

## Research Article

# Research on the Construction of Characteristic Teaching Material of Packaging Design in Higher Vocational College

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**Abstract:** The aim of this research is to construct a kind of characteristic teaching material of packing design which could highlight the application. This study has analyzed the main problems of the existing teaching materials of packaging design and then has set the contents of the teaching material that is being constructed, including the basic knowledge of packing design, the packaging modeling elements, packaging decoration design, packaging design procedures, application packaging design and packaging design examples. On this foundation, the research conclusion on the construction of teaching material of packing design is done. The construction of teaching material is an important guarantee for higher vocational colleges to cultivate application-oriented talents and the packaging design has a unique role in training application-oriented talents of art design majors in higher vocational college, so it is very important to construct the appropriate teaching material of packaging design.

**Keywords:** Application-oriented talents, construction of teaching material, contents of teaching material, content setting, higher vocational college, packaging design

## INTRODUCTION

The course of packaging design which is set up in art design majors of higher vocational college is one of the most important specialized basic required courses. This course serves as a connecting link between the preceding and the following and it directly affects the quality of talent cultivation of art design majors in higher vocational college. As the main carrier of teaching contents, teaching methods and teaching means, teaching materials are the gist and fundamental guarantee for teaching activities and are the main way to achieve talent cultivation. With the improvement of the quality requirements of talent cultivation, the construction of teaching material puts forward higher requirements for the function of talent cultivation (Li *et al.*, 2015). A high-quality teaching material could play an enhanced role in promoting teaching quality. The quality of teaching material of packaging design will directly affect the quality of talent cultivation of art design majors in higher vocational college.

After the realization of popular education in higher vocational colleges, there is a wide gap between students' learning motivation, goals and the ability to accept knowledge (Xu and Li, 2011). In view of the status quo of this education, teaching materials are not only important guarantee of students' quality-

oriented education, but also reflect the achievements of educational reform. Only strengthening the innovation of the construction of teaching materials can meet the needs of the cultivation of application-oriented talents (Liu *et al.*, 2014).

The mission of constructing the teaching material of packaging design is to respect individual difference of students, update education idea, reform the teaching contents, build a reasonable curriculum system, combine organically imparting knowledge and cultivating talents, insist on the development of students' application ability as the main line, integrate the contents of teaching material and emphasize ability training (Jiang and Liu, 2016). According to the requirements for cultivating the application-oriented talents, teaching materials should be compiled according to the principle of utility and practice, reorganizing the curriculum structure and highlighting the core role of application capacity cultivation (Li *et al.*, 2015).

In addition, a large number of pictures are used in the teaching material to simplify the written narrative. Western countries have a statement that good picture is worth 1,000 words. The picture contains far more information than the same length of text description (Tang, 2005). Especially the beautifully printed color picture will impress the readers (Tang, 2005). For the abstract concept and the content that it is difficult to

understand or the one that needs to be emphasized, using picture to express them enables students to deepen understanding and memory with the help of short text description (Tang, 2005).

As one of the front-line workers engaged in the design teaching in colleges and universities, from teaching experience of packing design course, it is clearly felt that the gap and problem between the existing teaching materials of packing design and the training target of application-oriented talents are obvious, which seriously affects the quality of application-oriented talents training. Therefore, it is urgent to carry out the research on the construction of teaching material of packaging design, writing the excellent teaching material that adapts to the training goal of application-oriented talents in higher vocational colleges, which is the main purpose of the author to write this study.

The objective of this research is to construct a kind of characteristic teaching material of packing design which could highlight the application. On the structure arrangement, the teaching material begins at the beginning of each chapter with pre-class practical training, giving students practice tasks and at the end of each chapter it also has the post-class practical training and homework. On this account the theoretical knowledge of packing design is combined with the practical application (Jiang and Cheng, 2013). Many of these practical trainings are the activities that students participate in, aiming at mobilizing students to participate fully and put their hearts and souls into it. It is a student-based teaching material (Tang, 2005).

#### **MAIN PROBLEMS EXISTING IN TEACHING MATERIALS OF PACKAGING DESIGN**

**Teaching materials lacking distinct features of higher vocational college:** The teaching materials of art design majors in higher vocational college should highlight the characteristics of higher vocational education. At present, in China's theoretical circle of higher vocational education, there are six aspects about the basic characteristics of talent cultivation of higher vocational education, being the characteristic of grass-roots level of service direction, the technicality of talent cultivation type, the comprehensiveness of professional quality, the applicability of teaching content, the practicalness of teaching process and the cooperativeness of running schools of higher vocational education. Therefore, the teaching materials of packaging design as one of the important carriers to realize the talent cultivation of art design majors in higher vocational college should also be closely linked with the education idea of higher vocational college, reflecting the characteristics of higher vocational education. But at present the teaching materials of

packing design that are adopted by most of the art design majors in higher vocational college are the ones of undergraduate course, of which the theoretical property is stronger. They pay more attention to the systematicness of disciplinary knowledge, but the characteristic of applicability is not obvious, mainly shown in the following several aspects (Liao, 2013).

Firstly, the existing teaching materials of packaging design do not well embody the characteristics of practicality in higher vocational education. Through surveys and interviews, it is found that the practice teaching accounts for 90% in the teaching process of packaging design course of art design majors in higher vocational college, but most of the existing teaching materials of packaging design are almost theoretical contents, very little practical contents and the packing design works in teaching materials are less connected with the era, culture and other aspects, making the content more boring and unitary. The living side that should be had by packaging design is not presented to the students, which will greatly reduce their learning motivation for students in art design majors (Jiang, 2014b). At the same time, the students' cultural foundation of art design majors in higher vocational college is relatively poor and the knowledge reserve of courses is insufficient, especially for courses such as packaging design, so that faced with the contents of teaching materials, it is easy for them to engender the daunting and conflicting emotions psychologically and it is possible that their interest in learning this course has been strangled from the beginning, so the "best teacher" that could prompt them to learn is driven away. The absence of the practical teaching content in teaching materials is contrary to the teaching characteristics of emphasis on practicalness in higher vocational education (Liao, 2013).

Secondly, the existing teaching materials of packaging design do not well embody the characteristics of applicability in higher vocational education. The statement of pure theoretical content will also make students feel uncertain about what the connection between the theory and the practice of packaging design is and what the significance of learning packing design for design activities is and which aspects the applicability embodies (Jiang and Song, 2015). Most teaching materials are all a list of theoretical knowledge such as the history, the visual elements and the modeling elements of packing design and the visual elements are discussed in terms of the visual elements and the modeling elements are discussed with respect to the modeling elements. In the teaching materials, there are few practical teaching links, except that part of the teaching materials guide students to practice by setting up unit training and homework, but there are no chapters that guide students to operate, so that students don't know how to apply

theoretical knowledge to their own design practice even if they have learned theoretical knowledge, which makes the whole teaching process difficult to stimulate students' enthusiasm for learning. At the same time, the explanation of too much theoretical contents often makes the students feel like being bound hands and feet and have no way to start, producing the opposite effect (Liao, 2013).

Finally, the existing teaching materials of packaging design do not well embody the characteristics of cooperativeness in higher vocational education. This cooperation could be understood as the cooperation between universities and enterprises, the cooperation between professional teachers and enterprise designers and the cooperation between higher vocational colleges, in the construction of teaching materials. In the existing teaching materials of packaging design, the setting of teaching material chapters, the writing of teaching material contents and the arranging of post-class unit training and homework all do not embody the characteristics of cooperativeness. Almost all the teaching materials are completed by the teachers in universities and most of the teaching materials are accomplished by the professional teachers who are engaged in the research of art design in universities cooperatively or independently (Jiang and Sun, 2015). Because of the influence of their own consanguinity of scholarships, the teachers engaged in the research of art design have compiled the teaching materials, in which the systematicness of subject is still relatively emphasized, while the knowledge of design applicability is not given enough attention (Liao, 2013).

**Obsolete contents of teaching material:** The similarity of existing teaching materials of packaging design is extremely high. No matter from which angle to analyze these teaching materials, they are all much of a muchness.

Firstly, most of the teaching materials all begin with an overview of packing design, where basically started with packing history. After that, the other chapters are basically inseparable from the visual elements, the modeling elements and the positioning design of packing design. Among them, the visual elements of packaging design basically all introduce the color elements, the text elements, the graphic design performance and the packing layout; The modeling elements of packing design basically all introduce the selection of packing materials, the modeling design of packing container and the structure design of paper packing; The positioning design of packaging design basically all introduce the market research, analysis and collation, design thought, design performance, hand sketching and computer production. All kinds of teaching materials of packaging design are basically all these contents and only the name is slightly different.

Secondly, most of the contents of teaching materials do not involve many new materials and processes. The development of things is constantly progressing according to the law and we should also actively try to make students understand the new materials and processes that are closely related to our life through the teaching materials.

Finally, many of the packaging design works presented in teaching materials are the outdated and obsolete packing works that are not consistent with the current era and they fail to show the characteristics of keeping pace with the times.

**Single knowledge structure of teaching material:**

Most of the teaching materials of packaging design give priority to the theory teaching, lacking of practical training, which could not well manifest the characteristics of higher vocational education and could not also make the teaching materials well embody the characteristics of guiding practice with theory and the service for the professional practice. When students get the teaching materials, the rigid, single and rigescent information is instilled into their mind and it is also easy to make students generate the extreme understanding for packaging design course itself, so that in the study a strong psychological resistance to packing design course is generated, which goes against carrying out the teaching work (Liao, 2013).

## MATERIALS AND METHODS

**Rudimentary knowledge of packaging design:**

Before introducing this part, the pre-class practical training should be set up first. The pre-class practical training of this part requires students to collect the packaging around them by the way of taking pictures or collecting physical objects. If it is a paper packaging, it should expand it into a plane, observe the expansion diagram and understand the packaging structure.

**Definition of packaging:** In this chapter of the rudimentary knowledge of packaging design, the definition of packaging is introduced first and the picture is supplemented. Different countries have a slightly different definition of packaging, in which the United States believes that the packaging is the preparation for the delivery and sale of products; The UK considers the packaging to be the artistic, scientific and technical preparation for the transport and sale of goods; Canada believes that the packaging is a tool to delivering the product from supplier to the shopper or consumer with the product in good condition; In our country the definition of packaging is generic terms of containers, materials and auxiliaries that are used according to certain technical methods to protect the products in the process of circulation, to facilitate storage and transportation and to promote sales.

**Function of packaging:** When introducing the function of packaging, it needs to separately introduce the containing function of packaging, the protecting function of packaging, the communicating function of packaging, the convenient function of packaging and the promotion function of packaging and the pictures are supplemented.

**Classification of packaging:** Packaging is an overall collection. When classifying, it could be divided into different types according to different classification basis. So the classification should be as comprehensive as possible and supplemented with pictures.

**History of packaging:** In this part, the origin and development of packaging is introduced, from primitive society packaging to modern packaging to summarize in phases and supplemented by pictures.

**Development trend of packaging:** It could be introduced from the aspects of amenity, interest, simplicity design, green packaging and so on and supplemented by pictures.

After this part is finished, it should set up the post-class practical training and homework to deepen students' cognition of packaging. The post-class practical training and homework of this part could be completed in the form of discussion and communication. The content could be set from three aspects. Firstly, according to the collected packaging of products, their classification and functions should be considered; Second, it should disassemble the paper packaging so as to know them; Third, it could through the way of asking questions to inspire students' thinking, to spur students to know the packaging again, to deeply consider the classification, material, structure, color and graphics of packaging and to promote them to associate and express from multiple perspectives.

**Modeling elements of packaging:** Before introducing this part, the pre-class practical training still should be set up first. The pre-class practical training of this part requires students to collect the paper packaging and disassemble it and then hand-draw 2~3 planar expansion plans to deeply understand the structure of packaging.

**Selection of packaging materials:** The commonly used packaging materials are introduced first and here could be respectively introduced the paper packaging materials, plastic packaging materials, composite flexible packaging materials, metal packaging materials, glass packaging materials, ceramic packaging materials and wood packaging materials (Liu and Zhong, 2011) and supplemented by pictures; Then the selection of packaging materials is introduced and here should figure out the factors to be considered when choosing the packaging materials.

**Design principles of packaging:** In this part, the scientific principle, the safety principle, the artistic principle, the economic principle, the practical principle and the innovative principle are respectively introduced and supplemented by pictures.

**Artistic rule followed by packaging design:** In this part, the rule of change and unification, the rule of contrast and harmony, the rule of symmetry and equilibrium, the rule of rhythm and sequence and the rule of proportion and scale are respectively introduced (Jiang, 2014a) and supplemented by pictures.

**Modeling methods of packaging:** In this part, the methods of line, division, sculpture, bionics and texture are respectively introduced and supplemented by pictures.

**Modeling design of packaging container:** The materials of container packaging are introduced first and then the making method of gypsum model of packaging container is introduced and here are respectively introduced the handmade method and the wheel spinning method and supplemented by pictures.

**Structure design of paper packaging:** Firstly, the paper packaging material is introduced and here are separately introduced the paper and paperboard, the types of paper and the types of paperboard and supplemented with pictures. Secondly, the commonly used basic box-shaped structure is introduced and here are separately introduced the tubular paper box structure and disc paper box structure, among them the tubular paper box structure should clearly introduce its concept, characteristics and several types of tubular paper box structure, such as the type of inserting tongue, locking bottom, rocking cover and plug-in back cover, inserting lock, rocking cover and plug-in double insurance and pinning and inserting to lock bottom and supplemented with pictures; The disc paper box structure should also clearly introduce its concept, characteristics and several types of disc paper box structure, such as the type of pinning and inserting assembly, rocking cover, covering cap, drawer-type, continuous pinning and inserting and book-type and supplemented by pictures. Thirdly, the structure design of special shape paper box is introduced and here is clearly introduced its concept, after that, several types of special shape paper box are separately introduced, such as the type of atypical variation, mimicry image, collection, portable type, opening window, POP type, hanging type and easy opening and supplemented by pictures. Fourthly, the design drawing of paper packaging is introduced and here are introduced the design requirements of paper box first and then the design drawing of paper packaging is introduced and supplemented by pictures. Fifthly, the making skills of

paper box are introduced and here are separately introduced the utilization of paper edge, utilization of triangle ruler, pencil drawing lines, stylus creasing, scalpel cutting, letting paper box straight and upright, utilization of dividers, thickness of paper and front and back and supplemented by pictures.

After this part is finished, the post-class practical training and homework are set up to let students master the structure and modeling design of packaging and change the structure of paper packaging and innovate the modeling of non-paper container freely. The post-class practical training and homework of this part could be set from two aspects. Firstly, each student looks for 5 kinds of paper box structure, expands them out, draws the plane unfolding drawing with drawing software, prints them and makes them real and then designs 3 packaging structures innovatively; Secondly, each student makes 3 plaster models of packaging container.

**Decoration design of packaging:** Before introducing this part, the pre-class practical training still should be set up first. The pre-class practical training of this part requires students to select some small commodities such as food, medicine, washing products, etc. and carry out the analysis of the character, graphic, color and layout design of packaging.

**Character design of packaging:** The character type of packaging is introduced first and here are separately introduced the basic character, data character, description character and advertisement character and supplemented by pictures; Then the design principle of character in packaging design is introduced and here are separately introduced the identification of character, the unification of character and commodities, the unification and coordination of character and the innovative design of brand characters and supplemented by pictures.

**Graphic design of packaging:** Firstly, the classification of packaging graphics is introduced and here are respectively introduced the product image, figure image, description image and decorative image and supplemented by pictures; Secondly, the form of packaging graphic is introduced and here are respectively introduced the concrete graphic, abstract graphic and fictitious graphic and supplemented by pictures; Thirdly, the technique of expression of packaging graphic is introduced. and here are respectively introduced the expression of photography, commercial illustration and traditional culture (Yu, 2012) and supplemented by pictures; Fourthly, the selection method of packaging graphic is introduced and here are respectively introduced the selection method of association of graphic, shift of graphic, abstract graphic and child interest graphic (Yu, 2012) and supplemented by pictures.

**Color design of packaging:** Firstly, the principle of color design of packaging is introduced and here are respectively introduced the visual communication, systematicness and fashion and supplemented by pictures; Secondly, techniques of color design of packaging are introduced and here are respectively introduced the method of color image, color contrast, color harmony and color monochrome and supplemented by pictures; Thirdly, the packaging color and the commodity category are introduced and here are respectively introduced the color of food, the color of medicine, the color of children products, the color of hardware, the color of daily necessities and the color of electronic products (Ouyang and Ouyang, 2014) and supplemented by pictures; Fourthly, the color matching and meaning of packaging design is introduced and supplemented by pictures.

**Trademark:** The items that need to be noticed by the trademark as an important element of packaging design are introduced and supplemented by pictures.

**Layout design of packaging:** The principle of layout design of packaging is introduced first and here are separately introduced that the information should be shown three-dimensionally, that the theme should be distinct and accurate, that the gradation should be clear and orderly and that the entirety should be harmonious and unified and supplemented by pictures; Then the layout type of packaging is introduced and here are separately introduced the vertical type, horizontal type, oblique type, arc type, triangle type, scatter type, metrical type, central type and comprehensive type and supplemented by pictures.

After this part is finished, the post-class practical training and homework are set up to let student master the procedures and techniques of packaging design further, so as to create freely. The post-class practical training and homework of this part could be set from two aspects. Firstly, each student carries out the overall design of paper packaging, including the structural design and the exterior decoration design; secondly, each student carries out the modeling and exterior decoration design of container. The paper packaging is required to use the drawing software to draw the plan that is made real after printed and the container packaging is required to use the plaster to make the model.

**Design procedure of packaging:** Before introducing this part, the pre-class practical training still should be set up first. The pre-class practical training of this part requires students to select a large supermarket, collecting some interesting packaging graphics and trying to conduct market research.

**Market research:** Firstly, the product information survey is introduced; Secondly, the consumer survey is

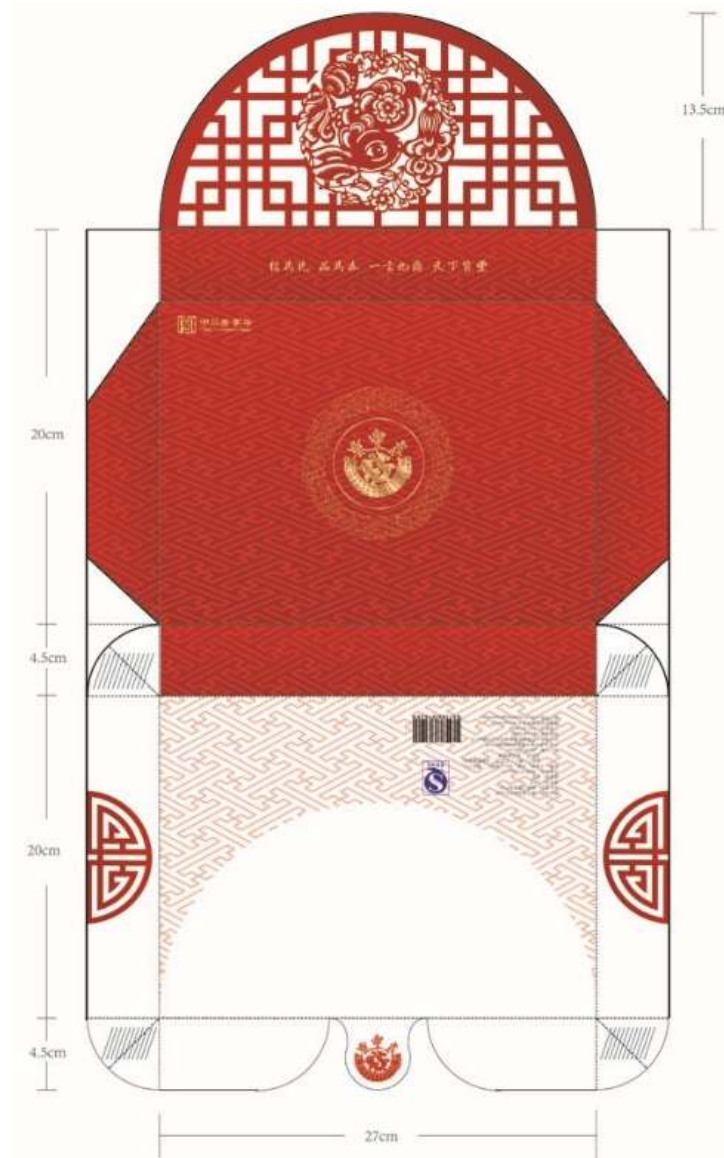


Fig. 1: Expanded figure of moon cake packaging

introduced and here are separately introduced the consumption information survey and the consumption psychology survey of packaging design; Thirdly, the information survey of competitors is introduced; Fourthly, implementing market research is introduced; Fifthly, the research result analysis is introduced.

**Positioning design:** Firstly, the brand positioning is introduced and supplemented by pictures; Secondly, the product positioning is introduced and supplemented by pictures; Thirdly, the consumer positioning is introduced and supplemented by pictures; Fourthly, the brand plus product plus consumer positioning is introduced and supplemented by pictures; Fifthly, the copywriting positioning is introduced and here are separately introduced the symbolic positioning, the image positioning associated with product, the gift

position, the commemorative positioning, the modeling positioning and the plot positioning and supplemented by pictures.

**Draft of design proposal:** Firstly, the design sketch is introduced and supplemented by pictures; Secondly, the rough sketch is introduced and supplemented by pictures; Thirdly, the scheme optimization and the follow-up procedures are introduced and here are separately introduced the scheme optimization, finalizing draft, making final draft, delivering the production and circulation inspection and supplemented by pictures.

After this part is finished, the post-class practical training and homework are set up to let student learn more about packaging and understand the design procedure of packaging, stimulating students' creation

enthusiasm. The post-class practical training and homework of this part could be set from two aspects. Firstly, each student carries out the actual research and writes research reports or designs questionnaires; Secondly, in the process of research, each student uses the method of design sketch to record the packaging, using writing and painting simultaneously.

**Design of application packaging:** Before introducing this part, the pre-class practical training still should be set up first. The pre-class practical training of this part requires students to choose a set of gift packaging and to analyze its characteristics.

**Design of gift packaging:** The kinds of gift packaging is introduced first and here are separately introduced the classifying according to the type and function, classifying according to the structure and shape, classifying according to the number and property, classifying according to consumer category and other classification and supplemented by pictures; After that, the decoration design of gift packaging is introduced and supplemented by pictures.

**Design of series packaging:** The characteristics and the design of series packaging are respectively introduced and supplemented by pictures.

**Design of combined packaging:** The characteristics and the design of combined packaging are respectively introduced and supplemented by pictures.

**Design of supporting packaging:** The characteristics and the design of supporting packaging are respectively introduced and supplemented by pictures.

After this part is finished, the post-class practical training and homework are set up to let student learn more about application packaging. The post-class practical training and homework of this part is to design a set of series packaging, not less than 15 pieces, at least 8 models.

**Example and operation of packaging design:** The design of several sets of series packaging of local specialty products is introduced and supplemented by the expanded figure and packaging photo. Some examples are shown in Fig. 1 to 3. After that, the students are guided by the examples to operate.

## RESULTS AND DISCUSSION

Higher vocational students are different from undergraduate students. Their cultural foundation is relatively poor. If the theoretical property and the systematicness of teaching material are stronger, it is not only unfavorable to cultivating them, but also making them feel fear and engendering conflicting



Fig. 2: Photo of moon cake packaging



Fig. 3: Photo of pine nuts packaging

emotions. Therefore, the construction of teaching material in higher vocational college must be from the present condition of higher vocational education, based on the nature of higher vocational education.

## CONCLUSION

For the course of packaging design that has strong applicability itself, it should make its teaching material highlight the applicability. So on the structure arrangement, the teaching material begins at the beginning of each chapter with pre-class practical training, giving students practice tasks and at the end of each chapter it also has the post-class practical training and homework. On this account the theoretical knowledge of packing design is combined with the practical application. In this way, it not only highlights the characteristics of higher vocational education, but also makes the teaching materials better reflect the guidance to practice with theory and the characteristics of the service for the professional practice. Through the



driving of practical task, it could let students see that the packaging design is useful and could stimulate their interest, which is conducive to the development of teaching work. And then it could efficiently improve the students' qualities and skills and better service for the society, so as to meet the requirement of cultivating talents in higher vocational colleges, to show characteristic of higher vocational education.

#### **ACKNOWLEDGMENT**

This research is the achievement of the Teaching Reform Research General Subject of Vocational Education and Adult Education of Education Department of Jilin Province under the grant No. 2016ZCY237. This subject is approved in 2016 and its name is "research on the construction of characteristic teaching material of project-based integration of theory and practice of packaging design in higher vocational college".

This research is also supported by the Thirteenth Five-Year Social Science Project of Education Department of Jilin Province under the grant No. JJKH20170503SK and the Social Science Fund Project of Jilin Province under the grant No. 2016B245.

#### **CONFLICT OF INTEREST**

We declare that we do not have any commercial or associative interest that represents a conflict of interest in connection with the work submitted.

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