

Literacy orientation: the value of online and offline integration of unit teaching and learning, design

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ABSTRACT

The rapid development of artificial intelligence, online and offline integration of unit teaching change has become the inevitable requirements of the new era, and its development has a qualitative leap. Dual-line fusion unit teaching has rich value connotations, including distinctive core literacy orientation, intensive unification unit of multiple types of classes; learning time and space without boundaries, expanding the field of unit learning; numerical intelligence empowered structured unit teaching complex; learning mode integration, promoting unit learning organizational form of pluralism. Learning-centered dual-line integration of the unit teaching design, with a scale of individualized teaching, openness to a wide range of generative, deepening the characteristics of disciplinary practice. Its design needs to be centered on the conceptual system of the unit to carry out two-line planning, value-added information technology to build a large concept-led goal system, the design of holographic instantaneous "teaching and evaluation" consistency of the evaluation task and the list of learning tasks of the two-line integration.

KEYWORDS

literacy orientation; online and offline integration; unit instruction

Artificial intelligence era, with ChatGPT, Sora, Wenxin Yiyin and other artificial intelligence models, as well as AR, VR and other digital information technology, is profoundly changing people's production, life, learning methods, China's school education and teaching from the multimedia-based information technology-assisted classroom teaching stage to the scale of the development of the depth of the fusion of information technology and classroom teaching stage, the ecology of teaching quietly and profoundly changed. Promote the digital transformation of education, online and offline integration (referred to as "double-line integration") teaching as an effective way to cultivate new productivity and innovation talents.

1 Connotation of the value of unit teaching in online and offline integration

Bilinear fusion teaching is the development of network information technology to a certain stage in the field of education application products, network information technology as the organic factors constituting a new type of learning ecological environment, fully embodies the learner's subjective position^[1], will be the online teaching and offline teaching two kinds of teaching pathway integrated design, the formation of complementary strengths, the formation of anytime, anywhere, effective learning field, the practice of teaching pattern gradually towards holographic borderless learning Revolution.

1.1 Distinctive literacy orientation: two-line fusion and intensive integration of units with multiple lesson types

The unit teaching of dual-line integration can be categorized into four types, namely, unit initiation and construction, cognition and comprehension, practice and application, and creativity and transfer, in terms of the law of literacy development. The two-line integration of unit initiation and construction class type, through the information technology based on the clear presentation of the structure and logic of the big concepts, situations, problems and tasks, to stimulate the students to have an overall high level of awareness of the unit. The second is the dual-line fusion of cognition and comprehension lesson type, which constructs real situations through multi-dimensions such as text, image, video, modeling, data, virtual, etc., and focuses on the basic learning tasks of the unit. The two-wire integration of practice and application lesson type, through the terminal equipment design interactive and strong inquiry tools, such as, recording, searching, sharing, collaboration and other aids, will be judged, evaluated, and used in real situations and solving real problems, is a kind of cognitive realization and deepening. The two-line integration of the creation and transfer of lesson type, based on a deeper understanding of knowledge, cognition, practice, information technology to effectively support the real situation of complex problem solving, beyond the textbook natural unit of learning content.

1.2 Learning without boundaries in space and time: two-tier integration to expand the field of modular learning

Dual-line integration of teaching and learning activities have the characteristics of the intermingling of ephemeral and co-temporal, in which online teaching needs to be targeted at the online redevelopment of teaching materials to enhance the appropriateness of online teaching, including distance learning, catechism, microclasses, flipped classrooms, etc. Teachers teach and students learn asynchronous time and space of the recorded online teaching, but also includes the teaching and learning in the same physical space of the synchronous online teaching and synchronous teaching in different physical space; online teaching is an integral part of the entire teaching ecology. Online teaching; online teaching is an integral part of the entire teaching ecology.

1.3 Mathematical and intellectual empowerment of the unit as a whole: a two-tier integration of structured unit teaching and learning complexes

Dual-line fusion unit teaching puts students' knowledge learning, learning practices and existing cognitive and psychological foundations in a continuous interactive digital and intellectual environment in space and time, and the relationship between groups of learning tasks and activities may be a linear structure, an ascending spiral construction, or a vertical and horizontal interweaving and blending, and the type and complexity of the structure depends on the degree of tension between students' literacy development and the variables of the teacher, knowledge, and practice to form a teaching and learning.

The degree of tension between chaos and order in the complex. Two-line fusion of unit teaching makes the basic functions of material circulation, energy flow, and information transfer between these variables effectively promote the learning ecology to be both dynamic and well-organized^[2].

1.4 Integration of learning styles: twin-track integration for diversified organization of modular learning

Bilinear integration of teaching needs to reshape the traditional classroom classroom instruction pattern, "a pair of classes as a whole" traditional relationship to information technology-enhanced "a pair of classes as a whole" "a pair of group groups" "One-to-one" precise systematic distributed, flat, multi-state new learning organization style. In addition, many typical teaching and learning styles have different connotations, characteristics, and operating procedures, and the online and offline presentations are different, so it is necessary to design interactive tools for the integration of two lines of knowledge for different types of knowledge, so as to facilitate the skillful use of various learning styles.

2 Unit instructional design for online and offline integration

Based on the basic education curriculum standards, the two-line integration of unit teaching design, need to follow the logic of the academic discipline, cognitive logic, psychological logic, the logic of the practice of several comprehensive unity, two-line integration of the unit "teaching and evaluation" integration design is based on the "standard - textbooks The integrated design of the two-line fusion unit "teaching and evaluation" is based on the integration of "curriculum-textbook" and "learning situation"^[3], emphasizing the overall consistency of teaching and learning, teaching and evaluating, and learning and evaluating on the basis of the overall integration of the integrated unit curriculum based on the online and offline teaching and learning activities, realizing the online and offline two kinds of teaching and learning pathways "hybrid symbiosis", and will be Toward integration^[4].

2.1 Two-line planning around a modular conceptual system

From the perspective of the essence of the discipline to grasp the overall position of cultivating students' literacy in the learning unit, clear the corresponding disciplinary literacy in the unit to cultivate the level of requirements, clear core literacy training point, surface, the synthesis of the unit's teaching objectives and the distribution of different types of class teaching objectives.

According to the distribution of teaching objectives of different types of class teaching content, time allocation, assessment of the application of existing information technology equipment effect on the optimal contribution to the achievement of teaching objectives, give full play to the advantages of intelligent cloud services, intelligent classrooms, intelligent end application tools as one of the intelligent service platform for teaching^[5], especially tapping the potential of information technology and the results of the data of the intellectualization of the process of learning to solve the key, difficult problems.

2.2 Value-added information technology to build a system of broad concept-led objectives

Based on the curriculum standards of the unit teaching big concept refining needs to reflect the essence of the discipline, highlight the value of the discipline, generalize the structure of the discipline, the specific form of the concept can be the theme, the problem, the point of view, questioning, theories and so on. Different levels of the big concept system span too much, to some extent, weaken the concept of the transversal, migration, interpretation, understanding, unifying category, the use of information technology will be auxiliary facts, phenomena, concrete concepts and big concepts between the establishment of an interesting and diverse, logical, interpretive, good, visual and effective connection. Unit and hourly objectives are developed based on the concepts of concrete to abstract, and hourly objectives structured as what to know, what to understand, what to be able to do, and what to become using KUDB objective descriptions^[6].

2.3 Holographic and instantaneous "teaching and evaluation" consistency assessment task design

The significant advantages of holographic and instantaneous teaching evaluation based on the "Cloud-Taiwan-End" Intelligent Teaching Service Platform are conducive to the design and implementation of consistent evaluation tasks for "Teaching Evaluation". Evaluation from a single point, extended surface to three-dimensional observation evidence, transformed into data form, to achieve data traces, so as to generate a comprehensive, personalized and three-dimensional student unit learning portrait. The holographic instantaneous teaching process evaluation task focuses on the mosaic distribution of evaluation tests in all aspects of online and offline teaching, and plays the role of extracting the original cognitive foundation, searching for knowledge production points, constructing new knowledge, and assisting in the assimilation of compliant cognitive structures in the learning process of the students.

2.4 Design of a list of learning tasks for two-tier integration

Based on the evaluation evidence of learning evaluation, the design of the learning task list needs to be based on the following aspects: First, the learning task list needs to be centered on the core knowledge structure of the unit, to clarify the knowledge composition of the unit's cognitive information processing class, social class, individual class, behavioral class, belief class, etc., and to form the logical structure of the subject's knowledge in the form of a visual mapping of the total score, contrast, space, time, cause and effect, synthesis, etc., and to create a group of learning tasks that are based on the structure of knowledge and cognitive psychology^[7]. The second is to create a series of real scenarios of knowledge generation, development, dissemination and application of disciplinary units with multimodal data and diversified tools, so that students can deepen their understanding and application of knowledge through experience, practice and exploration; the third is to set up situational questions to express the learning objectives and enhance the learning process within the task list, integration correlation within the task list within the learning tasks and between the task lists.

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