeria-estudiantil/>
- Rodríguez, L., Loor, M., & Duran, U. (2018). Educational Social Work: Perspective from the Department of Student Counseling. *Synapse Scientific Journal*, 1 (12), 1–16. <https://doi.org/10.37117/s.v1i12.135>

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- Rosales, M. (2018). The level of knowledge about formative evaluation in the practice of the teaching work of a Secondary Educational Institution of Trujillo, 2017 [Universidad César Vallejo]. https://repositorio.ucv.edu.pe/bitstream/handle/20.500.12692/11767/rosales_am.pdf?sequence=1&isAllowed=y
- Silva, M. (2020). The pedagogical dimension of equity in higher education. *Educational Policy Analytical Archives*, 28 (46). <https://epaa.asu.edu/ojs/index.php/epaa/article/view/5039/2410>
- Touriñán, J. (2019). Pedagogy, profession, knowledge and education: a mesoaxiological approach to the relationship from the discipline, the career and the function of educating. *Pedagogical Trends*, 34, 93–115. <https://doi.org/10.15366/tp2019.34.008>