A COMPARATIVE STUDY OF "FIGURES AND GEOMETRY" IN JUNIOR MIDDLE SCHOOL MATHEMATICS TEXTBOOK BY PEP EDITION AND KANGXUAN EDITION

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Using content analysis and quantitative research methods, comparing the "graphics and geometry" part of the junior high school mathematics textbook of the PEP version and the Kangxuan version, it is found that the PEP version attaches great importance to helping students build a knowledge system and expands more columns; the Kangxuan version attaches importance to students' operational ability and The teaching materials are more difficult. Therefore, it is recommended that the teaching materials of the PEP textbook add intuitive geometric content, review old knowledge with exercises, and provide a large number of physical teaching aids.

RESEARCH DESIGN

In terms of the layout style, it analyzes which parts are included in the structure of the two editions of the textbook, and the characteristics of each part. In the expansion column, according to the mainland compulsory education curriculum standards, the cognitive requirements are divided into three levels: feeling, experience, and exploration. In terms of illustration function, Meyer's point of view is used to divide the function of illustration into decoration, representation, interpretation, and organization. In terms of the difficulty of the textbook, the formula used is $N = f(C_1, C_2, E)$(Kuang, 2015).

COMPARATIVE ANALYSIS RESULTS

In terms of the layout style, the PEP version is student-centered; the Kangxuan version conforms to the cognitive characteristics of students.The Master Education version of the expanded column pays more attention to the experience level, and the Kangxuan version pays more attention to the experience level.The illustration functions are mainly representational illustrations, with few explanatory illustrations. The PEP version has a few organizational illustrations, and the Kangxuan version has more decorative illustrations.In terms of the difficulty of the textbook, the Kangxuan version is slightly higher than the PEP version.

SUGGEST

Intuitive geometry is added to the content to provide a rich background. Students are gradually transitioning from intuitive geometry to demonstrative geometry learning. Comenius (Comenius, 1999) and Pestalozzi both advocate intuitive teaching; the history of mathematics helps students understand the essence of mathematics.Use exercises to review old knowledge and design a summary for each section. Reviewing in the way of exercises can integrate relevant knowledge. According to the Ebbinghaus forgetting curve, the earlier the review, the better.Provide physical teaching aids to enhance the readability of teaching materials. Piaget (Piaget, 1990) believes that students' activities must be emphasized, and teaching aids can enable students to gain rich experience in activities. Improve readability and improve students' interest in learning.

References

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