**A creative industrial design framework of the taxonomy for Chinese indigenous materials and relevant crafts**

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***Supplementary Information***

The online survey links of this research can be accessed at

<https://www.wjx.cn/m/57086509.aspx>

The link of the framework of CIMs taxonomy can be accessed at

<https://pan.baidu.com/s/15B5_xitWm2apw3N8erFVSg> (Extraction code: qwo1)

***online survey results***

**Table A1**

Online survey results

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| --- | --- | --- |
| Information | Questions | Results |
| Basic information | Gender | Male 100/235；Female 135/235. |
| Area of expertise | Industrial design 177/235;  Product design 58/235. |
| occupations | Undergraduate 85/235;  Postgraduate 83/235;  PhD 5/235;  Design practitioner 57/235;  Design educator 15/235. |
| Material selection | How do you currently material select? | |  | | --- | | Personal knowledge 174/235;  Material database 119/235  Materials already used 112/235;  Existing company suppliers 64/235;  Material sample libraries 61/235;  Recommendation from experts 29 /235;  Others 8/235:  Searching on the Internet (3/8), according to customer needs (2/8), combining the functional requirements of the product (1/8); asking teachers (1/8); buying by themselves (1/8). | |
| If you are a design practitioner, are there limitations on your material selection choices? | Company has existing suppliers 46/68;  Company policy 24/68;  Company selects or makes materials itself 16 /68;  government/or other policy 13/68;  Others 18/68:  Cost limitation (7/18), followed by material characteristics (6/18), product modeling (2/18), customer needs (2/18) and molding process (1/18). |
| If you are a design practitioner, what is your priority of importance of material to you when designing? | Function of product/suitability 45/68;  Process of manufacture 43/68;  Cost 42/68;  Aesthetic 35 /68;  Works with my companies process/manufacturing equipment 20/68;  Environmental protection 3/68；  Others 1/68. |
| Material inspiration | When designing, where do you currently look for design inspiration? | Design online website 141/235;  Pinterest 105/235;  Baidu Gallery 96/235;  Behance 91/235;  Design Forum 80/235;  Weibo 65/235;  Other 32/235:  Chinese design website (18/32), shopping sharing platform (5/32), WeChat public account (5/32), library (1/32), pictures (1/32), natural things (1/32) and foreign supermarket prototypes (1/32).  Instagram 30/32;  Twitter 14/32. |
| Usefulness | Having reviewed the attached PDF describing the framework, would you consider using a Chinese indigenous material taxonomy during your creative process? | Yes (217/235);  No (18/235). |
| Why yes? | 96 people ticked the option to find design and/or material opportunities, 86 people strongly agree to acquire traditional crafts or product information knowledge. |
| Why other? | Provide more professional materials knowledge and process services 20/64;  Help students learn and open their minds to designers 16/64;  Promote the spread of traditional Chinese characteristic materials and culture 15/64;  It is more convenient to find suitable materials and save search time 7/64;  Combining tradition and modern culture 2/64;  This method is novel and is not previously available 2/64;  To avoid waste of materials 2/64. |
| Why not? Could you please specify? | Not convenient and practical 5/16;  Does not meet industry characteristics 3/16;  The selection of materials failed to effectively stimulate the breakthrough creativity in overall design, and the application of innovation is too old-fashioned 2/16;  Insufficient knowledge of materials 2/16;  Single form of expression 1/16. |
| Do you feel it would be a useful resource during your design activity? | Yes 230/235;  No, why? Please specify 5/235. |
| Acceptance | Have you considered using Chinese indigenous materials before? | Yes 156/235;  No 79/235. |
| Would this framework of CIMs taxonomy make you more likely to use Chinese indigenous materials? | Yes 213/235;  No 22/235. |
| Have you use a taxonomy before? | Yes 69/235;  No 166/235. |
| Would you recommend it to your colleagues or classmates/students? | Basically agree 88/235;  Slightly agree 58/235;  Totally agree 48/235;  Neutral attitude 23/235;  Slightly disagree 6/235;  Certainly not 1/235. |
| Clarity and logic | Do you think the taxonomy present itself clearly? | Slightly agree 144/235;  Totally agree 54/235;  Neutral attitude 27/235;  Slightly disagree 10/235. |
| To make it clearer, you would prefer to recommend us to: | Add more case studies 18/24;  Add complementary text & figures 17/24;  Add more information & levels 17/24;  Others 3/24:  It would be better if there was a video (1/24), cases are old and there is little difference between cases (1/24),  establish interactive mode to improve visually and operationally (1/24). |
| Do you think it has a logical structure? | Slightly agree 65/235;  Agree 97/235；  Totally agree 52/235;  Neutral attitude 20/235;  Slightly disagree 1/235. |
| Why do you think its classification structure is not reasonable? | The same layers are not independent to each other 1/3;  There are overlaps between the same layers 1/3;  It is not a systematic one 1/3. |
| Refinement | Do you think the taxonomy is useful for designers? | Basically agree and agree 103/235;  Totally agree 76/235;  Slightly agree 34/235;  Neutral attitude 20/235;  Slightly disagree 2/235. |
| Why do you think it is useless, please specify: | Lack of design practice 1/3;  It is just a simple classification, without in-depth analysis of its characteristics, and it does not show the correlation and connection between different materials 2/3. |
| Please list 1-3 options you think is most useful for designers： | The 3 most ticked items are material properties: general property 91/235, introduction: typical product applications 90/235 and relevant typical traditional art & crafts: innovative applications 82/235.  Material properties: technical property 80/235;  Material properties: aesthetic property 69/235;  Introduction: what it is 60/235;  Relevant typical traditional art & crafts: the relationship between the material and the craft or art 44/235;  Material properties: eco property 33/235;  Relevant typical traditional art & crafts: general introduction 32/235;  Relevant typical traditional art & crafts: traditional applications 28/235;  Manufacturing process: process diagrams 23/235;  Manufacturing process: process 19/235;  Manufacturing process: raw material 16/235;  Manufacturing process: more information 12/235;  More 6/235;  Relevant typical traditional art & crafts: more information 5/235. |
| Please list 1-3 options you think are least useful for designers： | The 3 most ticked items are Introduction: what it is 56/235, manufacturing process: process diagrams 54/235 and manufacturing process: more information 51/235;  Manufacturing process: process 48/235;  Relevant typical traditional art & crafts: more information 43/235;  Relevant typical traditional art & crafts: general introduction 41/235;  Material properties: eco property 37/235;  Material properties: aesthetic property 33/235;  Material properties: general property 27/235;  More 25/235;  Manufacturing process: raw material 23/235;  Introduction: typical product applications 22/235;  Material properties: technical property 22/235;  Relevant typical traditional art & crafts: the relationship between the material and the craft or art 17/235;  Relevant typical traditional art & crafts: traditional applications 13/235;  Relevant typical traditional art & crafts: innovative applications 10/235. |
| How could the tool be improved? | 1. More detailed introduction to the material 63/135:   This mainly includes the addition of practical case applications (21/63), more comprehensive types of materials (9/63),  the distinction of material functional attributes (5/63),  the development process of materials (3/63), advantages and disadvantages and use restrictions (3/63), new use angles (3/63), cultural background introduction (2/63), technical parameters (2/63), processing technology (2/63), etc.   1. Optimizing Display mode 54/135:   This mainly includes clearer layers (12/54), more concise and easier to understand (12/54),  easy to search and find the specified material (9/54),  enhance visualization (4/54), add video or VR display (4/54),  enhance aesthetics (3/54), material texture (3/54),  develop applets or APPs (2/54), display by category (2/54), personalized display, etc.  3. Investigating more people's opinions 7/135;  4. Strengthening the contrast between materials 4/135;  5. Promoting 1/135;  6. Quantitative analysis of classification criteria 1/135;  7. Building a feedback framework 1/135;  8. Adding necessary English notes1/135. |