An Innovative Idea: Design and Assessment of Interest-Driven Curriculum in Junior High Schools in China

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ABSTRACT. *The purpose of the study is to design an interest-driven curriculum model using Sources of Interest Based in Usefulness and to implement it based on Interest-Driven Learning Design Framework. This study will address the gaps of the previous studies on interest-driven curriculum, which lacks a system for the development and implementation of interest-driven curriculum in China and its assessment. Most importantly, this research presents an innovative idea to design a brand new curriculum system that includes concepts such as Pleasure Curriculum, Concern Curriculum, Identity Formation Curriculum, Life Goals Curriculum, and Curiosity Curriculum. The interest-driven curriculum has significant meaning for student learning and individual development. This study adopts quantitative research methods, which determine students' interests, test students' learning motivation through questionnaire surveys, and evaluate students' academic achievements through pre-tests and post-tests. It also uses qualitative research methods through an interview survey to investigate students' attitudes, which can be used as feedback for teachers and the researcher. This study is a trial experience to prove that the interest-driven curriculum can have excellent contributions for students' learning and individual development, ultimately allowing the concept to be borrowed by other educational institutions.*

KEYWORDS: *interest-driven curriculum, curriculum design and assessment*

1. Introduction

As the world-class cartoonist Zhizhong Cai said in his seminar (2016), everyone is useful and has talent; people must discover the thing they like and then do this thing their whole lives so that everyone can be a master. Most importantly, efforts are not useful for individual development unless people find their interests. People must try their best to find interests as early as possible in order to have more time to learn and practice. The statements reveal that each child has their own gifts or talents, however, students need to cultivate their expertise in a professional learning

environment, and students need teachers to help them discover their interests. Therefore, it is important to design an interest-driven curriculum that could fulfill students' interest-driven learning as well as have benefits for their individual development.

However, there are still some gaps when implementing interest-driven curricula in schools. Firstly, junior high schools in mainland China still do not use interest-driven curricula, which aim to promote student individual development by cultivating student interests (Xu, Chen & Xu, 2013). The fact is that schools establish only extracurricular activities that cannot really aid in student interest development (Overview of Basic Education in China, 2016). Secondly, schools lack a framework for implementing interest-driven curricula, which is the key point of curriculum reform. Most previous research mentions how to implement activities directly based on learner interests (Edelson & Joseph (2001); however, they have not mentioned how to implement curriculum based on learner interests. Thirdly, previous studies lack evaluation of the effectiveness of interest-driven curriculum, which was pointed out by Edelson & Joseph (2004). This lack of curriculum assessment causes insufficient understanding of interest-driven curriculum design.

1.1 Critique for the Exam-oriented Education in China

Yi (2001) revealed that most students do not have clear directions for their lives, including career plans and life values, and that most feel unsafe, empty, and bored in their lives. He also pointed that the exam-oriented education in China is strongly flawed because it cannot satisfy students' interests or curiosity. this means it cannot let students learn what they like and, most importantly, that it cannot educate students on how to be their own individual thinkers. Students lose self-awareness; however, people who live in the world need to discover who they are and find the things they like to do. They do not need to fight for high scores, as excellent academics may not be useful for everyone in life. Under the current model, then, some students invariably cannot find work even though they graduate from outstanding universities. A good education must help students not only train their learning ability but also develop their spiritual needs, which is exactly the function of interest education (Dewey, 1916).

1.2 Focus of the Study

The focus of the study is to implement interest-driven curriculum as general curriculum in education, which prepares to instead the traditional curriculum in junior high schools. This requires schools to change from existing exam-oriented curriculum to interest-driven curriculum, as Chinese educational centers adopt exam-oriented education in nine-year compulsory schools. National curricula should move toward interest education, which the vision that each child can be a talent through the cultivation of their interests. For this study, interest-driven curriculum helps satisfy student interests in order to promote student individual development and is designed based on five sources of usefulness, with one source corresponding

to one curriculum. Therefore, there are five types of interest-driven curriculum. The first, the Pleasure Curriculum, aims to cultivate students' hobbies by combining learning skills. The second, the Concern Curriculum, aims to assist students who are concerned about the natural environment or other themes to satisfy their concerns through practical strategies. The third, the Identity Formation Curriculum, aims to help students form and reinforce their individual identities as useful through Identity Formation facilitated by different teaching themes. The fourth, the Life Goals Curriculum, aims to provide knowledge on and guide students clearly to their life goals. The fifth, the Curiosity Curriculum, aims to fulfill students' curiosity to help them solve their doubts or initiate their potential interests.

1.3 Research Questions

In order to address the gaps in previous studies and theories adopted in this study, we put forward fives research questions:

1. What interest-driven curriculum can be adopted by junior high schools?

2. What are the students' interests in junior high schools?

3. What are the student motivations of interest-driven curriculum?

4. What are the students' attitudes toward interest-driven curriculum?

5. Does interest-driven curriculum affect student academic achievement?

2. Literature References

There is some research that describes the significance of interest for student learning and provides an Interest-Driven Learning Design Framework and its previous studies and Sources of Interest Based in Usefulness, as well as the explanation of Interest-Driven Curriculum. As a practicability and effectiveness framework, it covers a wide range of interest sources that can be used to design diverse curriculum that satisfy student interests. It also has a systematic process for leading the implementation that can ensure the curriculum reform is successful.

2.1 Interest-Driven Learning Design Framework

Interest-Driven Learning Design Framework (IDL Design Framework), created by Edelson & Joseph (2004), is adopted in this study as a guidance for interest-driven curriculum implementation. The IDL Design Framework has been adopted in various ways in previous studies, including Goal-based Scenarios (Schank et al., 1993/1994), Anchored Instruction (Cognition and Technology Group at Vanderbilt, 1992), Concept Oriented Reading Instruction (Guthrie & Alao, 1997), and Project-based Science (Singer, 2000). For example, Singer (2000) designed a project named What is the Air Like in Our Community, which involves students in the area of their

concern (one source in five sources of usefulness) to investigate the air quality in their community. Edelson & Joseph (2004, p. 172) state that:

"In IDL terms, these approaches illustrate how a designer establishes relevance in order to use an activity or topic that is already motivated by interest to generate a demand for target learning objectives."

For example, one scholar designed interest activities by adopting Interest-Driven Learning Design Process in curriculum instructions and created a writing activity based on students' interest in order to improve students' writing skills (Edelson & Joseph, 2004). In this case, there was a student who was not good at writing and the teacher wanted to help him improve his writing skill based on his interest—music. Therefore, the teacher let him write lyrics under a topic to exercise his writing skill or let him remember the lyrics to exercise his memory. This true case is strong proof of the effectiveness of the Interest-Driven Learning Design Process, which can be used to promote student learning. Specifically, the case reveals that teachers can use student interests as motivation to exercise and develop their academic skills.

The IDL Design Framework provides clear processes for implementing interest activities in curriculum, which reveal the benefits of interest as a motivator for learning. It consists of four phases: Determine learner interest, Align learning objectives with learner interests, Initiate motivation, and Maintain motivation (see Table 1).

Table 1 The Interest-Driven Learning Design Process

Phase	Process
Determine learner interest	Expose or infer existing personal interests and opportunities to elicit new interest.
Align learning objectives with learner interest	Identify learning objectives directly motivated by interests and opportunities to create relevance to interests for others.
When necessary, use context to initiate motivation	Where relevance is not likely to be apparent to learners, use context-based motivators to help initiate motivation.
When necessary, use context to maintain motivation	When interest is likely to flag over time and effort, use context motivators to help maintain motivation.

2.2 Sources of Interest Based in Usefulness

The Sources of Interest Based in Usefulness are described in the Interest-Driven Learning Design Framework that identifies five sources of usefulness, which classify multiple interest elements into five sources that designers can use as a basis for recognizing learners' interests, including Pleasure, Concern, Identity Formation, Life Goals, and Curiosity (see Table 2). This is based on the existing interest-driven curriculum that identifies five sources of usefulness that designers use to generate

interest (Edelson & Joseph, 2004). Therefore, it can be a standard of classification for students' multiple interests.

Table 2 Sources of Interest Based in Usefulness

Sources of Interest Based in Usefulness	Definitions
Pleasure	Engaging with certain topics and activities provides people with a combination of sensational, aesthetic, or intellectual satisfaction
Concern	People value activities and outcomes that they feel are important for emotional, moral, or spiritual reasons, whether or not they result in pleasure.
Identity Formation	People have a universal need to establish and reaffirm their own self-image.
Life Goals	People have needs and desires associated with improving how they function in the world.
Curiosity	Learners are confronted by unexpected gaps in their understanding or ability

2.3 Interest-Driven Curriculum

The definition of interest-driven curriculum adopts one of the learning-teaching approaches: interest-driven learning based on students' interests as their learning motivation to have a contribution for their learning. Teaching will be based on students' interest to design corresponding interest activities in the teaching curriculum (Evanset et al., 2014). The interest-driven learning environment allows students to feel comfortable, and the learning place can provide students the opportunity to learn what they want and fulfill their curiosity (Sampson et al., 2002). In this study, the interest-driven curriculum designed by multiple interest elements provides multiple choices for students' multiple interests, which can have a positive influence on student academic achievement and student individual development (Harackiewicz., & Hulleman., 2010). The interest-driven curriculum aims to satisfy students' different interests in order to promote individual development and even help them realize their personal value.

3. Methodology

In this study, the research design mainly adopts qualitative research methods and quantitative research methods, which provide comprehensive and scientific measures for the assessment of interest-driven curriculum.

3.1 Design of Interest-Driven Curriculum

In order to investigate what interest-driven curriculum can be adopted by junior high schools, the study adopts Sources of Interest based in Usefulness to design interest-driven curriculum, which includes five sources of usefulness that can be developed into five types of interest-driven curriculum, including Pleasure Curriculum, Concern Curriculum, Identity Formation Curriculum, Life Goals Curriculum, and Curiosity Curriculum. As interests are the biggest teacher in our life education, student learning and individual development can be strengthened by combining students' interests into the general curriculum. Furthermore, Interest-Driven Learning Design Framework is a effectiveness and systematic procedure, which reveals the four processes for implementing interest-driven curriculum, including Determining learner interest, Aligning learning objectives with learner interests, Initiating motivation, and Maintaining motivation.

3.2 Quantitative Method

3.2.1 Participants

The author will select 50 students from grade one of a junior high school. The reason is that junior high school students are a representative group of foundational education, as well as objects of emphasis in much education reform in China. The experiment duration is one semester.

3.2.2 Instrument

There are two questionnaire surveys adopted in the study. The measurement tool of interest adopts a psychology scale which has been used in previous research from Rotgans (2015). The psychology scale of interest has seven items; all items are designed on a five-point Likert scale. The other measurement tool of motivation uses a psychology scale which has been used in previous research from Tuan et al. (2005). The psychology scale of motivation has six dimensions, including self-efficacy, active learning strategies, interest-driven curriculum learning value, performance goal, achievement goal, and learning environment stimulation. Each dimension has three questions. All items were designed on a five-point Likert scale. Furthermore, the research also used pre-tests and post-tests to compare student academic achievement and reveal the effectiveness of interest-driven curriculum. For student academic achievement, the measure method adopts students' grades from before the semester and after the semester of the tested curriculum.

3.2.3 Procedure

To answer the second research question in the current study, the researcher will ask 50 students a question ("What is your interest?") before the curriculum

implementation, then ask students who finish the interest questionnaire to confirm whether the interests match individual students; after that, using SPSS data analysis to select students who have the same interests, the researcher will randomly assign the same interest students into two groups. One is the control group, and the other is the experiment group, which is needed to confirm that the two groups of students have the same interests and level of learning motivation, as well as have the same curriculum teacher who has a professional ability for interest teaching.

To examine the third research question, the researcher will conduct a motivation questionnaire that aims to study the level of students' learning motivation at the end of the semester. At first, it can be conducted by the curriculum teacher, who takes the questionnaire to the experiment group at the end of the research. Additionally, the research maintains confidentiality for all information. Most importantly, after finishing the research, the researcher will provide feedback on the research results for the teacher, as well as give her some suggestions for teaching.

To answer the fifth research question, the research adopted both pre-test and post-test experiments, which aim to confirm how curriculum reform affects student academic achievement. For the data collection, the curriculum teacher will provide two groups of student academic achievement data as the pre-test data before the curriculum begins and provide this data again as post-test data when the experiment finishes.

3.3 Qualitative Method

3.3.1 Sampling

For the research, researchers must conduct interview surveys with the students at a junior high school who are the unit of analysis in the research (Flick, 2018). Students have the first-hand experience of their own attitude. Obviously, they also are the key participants of the interest-driven curriculum so that they could share their direct points-of-view on interest-driven curriculum, which has benefits for data analysis.

3.3.2 Data collection

The fourth question is addressed by an interview survey on students' attitudes regarding interest-driven curriculum. The interview questions on student attitudes were designed by Lennartsson (2008) & Rogers (2003) who used it to test student attitudes for curriculum learning. For the interview, the researcher needs to get permission from the principal who works at the respective junior high school. At first, the interviewer should introduce herself to the principal and state the objective of the research in terms of the research's purpose and questions. After that, the principal agrees to help and informs a head teacher to let his or her students to participate in the interview. During the interview process, the interviewer should tell

students to make a sound recording and get permission from them. All the collection data should be confidential.

3.3.3 Data Analysis

To analyze the data, the study adopts a grounded theory approach (Strauss & Corbin, 1990). The first step is open coding, which reviews students' responses sentence-by-sentence and interprets them to different new labels. The second step is axial coding, which, according to the similarity of the first step's labels, separates them into different groups. The third step is thematic coding, which observes the relationship of different groups in the second step and then uses sentences to integrate them together. At last, based on the third step, this approach can come up with a theoretical coding, which can present a clear statement on students' attitudes on interest-driven curriculum. These steps should be used until the completion of the data analysis.

4. Implications

Theoretically, compared to previous studies focused on designing activities with student interests, the present study pays attention to designing interest-driven curricula with student interests. Furthermore, while previous studies have not experimented with the effectiveness of interest-driven curricula, the present study further considers including feedback on the motivation levels of student learning, student attitudes, and student academic achievement, which could reveal that interest-driven curricula can have a significant positive influence on student learning and individual development. This study is innovative in that it is the first to implement interest-driven curriculum reform in China.

In addition to theoretical implications, the current study also has some practical implications. One major practical implication of this study is the realization that curricula need to satisfy student interests in order to achieve curriculum reform that promotes students' individual development and helps them realize their personal value. Another key aspect is that the study employs a comprehensive evaluation on the effectiveness of interest-driven curricula, which can fill in the gaps of the previous studies. Furthermore, the study has practical significance for other education institutes, which can borrow interest-driven curricula as a curriculum system to implement in schools.

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