

The construction of curriculum learning pattern of master of education: theoretical foundation and practical framework

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Abstract. The implementation and operation of the "Curriculum for Education" is an important medium and carrier for nurturing the in-depth learning literacy of postgraduates, especially the implementation and operation of the principle courses provide an important platform and guarantee for cultivating the principle thinking of M.Ed. Combined with the analysis of research data, this paper finds that (1) the learning pattern of M.Ed. courses has the characteristics and practical characteristics of openness, initiative and self-adaptability. (2) The practical framework for constructing the learning pattern of the M.Ed. programme consists of two modules that lay out progressive learning tasks that point to "academic competence in the curriculum" and "practical competence in teaching". (3) Guiding M.Ed. students to participate in course evaluation and promoting the formation of M.Ed. learning experiences are the core mechanisms of M.Ed. course learning patterns in practice.

1 Introduction

In the Dictionary, the word 'pattern' is taken to mean 'specification, style'; the Modern Chinese Dictionary defines pattern as 'structure and format'. This shows that the word 'pattern' is used for the whole of something, a systematic structure with specifications. The learning pattern of a course is a professional interpretation of the three-dimensional picture of the learning resources, learning platforms and learning bonds for the achievement of the learning goals of the course based on the integration of students' professional learning consciousness, learning abilities and learning value perceptions.

This paper defines the "curriculum learning pattern of Master of Education" as follows: the personalised cognitive and practical framework of the learning experience of a course constructed by students according to curriculum evaluation scheme provided by the course instructor, relying on the synchronous interaction between teachers and students in class and asynchronous interaction outside of class, using the completion of the course learning tasks as the carrier and the course learning outputs (works) as the nodal resources. This paper is based on the student's perspective. Based on the student's position and perspective, this paper

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takes the Curriculum and Pedagogy course as the base to describe the process of deconstructing and constructing the learning pattern of Master of Education in this course, and to clarify how their principle thinking and professional practice skills are effectively enhanced and deepened in the construction of the learning pattern of the course.

2 Research design

In order to explore the process of constructing and implementing a postgraduate course evaluation scheme, this study takes H, a teacher of the public course Curriculum and Pedagogy for Master of Education (M.Ed.) students at Y Normal University, as the subject of the study, and develops a case study of his course evaluation design and practice journey, in an attempt to describe and explain the teacher's practical knowledge and practice transformation process in the course evaluation practice.

2.1 Directions

For a long time, China's postgraduate training institutions (units) have focused on the purpose, content and methods of course evaluation from a "tutorial" perspective, i.e. mainly on what the teacher, as the subject of evaluation, has done in the course of course implementation. In other words, it is more concerned with 'who is teaching and what is being taught'. In recent years, however, as important research has been conducted in the field of learning sciences to explore the issue of effective student learning, the education community has been asking questions about the quality of the curriculum, such as "how does the curriculum promote effective student learning". In addition, "learning opportunities" is becoming an international trend in curriculum assessment, which focuses more on the quality of students' time spent on learning, their understanding of the content, and the quality of their learning outcomes in the course of learning. [1] In other words, curriculum evaluation research under the 'learning process' approach is more concerned with whether the 'learning journey' of students actually takes place in the course of curriculum implementation, and whether curriculum implementation helps students to complete the 'closed loop of learning'. "This is the case with the 'learning journey'. In this way, the question of how to reconstruct course evaluation from the perspective of "learning process" will become a new trend and a new point of view for postgraduate course evaluation research.

2.2 Participants

As a public course, the course is offered to all M.Ed. majors in the university and is offered in both the spring and autumn semesters. In this study, two main factors were taken into consideration when selecting the subject: firstly, the teacher in charge of the course; and secondly, the subject had at least three rounds of updating and iteration of the course evaluation scheme. In this study, Ms. H was identified as the case study subject, and the process of identifying and validating her knowledge and competence in course evaluation in the course of Curriculum and Pedagogy was examined from the perspective of "learning process".

2.3 Methods

The research data collected in this study were analysed using the literature method, interview method, observation method and text analysis method. The research data mainly involved: interview data on the design of teacher H's curriculum assessment scheme, the choice of

classroom assessment strategies and assignment design strategies; the activities involving classroom assessment in teacher H's classroom recordings, the teaching design, teaching reflections and texts of students' learning reflections related to them, etc.

3 Results

3.1 The characteristics and practical representation of M.Ed. learning pattern

The construction of a course learning model based on a 'student standpoint' usually results in a more open, active, adaptive and generative course learning experience for students.

3.1.1 Openness: Building individual courses

The learning process in higher education cannot stop at the level of learning points, we need a learning that can reach through the surface and benefit the mind, reaping long-term freedom is the real purpose of learning. [2] In the course of learning, based on their own understanding and connection to knowledge, students will show different characteristics in the process of building their own knowledge system, which will also change with their own development, and has a certain degree of immobility and openness. Openness, i.e., the unfixed nature of the human being formed in the process of subjective mental activity and interaction between the human being and his or her environment. Learning is related to individual experience and students rely on the relevance of existing experience, information and internal experience to create connections between the information of all parties, which constitutes the essence of learning. Each student, as an individual, is different and experiences the curriculum differently due to the differences in their physiological base and prior life learning environment.

3.1.2 Initiative: Building an absorptive mind

Initiative, i.e. the ability to act without being pushed by external forces, is the opposite of passivity. [3] Each M.Ed. is the subject of his or her own learning activities, and his or her subjective initiative determines, to a certain extent, the effect of his or her learning. The real driving force of individual development is the self-awareness of individual development, the self-awareness and self-reflection of the individual on the development process, and the development crisis and development needs arising from this process make individual development a conscious process. [4] Learning is not a transfer of knowledge from teacher to student, but a process in which students construct their own knowledge, they are the active constructors of information, establishing some kind of connection between it and their existing learning experience, and "assimilating" and "adapting" it, constantly enriching their own cognitive structure. This process is not forced by external forces, but is a spontaneous and purposeful activity.

3.1.3 Adaptive: Establish an orderly learning process

Course learning at postgraduate level is often project-based, resource-based, open-ended and led. At the beginning of the semester, the course instructor explains to students the Course Outline, which is the frame of reference for personalised learning, and which spells out the pace, difficulty and differentiation of learning in terms of course objectives, course content modules, course delivery methods and course assessment requirements. Adaptivity is perhaps the expectation and depiction of the ideal state of learning at postgraduate level. The M.Ed.

is able to dynamically adjust the course content of revision courses based on individual learning abilities, styles and guidance on task completion frameworks within a certain flexible timeframe, selectively refining the level and type of learning above the pass level. Rather than imposing uniform and standardised requirements on students in terms of the total amount of learning, the lecturers allow students room for active learning above the bottom line standard and encourage students to actively seek to enhance their learning performance and experience with the intervention of the teachers.

3.2 The framework to teacher action that points to the construction of learning pattern

This paper uses a series of learning assessment tasks covered in the Curriculum and Pedagogy as an example to guide the M.Ed. through the learning process on their own, focusing on the relationship between task completion and achievement of course objectives.

3.2.1 Learning tasks that point to "course academic competence" advancement

The acquisition of graduate students' academic ability is the result of the interaction and mutual stimulation of many internal and external factors, such as curriculum, classroom teaching, academic evaluation, graduate students' academic aspirations, learning ability and tutor guidance. [5] For M.Ed., learning is no longer confined to the classroom and the understanding and memorisation of textbooks, but is more importantly about applying theoretical knowledge to practice, discovering shortcomings in theoretical research, and carrying out research-based learning in order to gradually acquire certain academic skills. [6] At the beginning of the course, the instructor laid out the course outline, which aggregated the course objectives, course content, course implementation methods and course assessment requirements. In accordance with the teaching calendar provided by the teacher, students took the initiative to actively consult the relevant literature around the learning topic in accordance with the teacher's nodal task requirements, and successively completed "Academic lectures", "Modular learning journal (post-class notes stream improvement)" The three progressive learning tasks "Course Paper" (as shown in Table 1)

Table 1. Three progressive learning tasks pointing to "curriculum academic competence".

Task definition	Task type	The relationship between tasks and curriculum structure	Task feedback form
academic speech	Extract the key	Extract and summarize the content of the course	Content visualization
modular learning log	knowledge restructuring	Improvement and reconstruction of curriculum content	Process visualization
course paper	result output	Internalized outputs of course content	results visualization

The above three tasks are progressive requirements that are integrated throughout the course of study in terms of the development of 'principle-based thinking' and 'problem awareness'.

3.2.2 Learning task that points to "teaching practice ability" advancement

As university teacher trainees about to head for the podium, in addition to a solid theoretical foundation, they must also have the teaching skills to pursue a career in teaching. [7] In terms

of the horizontal dimension of the content presentation, the teacher has designed three further learning tasks in the core content module, namely exploring the nature of learning, analysis of the standards and multimedia teaching design. The completion of these three tasks points to the refinement and expansion of students' pedagogical knowledge of the subject. At the same time, they reflect the learning priorities in the content areas of curriculum, pedagogy and learning theory, and reflect the curriculum teaching concept of learning by doing and learning by studying.

Exploration of the nature of learning: At the beginning of the course, the teacher mentions that the existing research and practice framework of curriculum and pedagogy has not yet found a good coupling pathway and mechanism. As a result, the teacher suggested that students could consider valuable theoretical and practical issues related to curriculum and pedagogical research from a 'learning theory' perspective. In completing the assignment, students reviewed advances in educational psychology research on the psychology of learning and learned about theories of learning science in relation to representational strategies for teaching and learning. As a result, the importance and necessity of the "learning situation analysis" mentioned by primary and secondary school teachers in their daily teaching design was further appreciated.

The lecturer pointed out the importance of developing the knowledge of the subject matter (PCK), in particular the systematic learning and understanding of subject matter ontology. In the "Curriculum Theory" section, the teacher explained and demonstrated the basic framework for analysing the curriculum standards for the compulsory education section, and asked the students to reflect and practise.

The teacher explains the logic of the psychological representation of learning in the principles of multimedia design and asks the students to focus on After an exemplary explanation of the logic of the psychological representation of learning in the principles of multimedia design, the teacher asks the participants to focus on the integration and realisation of teaching strategies in the multimedia design process, and the value of the presentation of "board books" and the use of "multimedia presentations" to reduce the cognitive load of students.

3.3 The guide to student action that points to the construction of learning pattern

3.3.1 Student participation in course evaluation: outcome - process - metacognition

In recent years, in academic circles, "from evaluation of learning, to evaluation for learning, to evaluation as learning, reflecting the transfer of the power and subject of evaluation and the country, that is, from school administrators to teachers to students' evaluation subjects transfer" [8] In this study, curriculum evaluation is defined as the process of making value judgements based on the fundamental starting point of collecting and interpreting relevant information that reflects students' learning journeys for both the entire curriculum system and the preparation of the subjective and objective environment in which the curriculum operates. The process aims to continually optimise the effectiveness of the curriculum's parenting practices and to provide valuable decision-making information for the high quality and sound development of the curriculum.

Mr H's experience of over thirty years of curriculum practice has given him a unique understanding of what curriculum assessment is in relation to students' learning processes. For H, the pedagogical function of curriculum assessment is to value, deeply explore and make good use of students' learning experiences. *"There are various ways to test the achievement of curriculum objectives, and most curriculum practitioners have long relied on the implementation and management path of "decomposing objectives - collecting teaching*

data - checking summative texts", which has the disadvantage of neglecting the search for and awakening the experience, value and meaning of students' learning. The disadvantage of this is that it ignores the search for and awakening of the experience, value and meaning of students' learning, and unwittingly treats learning as a process that can be 'assembly-line'." (2021-11-20)

For students, this is a metacognitive awareness and competence with monitoring implications. Students who have this literacy know: what the purpose of learning certain specific terminology, concepts and related skills is; how much they know about a particular topic; are clear about the strategies that can help them learn such knowledge and skills; whether they understand these concepts; know the criteria for improving the quality of their learning; and can assess whether they can accomplish the goals they set for themselves.

3.3.2 Based on the "student position": defining own curriculum pattern

The student stance is reflected in the process of curriculum development, which is based on the value of student development. [9] In the context of curriculum assessment, the 'student position' is a holistic and deeper approach to student development. Specifically, there is a need to answer the question of whose life development should be addressed in the process of curriculum assessment. Some scholars have suggested that it is important to "shift from focusing on the lives of teachers and students, who are encouraged, to focusing on the lives of both parties, and from focusing on static lives to focusing on the dynamic relationship between generation." [10]

During the interview, Mr H used the term 'pattern' as a metaphor for the importance of the overall contours of the course learning and its corresponding learning requirements for the students' course learning experience. *"The pattern is a professional interpretation of a three-dimensional picture of learning resources, learning platforms, and learning bonds for the achievement of course learning goals based on the integration of students' professional learning awareness, learning abilities, and perceptions of learning values." (2021-12-15)*

During the course of study, postgraduate students track their own learning progress under the guidance of their teachers, look critically at their own learning performance, develop appropriate improvement strategies and make constructive learning improvement decisions. This in itself is what course evaluation is supposed to be about. This process requires a concerted effort by staff and students to enhance and extend the understanding and appreciation of the importance of formative assessment for postgraduate study guidance.

For example, in the course learning task, students are assigned to select and compare five related textbooks named 'Curriculum', 'Pedagogy' and 'Curriculum and Pedagogy'. The students are then asked to draw up a 'history of scholarship' in the relevant field in the form of a mind map, which is then revised twice or three times under the guidance of the teacher to identify the key theoretical perspectives of important authors. Another example is the progressive task of 'Academic Presentation - Course Paper Writing', where students are encouraged to report on the process of developing a research question. These attempts at course evaluation tasks are all designed to enable postgraduate students to appreciate the nurturing value and significance of the course in the context of proper course learning practice. Students, as evaluators, collect evidence that represents and reflects their own learning progress, and the results are used to inform their next stage of learning.

4 Conclusions

Firstly, the learning pattern of the M.Ed. programme possesses the characteristics and practical representations of openness, initiative and self-adaptability.

Secondly, the practical framework for the construction of the M.Ed. programme learning pattern consists of two modules that lay out progressive learning tasks directed towards "academic competence in the curriculum" and "practical competence in teaching".

Thirdly, the mechanism of guiding M.Ed. students to participate in course evaluation and promoting the formation of M.Ed. learning experiences is the core mechanism of M.Ed. course learning pattern in practice.)

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