

# Designing School Desk Set and Teaching Media to Develop Ethics and Anti-Corruption Awareness Learning for Children

**Soraj Pruettkomon**

Lecturer, Faculty Of Architecture and Design, Rajamangala  
University of Technology Rattanakosin, Thailand, 73170

\*Email: soraj.pru.rmutr.ac.th

## Abstract

The research aimed to create innovative school furniture design, including a desk set with the provision of teaching media for young school-age children aged 3-7 in developing their morality and ethics, as well as raising awareness against corruption. The study aimed to design innovative school furniture with instructional media for young children, promoting morality, ethics, and corruption awareness, and to test and evaluate the newly created furniture. The research employed a mixed-method approach (qualitative-quantitative research). The research was conducted through qualitative methods, including observation, interviews, and questionnaires, to gather data. The results from these data sets were used to design a product using the Analytic Hierarchy Process principle. The study utilized quantitative research methods, including efficiency testing and satisfaction surveys, both before and after product use. The study's qualitative findings indicate that the use of high-quality instructional media can stimulate idea formation and stimulate children's imagination. The recommendation was made that a set of school furniture, including a table and chair, would be the most effective instructional materials to boost children's learning interest. Based on the satisfaction evaluations, the product was worth using because it had a low production cost and was safe. The raters' satisfaction score was an average of 4.06. The average satisfaction increased to a statistically significant 0.1 level with Sig 0.18. The study found that new school furniture did not significantly affect the perception of ten wholesome actions among 3-7-year-olds in the short term, but increased perceptions if used for longer periods.

**Keywords:** furniture design, children's furniture, morality, ethics development, teaching media

**Received:** November 22, 2022; **Revised:** May 24, 2023; **Accepted:** June 15, 2023

## 1. Introduction

Presently, Thailand has faced many social problems, including corruption, lack of morality and a consciousness of doing good has reduced. Thus, crime and corruption are prevalent. The study found that solving these problems should start from childhood. Planting a good conscience will help to solve and create new moral citizens. Using education media that focuses on the design and development of instructional media, together with table and chair furniture, incorporating ethical and moral concepts, as well as anti-corruption to raise awareness for children aged from 3 to 7, is the best formative period.

These problems that Thai society is now facing and the guideline for corrections are made at the results. However, the sense of goodness of people in society has not developed or cannot grow because it has passed the age or period of learning or improvement. If these problems are allowed to remain or to pass to the next

generation of children and adolescents, it may lead to dissension, violence, the country's separation or other uncontrollable issues. As a result, developing childhood awareness is critical.

In terms of style and function, today's children's furniture is quite varied. The furniture is part of the children's activity. It is used for studying, learning, knowledge gathering and mixed play. It is used in essential locations such as the home, school, and so on. In 2006, Walker suggested that "If we want to develop children's intelligence or emotional intelligence, appropriate furniture must be selected."

Furniture that promotes the learning of children today is mainly toys. Also, stories are a popular form of instructional material. Although many pieces of furniture are made, the one that helps to develop skills concurrently is not prevalent (with a small amount). If the furniture is developed to be fun and promote skills, it will be better than using toys and storytelling. The furniture will help children to be responsible, and disciplined, foster role-play, and love of learning, researching, doing homework, and practicing the future works of the children. Furniture has more space for appropriate activities than that for children playing with toys or using storytelling alone.

The target group which was chosen by the researcher were 3 to 7 years old children. In 1986, Jellen, G. & Urban suggested that “They are at the age of cognitive development and it is an important time for training and learning. At this age, children have very good development and memory. They like to learn new skills and language and are innocent.”

Furniture that promotes the learning of children today is mainly a toy. Also, storytelling is a popular teaching material. Although many pieces of furniture are made, the furniture that helps to promote and develop is not prevalent (with a small amount). If the furniture is developed to be fun and promote skills concurrently, it will be better than using toys in conjunction with storytelling. Furniture will help children be responsible, disciplined, role-playing, love learning, researching, doing homework, and practicing career skills. Furniture has an appropriate area for activities, compared to letting children play with toys or use storytelling alone.

The target group chosen by the researcher were 3 to 7-year-old children, who are beginning to develop thinking and it is an essential time for training and learning. In 1996, Chuachetton suggested that "At this age, the children have a very good development, memory, and like practice skills and language, as well as innocent." This research focuses on children in this age group. If there are media that help to develop a sense of goodness, gratitude, morals and ethics and honesty, etc., it should start at this age. It is a time when children begin to learn, so parents should give close attention to their children's development, as mentioned previously.

This research will solve the problem of children's consciousness by using morally-oriented morphology. Thailand is a Buddhist nation, and these values have embedded in its culture and tradition. In 2003, according to Doungdao "Thus, the researcher put forward the teaching and Buddhist principle that will help in the matter of honesty. The children aged 3 to 7 will use the ten principles of an honest man and these teachings which are in the Buddhist Tripitaka. The practice of doing good is divided into three parts: body, speech, and mind. If we practice having a strong body, speech and mind, these children can rely on themselves and coexist with others in society. Most importantly, they will love and have self-understanding. As a result, they will be quality children and unselfish or lead to corruption."

This research will use the principles and theories of children to create furniture that is appropriate and suitable for children aged from 3 to 7 years old and then conduct tests, evaluation and analysis with the National Institute for Child Development and Family, Mahidol University as well as apply the ten principles of an honest man to train children to do good.

## 2. Research Objectives

- 2.1 To study and design desk sets and teaching media to develop moral education and anti-corruption awareness for 3 to 7 years old.
- 2.2 To test the efficiency of the furniture with the instructional kit of the students to evaluate the efficiency of the product development.

## 3. Method

### 3.1 Furniture selected by experts.

Based on the Analytical Hierarchy Process (AHP) analysis, the experts decided to take the form of a sheep character model to add the following benefits.

1. The desk must have a writing and drawing area for studying. Colour must attract users (students from 3 to 7 years old). The table must have equipment storage. The children must be able to use it with teaching materials.
2. The table and chair should be strong. The selected materials must be safe, easy to maintain, durable, and harmless to children. Tables and chairs should be able to accommodate other activities and be reasonably priced.
3. The chair should be comfortable, easy to use, tidy and sturdy.
4. The appearance of furniture with too many functions can be harmful to children.
5. The style of furniture in the production process is too difficult.
6. Installing fittings may damage wooden pallets because the wood is soft.
7. Increase the learning activities of kindergarten children.
8. Consider the child's safety against the use of furniture.
9. Add cuteness to furniture because it attracts the attention of children.
10. Furniture should contribute to the learning of children.

### 3.2. The process of designing and developing tales.

The design and development of instructional media with illustrations are made for use in ethical teaching. Based on the collected data summarized above, the researcher studied and selected the characters and composed three stories and developed the character's appearance to be interesting. The character image is colourful, easy to understand, and suitable for children aged 3 to 7 years old. It can enhance the imagination by using illustrations. The children can easily be reached by introducing to or teaching by a parent, teachers, and a close person. The design focuses on virtues, doing good deeds against corruption, and the consequences of not being faithful to the media through fairy tales. The content of the story is as follows (using the ten principles of an honest man, covering the development of human beings in ten principles of an honest man, i.e. bodily action, verbal action and mental action).



**Figure 1** A Image of protagonist of the story is helping a friend.

The character is created to appear physically feeble but kind, non-aggressive, and like to help others.

The product is improved and developed in a format that experts recommend. The product is developed as required until one of the best patterns is acquired, at which point the resulting pattern is drawn for production. The design and production are as follows.

### 3.3 Analysis data for design analysis 5 W 1 H

What = Furniture design for kindergarten children.

Who = Children aged from 3 to 7 years old.

When = Used to store items and equipment to be tidy to promote morality and ethics.

Where = Used at various kindergartens that require educational material to strengthen morality and ethics.

Why = To strengthen the safety furniture set for public schools to be effective and promote morals and ethics (anti-corruption)

How = To store items for the children and as part of the teaching (ethics)

### 3.4 Analysis of data for design analysis S W O T

#### 1. Strength of products (strengths)

The product is a novel product with affordably priced, high strength, and safe. It can respond to a school that has budget deficits. The furniture product promotes the morality of ethics.

#### 2. Weaknesses of products (weakness)

It is an exotic product. The user is not confident in the furniture as expected.

#### 3. Opportunities of products (opportunities)

Nowadays, furniture for children is expensive and does not meet the requirements. There is less moral ethics. "The safety standards are very low. Researchers analyzed the furniture for children to meet their needs and then used it to produce the product." (Jean Piaget, 1983)

#### 4. Obstacles (threats)

As a new product, the idea is to promote morality in which the user is not confident in the effectiveness of the product. Therefore, the product should be tested, evaluated, and used to gain more acceptance.

### 3.5 Presentation of sketch design (sketch design)

The initial design process is the conceptual presentation (sketch design) and then analyzed to enter the selection process with suitability and feasibility. After that, it continues to develop in the process of presenting the final draft.

A conceptual framework for furniture design in kindergarten classrooms can be summarized as follows.

The conceptual framework and design conceptualization are the design of furniture in kindergarten classrooms for children aged 3 to 7 years old to strengthen morality and ethics through the media of three stories. One set of furniture in the project consists of:

- 1 study desk - 1 backrest chair

In response to consumer behaviour as follows:

- Study
- Classroom activities - Use in conjunction with teaching materials. (fairy tales)
- Useful to strengthen discipline and moral ethics.

#### 4. Discussion



**Figure 2** Desk set and teaching media to develop ethics and anti-corruption awareness learning for 3 to 7 years old children.



**Figure 3** Instructional media.

The experiment is to test the efficiency of the designed furniture with the instructional support set of the students and to evaluate the efficiency of the product development. A sample of twelve children is used in the

experiment. The scores of moral and ethical understanding before and after testing the use of furniture, tables, chairs and teaching aids of children aged from 3 to 7 years old in kindergarten are compared.

Assumptions are as follows. After testing the use of furniture, tables, chairs and teaching materials, students will comprehend ethics more fully than they did before using the product.

(Defined as statistically significant at  $\alpha$ : 0.01) (Yamane, T. 1973).

H0:  $\mu$  after test run  $\leq \mu$  before test run

H1:  $\mu$  after test run  $\geq \mu$  before test run

The researcher determined the confidence level at 99% to show that the test of using furniture, tables, chairs and teaching materials was reliable. They are able to cultivate children's awareness of how to behave as good by using the ten principles of an honest man through teaching.

**Table 1** A list of the scores of 12 school children who have been assessed before and after use.

Students No.	Point before test run product	Point after test run product	d	$d^2$
1	10.4	11.5	-1.1	1.1
2	15.6	16.7	-1.1	1.1
3	15.2	15.2	0	0
4	4.1	14.4	-10.3	10.3
5	4.5	4.3	0.2	-0.2
6	6.7	6.5	0.2	-0.2
7	10.2	12.0	-1.8	1.8
8	11.2	11.5	-0.3	0.3
9	15.4	17.5	-2.1	2.1
10	16.5	12.8	3.7	-3.7
11	17.8	19.8	-2	2
12	19.6	16.2	-3.4	3.4

The collected population is the number of people who voluntarily test a product before and after using the product.

Note: the grades of the student sample were tabulated in table 1.

**Table 2** The comparison results before using the product and after using the products of 12 students (The score was based on the assessment of 2 teachers.)

Variables	$\bar{X}$	SD	d	Std.	t	df	Sig. (2-tailed)
before test run	12.26	5.21	-.933	3.5	-.92	11	0.18
after test run	13.2	4.47					

( $\alpha$ : 0.01)

Therefore, it is estimated that the Sig value of  $0.18 \geq 0.01$  makes it impossible to reject  $H_0$ . The value of the test before use is higher than that of the actual product, but not significantly. The effectiveness of the research is as follows.

For a summary of the results of using furniture, tables, chairs and instructional media to develop moral and ethical awareness and anti-corruption awareness for children aged 3 to 7 years, the average score after testing the product was higher than before the test. The statistical significance of 0.01 did not follow the research hypothesis.

The results showed that after using the product, the score was higher than before the test. The product was not significant, indicating that it did not meet the research hypothesis. Therefore, it can not refuse  $H_0$ . The use of instructional media in a short period to raise awareness does not help children to have the knowledge of morals, ethics, and the ten principles of an honest man. The children can not have better scores and better rating trends in a short time.

However, there should be more hours spent on the media in order to improve the efficiency of the students who learn morality. From the data collection, the time to use the products of the researcher is one hour per day, which is not enough time to learn. However, if there is more time, it will increase the children's scores after using the product. Another reason may be due to the confidence that the researcher set at 99%. If the confidence level is reduced to 95%, then the research concludes that  $H_1$  is acceptable because the Sig value is  $0.18 \leq 0.025$  and accepts  $H_1$ . The post-use performance test results are significantly different.

Based on the performance tests, the researcher concluded that furniture, tables, chairs and teaching materials for developing moral education and anti-corruption awareness for children aged 3 to 7 years old are effective in raising children's awareness. For teaching time with the child, the parents together with the teacher will make the product more effective as Anders, W.(2015), discussed in the research that the design of appropriate access devices for the blind improved work performance and mental health.

## 5. Conclusion

This research was designed to study and design furniture, tables, chairs and teaching materials to improve moral education and anti-corruption awareness for children aged 3 to 7 years old.

The study and design developed from ten principles of an honest man, divided into three parts; body, speech, and mind. It is the practice of moral work to strengthen morality in children and make children more conscious. The design is developed as a learning medium in the form of three stories. The characters in the story are then designed into furniture to create role-playing, making children feel more connected with the media.

The design of the school desk set and teaching media is to strengthen the knowledge, morals, ethics, conscience and corruption reduction for children aged 3 to 7 years old. The objective is to reduce social problems that will occur in the future by using child psychology to help create the school desk set and teaching media to support teaching and learning. The prototype product was designed through experts and theoretical hierarchy analysis to determine the weights for the optimum product selection.

The design is based on the ten principles of an honest man to help design and develop. The products are selected by experts. The product score of the expert user was good with an average of 4.06.

For the development of this research, storage cabinets, bedside cabinets, or beds for storytelling which is a bedtime activity that makes the family have more relationships and makes the children grow a good conscience should be added.

The teaching media that is the story content should be fun, exciting, moving, sound, colourful, and appropriately applied to furniture.

The furniture may have issues with transportation, storage and movement by children due to its heavy weight. Although the cushion is soft, has storage, and has a lot of usability, but may make maintenance difficult. There should be more media development and more activities with parents.



**Figure 4** Before using the product and after using the products of 12 students. The score was based on the assessment of 2 teachers.

## 6. Acknowledgement

Thank you National Research Office (NRCT) for allocating research funds to help develop an awareness of children and young people, and thanks to the Rajamangala University of Technology Rattanakosin (Salaya) for having the policy to push the university to help society. This research was conducted by the policy guidelines of the funding sources.

## 7. References

Anders, W.(2015), Identity References in Product Design: An Approach for Inter-relating Visual Product Experience and Brand Value Representation, *Proceedings of the International Conference on Applied Human Factors and Ergonomics (AHFE 2015) and the Affiliated Conferences*. vol.3, (2118-2125), Lund University, Sweden.

Walker, S. (2006) Object lesson: Enduring Artefacts and Sustainable Solutions. *Design Issue*. 22(1), 20-31.

Chuachetton, R. (1996). *Use of Role-Play Activities to Enhance Assertive Behaviors of Preschool Children* (Master's Independent Study).

Doungdao, K. (2003). *Using Group Activities to Promote Prathom Suksa 6 Students' Discipline*, Bandonmoon [Suwannasaratbumrung] School, Phrae Province (Master's Independent Study).

Jellen, G., and Urban. K. (1986, Spring). Test For Creative Thinking Drawing Production. *The Creative Child and Adult Quarterly*. 11(8), 107-155.

Jean Piaget. (1983). *Handbook of child psychology*, Vol.1. New York: Wiley.

Yamane,T.(1973). *Statistics: an Introductory Analysis*. Tokyo: Harper International Edition

Walker, S. (2006). Object lesson: Enduring artefacts and sustainable solutions. *Design Issue*. 22(1), 20-31.