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**A Comparative Study of Educational Outcomes in Public, Catholic, and Waldorf  
Schools**

Doctoral dissertation

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# A Comparative Study of Educational Outcomes in Public, Catholic, and Waldorf Schools

## Rationale for Choice of Topic

The measurement of educational achievement in public education, from the assessment of student work to international standards, is well-developed. The results are of public interest and attract the attention of decision-makers. By contrast, measures of educational effectiveness are not as commonly applied and tend not to go beyond analyses of students' attitudes to school.

I set out to measure empirically the effectiveness of institutional education. Descriptions of the self-image, identity-forming self-presentations, theoretical educational aspects, and socialization objectives of different types of schools can be found in the Hungarian and international literature. Comparative empirical results, however, are lacking. The thesis, which is descriptive, cross-sectional, and *ex post facto*, provides an up-to-date psychometry, or more specifically, a *pedagometry* of the subject matter; measurement was not based on ideas but empiricism.

After taking into consideration Hungarian and international findings, I designed a customised tool of measurement to compare different types of school using a complex sampling procedure developed for the purpose. Thirty sites of 29 institutions participated in the data collection, and 1,367 students and 1,228 parents answered questions and carried out various tasks. Students' personality was assessed through belief and value orientation, motivation and lifestyle, and activity tests; the student community was evaluated by the quality of the group's activity system, the level of self-government, and the quality of public opinion and values. To ensure the validity of the results, I examined the socio-economic status of the students and the educational value orientation of their families.

I did not conceptualize educational outcomes in terms of the development of students' social skills, opinions on social justice, attitudes to climate issues, or absenteeism. Rather, I looked for differences in the socializing effects of the public, Catholic, and Waldorf schools and measured their personality-forming impact. However, I did not use *educational outcome* in terms of a particular value system but the development of students' moral thinking, attitudes, and actions.

Related issues included students' attitudes towards school and learning; their perceptions of teachers and the effects of these perceptions; the relationship between the school climate and student achievement; and social and affective competence. A significant number of Hungarian studies have investigated educational assessment, attainment, and achievement. However, I considered it more appropriate to thematize tests of the latter according to the motivational-regulatory competencies of students, so I focused primarily on their habits, life expectations, and beliefs.

Before the measurement, I formulated a conceivable idea that there would not be differences in terms of all the levels and psychological constructs examined among the student bases of the school types. The research confirmed this preliminary notion: despite substantial differences, in several cases no difference was found between the Catholic and public school types. In other cases, despite substantially different learning environments and educational concepts, no differences were found across all three types of school. The results also confirmed the study's starting point, namely, that it makes sense to ask the question "Do different types of school moderate students' personality and community formation in different ways?"

## Thesis Structure

First, the rationale for the choice of topic is provided. The next chapter identifies salient differences between the different types of school in terms of educational impact; introduces the concepts related to the topic; and defines the terminology. The third chapter presents the

hypotheses, followed by a description of the development of the measurement tool. The fourth chapter explains the sampling strategies that were employed. The fifth chapter discusses the data, and the sixth chapter presents the demographic characteristics of the sample. This is followed by the thematic analysis. In each case, I describe the methods used and the results, then look for differences among the type of schools for each thematic block. Next, structural equation modelling (SEM), multigroup path analysis (MGA), and multiple linear regression (MLR) are used to illustrate the moderating role of type of schools in student personality formation. The thesis concludes with a discussion, a summary, and a recommendation.

### **Research Questions**

- (1) What are the differences in moral thinking, attitudes, and actions, and in forming a learning community, amongst public, Catholic, and Waldorf school students? How do parents' views on education develop according to the type of school their offspring are attending?
- (2) Does the type of school influence the system of relations of students' constructs of morality?
- (3) To what extent do parental parenting styles, different demographic characteristics, and type of schools influence students' constructs of morality?

### **Research Hypotheses**

*The type of school has a moderating effect on students' moral reasoning.*

Q1/1: How do students in each type of school judge the individual who gains an advantage by breaking the norm; the effect of illegitimate gain on the position of norm adopters; and the impact of norm-breaking on the personality development of rule-breakers?

Q1/2: How do students in each type of school develop their moral concepts?

H1/3. The type of school, family demographic variables, and the educational climate influence the moral beliefs of students.

Q1/4: How do students in each type of school judge success criteria relating to life management and interpersonal conflict resolution?

*The type of school has a moderating effect on students' moral attitudes.*

H2/1. The type of school, family demographic variables, and educational climate affect students' evaluation of their concept of morality.

H2/2. The type of school, family demographic variables, and educational climate affect students' moral judgements.

Q2/3: How do students' life expectations develop in each type of school?

Q2/4: How does students' social distance evolve in each type of school?

Q2/5: How do students' perceptions regarding the reasons for the school's orderly group learning situation evolve?

*The type of school has a moderating effect on students' moral agency.*

H3/1. According to the educational concept of the type of school, there is a significant difference between the behavioural characteristics of students in cooperative situations concerning school tasks.

Q3/2: How do students in each type of school judge different types of friends?

Q3/3: How do students' habits evolve in each type of school?

*How are the levels of activity and self-governance of the type of school's community of learners and the experiential value of community activities formulated?*

*How do the quality of public opinion and the quality of values evolve in the school community in each type of school?*

Q5/1: How do students in each type of school relate to the class community, school knowledge, school tasks, and cooperation with teachers?

Q5/2: How do students in each type of school relate to learning, work, and healthy living?

## Research Methodology

The research took a multi-method (i.e., not a mixed method) approach. The harmonization of different methods was not the aim. A detailed methodological overview is presented in Table 1.

**Table 1** *Repertoire of Research Methodologies*

Area under investigation	Methods of investigation			
Moral dilemma discussion	Text analysis using a hierarchical deductive coding system			
Moral concept knowledge	Principal component analysis	Confirmatory factor analysis	Kruskal–Wallis test	Mann–Whitney U test
Moral beliefs	Principal component analysis	Confirmatory factor analysis	Kruskal–Wallis test	Mann–Whitney U test
Success criteria	Two-step cluster analysis		Chi-squared test	
Moral concept evaluation	Principal component analysis	Confirmatory factor analysis	Kruskal–Wallis test	Mann–Whitney U test
Moral Context Assessment	Principal component analysis	Confirmatory factor analysis	Kruskal–Wallis test	Mann–Whitney U test
Life Scales	Friedman test	Wilcoxon signed rank test	Kruskal–Wallis test	Mann–Whitney U test
Social distance	Distributions	Kruskal–Wallis test		Mann–Whitney U test
Opinion on the causes of learning status	Correlations, partial correlation	Principal component analysis	Wilcoxon signed rank test	Kruskal–Wallis test, Mann–Whitney U test
Friend selection	Distributions		Chi-squared test	
Habits	Principal component analysis	Hierarchical clustering	Chi-squared test	Correlation matrix
Activity system and self-government	Frequencies			Sentiments
Public opinion and values	Choices of images and metaphors			Distributions
Parenting dimensions, control variables	Principal component analysis	Confirmatory factor analysis	Kruskal–Wallis test	Mann–Whitney U test
Parental variables influencing school choice	Path analysis		Moderated mediation	
Differences in student correlates by type of school	Multigroup path analysis	Correlation matrix	Chi-squared test	Fisher transformation
Factors affecting student constructs	Multiple linear regression			

## **Theses**

### **Thesis 1. The moral thinking of Waldorf students is more social, while that of Catholic students is more moral.**

Of the three study levels in the moral dilemma discussion, all students least rejected the idea of gaining an individual advantage by breaking the norm. In this regard, public school students were the least dismissive, with Waldorf students the most. Rejecting the negative impact of undue advantage amongst those who accepted the norm was moderate compared with the other two study levels. Catholic students were most likely to reject conflict resolution between the characters in the story on moral grounds. Waldorf students were the most likely to reject it on social grounds. The impact of norm-breaking on the development of the rule-breakers' personality was judged most negatively by all students. The students showed the least variation in their dismissal of the idea on moral grounds. In summary, the results show that the individual gain achieved by norm-breaking was significantly more acceptable than the resulting personal development deficit. When interpreting the results, it should be kept in mind that the variation between the different types of schools was between 5% and 15%, i.e., the differences were not significant.

### **Thesis 2. Awareness of moral concepts was highest amongst Waldorf students.**

Significant differences were found between the different types of school regarding the subscales of character, evil, self-centeredness, and general knowledge of all concepts. The results suggested that amongst Waldorf students, the elements of these subscales were more widely recognized. However, no significant difference was found for the subscales of humanity, indecency, and goodness. This may have been the result of the pedagogical approach of the school, daily exposure to folk- and fairy tales stories and tales, or the higher education level of the parents. The results suggested that folk- and fairy tales shaped moral development (Lewin 2020).

### **Thesis 3. The public school students had significantly less positive perceptions of friendliness, sociability, and moral conviction for self-development. Waldorf students judged only sociability in a significantly more positive way.**

The moral convictions of the age group under study most likely served as alternatives; in other words, the action-outcome of a conviction was optional when the action was contrary to instinctual drives and therefore required effort. In such a situation, the individual was socio-morally manifested at the action level – not counting egoistic self-expression. This conclusion was reinforced by the fact that the least optional aspect in the students' perception was the act of thanking someone for their help. In this case, the individual was the beneficiary of the sociomoral behaviour of others, and the response did not require more effort, thus encouraging further help and acceptance.

### **Thesis 4. Regarding success criteria related to life skills and interpersonal conflict resolution, Waldorf students were the least constructive-normative, while Catholic students were the most.**

The distribution of assertive, adaptive, and constructive-norm-following groups was similar across each type of school. Public and Catholic schools generated similar results in terms of group distribution, while Waldorf students split the relative difference in their constructive-norm-following group into the other two—assertive and adaptive—groups almost equally.

**Thesis 5. Amongst the dimensions of moral concept evaluation, Catholic students rated evil, self-centredness, and indecency least positively and humaneness and goodness most positively. Waldorf students were the most positive in assessing evil, self-centredness, and indecency and the most negative in assessing humaneness and goodness. For Waldorf students, sociability was not a shared set of values but was grounded in the idea of a community engaged in a common activity.**

The students did not differ in their perceptions of character. The only difference between public and Catholic schools was between the ratings of evil, self-centredness, and goodness. Catholic school students rated evil and self-centeredness more negatively than public school students and goodness more positively. There was no difference between public and Catholic school students regarding humanity and decency, which may have been because humanity and good character were considered universal values and not more significantly related to ideological pedagogies than public school pedagogies. The untoward similarity in perceptions of indecency between Catholic and public school students can be explained to a lesser extent by the age of the subjects; understanding this phenomenon requires further investigation. Goodness was judged most positively, and viciousness and self-centeredness were judged most negatively, by Catholic students, which reflected the pedagogical model of their schools.

**Thesis 6. Amongst the dimensions of uncontrollability, trustworthiness, and rule-breaking regarding the moral situational assessment, Catholic school students judged uncontrollability and rule-breaking most negatively and trustworthiness most positively. Waldorf students viewed moral situations differently. They had the most positive perceptions of lack of control and rule-breaking and the most negative perception of trustworthiness. Public school students fell between the two other types of schools.**

Students' perceptions were most divided in terms of the action manifestations of the categories of healthy living, work, and learning. That is, students judged exercising for health and studying hard most positively, followed by cheating on a test, eating before school, and eating sweets on a daily basis in a conditional either/or manner. These results suggest that the students differentiated between ideation and action manifestation.

**Thesis 7. There was a negligible, insignificant correlation between students' declared life ideals and habits. Life ideals were similar across the three types of schools. Catholic students were the most goal-oriented and sociable and Waldorf students the least. Public school students were the least reserved and Waldorf students the most. Public school students were the least moderate and Waldorf students the most.**

For Waldorf students, the most important ideals were meeting people they know, books, painting, music, freedom, relaxation, and fun. There was little difference between the public and Catholic students in this respect. Waldorf students rated meeting people they knew more highly than spending time with family.

An advantage of Catholic pedagogy, explaining its viewpoint in a positive light, is its high representation of pupils in goal-oriented and sociable groups. The results suggest that Catholic pedagogy shaped the personality in a socially valuable and in an individually-productive direction. From a negative standpoint, after studying diligently and playing sports, Catholic students only had the energy and time to watch TV and their social life was reduced to the use of social networking sites.

A positive take on Waldorf education was the multiple forms of satisfaction the students experienced at school. They studied and played sports that were not goal-oriented. They relaxed, but not in front of the television or computer. They did not fill their lives with activities, nor were they in constant contact with others. A critical standpoint, on the other hand, could argue that the life management characteristics of Waldorf education, represented by the concept

of moderation, lead to a loss of competitiveness, a failure to recognize the potential talents of the student, and, in general, a lack of fulfilment.

The public school students were in the middle. From a pedagogical point of view, a positive explanation for their inclination to be less moderate was that they had the opportunity to excel in an activity, but in the absence of this, they were not under pressure to perform. A critical explanation of public pedagogy's standpoint was that unreservedness led to disorientation, and time available was taken up with computer games, entertainment, and excessive relaxation. Finally, Waldorf students were oriented primarily, but not exclusively, towards the pleasures of life, while Catholic students were oriented primarily, but not exclusively, towards a task-based view of life.

**Thesis 8. Public and Catholic students did not differ in their perceptions of social distance towards the mentally handicapped, other religions, and other mother tongues. For Waldorf students, better academic performance correlated with higher levels of social distance, and higher grade levels correlated with lower levels of social distance. By contrast, better academic performance was associated with less social distance amongst Catholic students, while higher grade levels were associated with more social distance.**

For students in both types of school, there was a greater social distance from the mentally handicapped and there was no difference in accepting students of other religions and other mother tongues. Using a modified Bogardus Social Distance Scale, Kovačević és Radovanovic (2020) found that students identified the greatest social distance as being from those with autism. Waldorf students had the highest social distance from students with intellectual disabilities; this was similar to the other types of school. However, they were more accepting of students whose native language was different. Waldorf education does not convey a specific ideology regarding this matter in a programmatic and general way; the higher acceptance amongst Waldorf students of others may have been due to the higher social status and educational attainment of their parents and the personality-forming effect of their worldview. The two correlations suggest that higher intellectual achievement increased social distance for Waldorf students and reduced it for Catholic students (i.e., Waldorf students were less accepting and Catholic students more). The results refute the idea that Catholic schools make students more segregationist.

**Thesis 9. Parents and students of Catholic and public school students tended to view group learning as driven by self-discipline, concentration, calmness, learning, and diligence. This differed from Waldorf parents' and students' educational attitudes; they viewed group learning as driven more by coercion, negligence, stress, deceptiveness, and oppression.**

There were four differences between parent and pupil perceptions in public and Catholic schools and three in Waldorf schools. In the former, parents tended to agree with the positive connotations of group learning, while in Waldorf schools, parents were more negative. Regarding the binary pairing of coercion and self-discipline, a difference between the students' and parent's opinions was only found in Waldorf schools; both parties tended to perceive group learning as coercive, but the parents tended to perceive it as more coercive than the students – more, in fact than any of the other cohorts. In public and Catholic schools, the concept of group learning was perceived more positively. Finally, Waldorf parents did not formulate their opinions based on the students' experience; in the public and Catholic schools the relationship between the two outcomes was inverted, and the more ideal expectations of the parent were associated with a less critical perception on the part of the students.



**Thesis 10. There was no significant difference between the choice of friends amongst students in the three types of school.**

In general, students sought and accepted friends who were understanding, humorous, and reliable (~80%). There was a slight difference in that Waldorf students were less likely to vouch for athletic, studious, and tidy peers, and more likely to accept fun, adventurous, and proactive peers as friends.

**Thesis 11. There was no significant difference between the three types of school in the learning community's levels of activity and self-government.**

The only well-defined differences between the school types were in the sentiments towards class assignments, student advocacy, and institutional responses to student-led school initiatives. According to the results, Waldorf students were less negative, similarly neutral, and much more positive in their assessment of the sentiments of classroom tasks, student advocacy, and the institutional response to student-led initiatives, than students in the other two school types. In this area, a disadvantage was registered for Catholic students.

**Thesis 12. According to the school community, Waldorf students had a more pronounced individualistic-relativistic view, Catholic students a more collective-normative view, and public students somewhere in between. In terms of value systems, public school students had a perception of orderliness, clarity, and transparency regarding learning. The results confirm the importance of the narrative of child-centredness in Waldorf pedagogy, but the results were nuanced by students' perceptions of a lack of order and clarity. Through work and learning, Catholic education promoted metaphysical goals.**

The results confirm not only popular perceptions and public discourse about public, Catholic, and Waldorf schools but also the criteria that qualify the concept of education – in particular, the types of educational goals, the organization of educational effects, and variations in the role of the teacher (Bábosik 2004).

**Thesis 13. Waldorf parents were somewhat more caring and less restrictive in their attitudes towards education.**

The results support the positive Western narrative regarding Waldorf schools. Other studies have suggested that parental behavioural control enhances the child's capacity for self-limitation and that in the context of non-Western cultures, parental psychological control is less likely to be understood as a constraint on freedom and autonomy or as a barrier to creativity (Chen et al. 2021). The correlational analysis of parenting variables in the present study showed that educational level affected prohibitive parenting in public and Catholic schools, where lower schooling levels were more restrictive in terms of parenting and higher schooling was less so. However, Waldorf parents were less restrictive regardless of their educational level. The results show that parents with less restrictive parenting styles and higher educational attainment enrolled their children in Waldorf schools. In other words, the choice of type of school could only partly be explained by the parenting style.

**Thesis 14. In public and Waldorf schools, students became more accepting of uncontrolled behaviour, that is, rule-breaking as they moved through the grades. They also became less reliable and their behaviour deteriorated. Catholic students with more uncontrolled attitudes were more accepting of rule-breaking and less positive concerning reliability. However, the last element of the chain of effects did not exist for Catholic students: attitudes did not manifest in behaviour.**

A greater acceptance of uncontrollability decreased trustworthiness amongst Waldorf students. However, academic success could not be explained by uncontrollability and poor reliability

amongst Waldorf students alone. Academic success, in this case, was independent of these two factors. A possible explanation of this phenomenon was that in Waldorf schools, teachers' judgements of students' behavior played little or no role in assessment and that supportive attention to students was both strong, regardless of their academic performance.

**Thesis 15. Catholic schools steered students' lack of control and reliability in a pedagogically positive direction. Waldorf pedagogy did not address students' lack of control, trustworthiness, and self-development. The pedagogy of the public school had a negative impact on students' self-development.**

In contrast with Waldorf schools, Catholic schools had a strong significant effect across all five measurement models, implying that Waldorf schools had a (negative) effect on students' lack of control. Catholic schools shaped this construct even under the influence of parental and demographic variables.

By examining the effect of type of schools in shaping student trustworthiness, I have shown that no other factor besides the effects of Catholic pedagogy influenced student perceptions of trustworthiness. Since my model includes family demographic variables, the results are theoretically significant. Only Catholic schools (positively) shaped student reliability, while different educational dimensions, the family's financial situation, the average educational attainment of the parents, and the family status of the student did not.

The household's financial situation, student marital status, CSH index, and TÖ index did not influence the shaping of the students' self-development. However, parental education had a slightly positive effect; a higher level led to better student perceptions of the dimension of self-improvement. Public schools themselves inhibited student self-development. According to the positive interpretation of public pedagogy, the measurement model used is still lacking such parenting effects that would eliminate the significant effect. According to the negative take on public pedagogy, the pedagogy of the public type of school lacks such parenting effects that could encourage student self-development (admitting mistakes, making up for omissions, doing better, taking criticism into account).

### **Summary**

In this thesis, I have shown that the pedagogy of Catholic schools can shape a student's personality, even under the control of parental educational influences and socio-economic characteristics. The results confirm Mueller and Halfmann's (2021) conclusion that religious individuals are less utilitarian in their moral choices. In most cases, public schools fell between the other two types of schools (Catholic and Waldorf). With regards to the impact of the school type, it appeared that in case of public schools, only the school type itself had negative impact on student self-development. The added value of Waldorf schools was not apparent at the observed ages and in the examined levels. Judging Waldorf pedagogy in a negative light, from a condemning point of view, the inefficacy of Waldorf pedagogy, in the context investigated in this study, may be viewed as the ineffectiveness of the school type itself.

### **The Usefulness of the Results**

The research has contributed to the development of measurement methodology, providing a more precise way of testing measurements and conferring them to the theoretical background. The research may stimulate the carrying out of further cross-sectional studies, and the development of longitudinal studies. Furthermore, the research provided a picture of the socialisation of public, Waldorf and Catholic school students in Hungary, and responded to the needs for outcome measurement in Catholic pedagogy, as well as a pedagogical reform movement (Aljabreen 2020; D'Agostino and Carozza 2019).

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