Supplementary data

**Table 1 The scoring results of round 1**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Twenty one factors in round 1 | Scores | Exclusion | In round 2 | In round 3 |
| 1 | bilingual instruction concept | 2 | √ | × | × |
| 2 | the implementation of bilingual instruction in the universities | 1 | √ | × | × |
| 3 | the bilingual instruction environment | 2 | √ | × | × |
| 4 | the problems that bilingual instruction brings | 1 | √ | × | × |
| 5 | the problems posed on the bilingual instructions | 1 | √ | × | × |
| 6 | the difficulties that the bilingual instruction encounters | 2 | √ | × | × |
| 7 | the evaluation of bilingual instructions | 2 | √ | × | × |
| 8 | curriculum designs | 4 | × | √ | Not decided |
| 9 | teachers’ training | 5 | × | √ | Not decided |
| 10 | attitudes towards bilingual instructions | 4 | × | √ | Not decided |
| 11 | bilingual instruction modules | 6 | × | × | √ |
| 12 | subject language feature | 8 | × | × | √ |
| 13 | sentence complexity | 7 | × | × | √ |
| 14 | subject content | 7 | × | × | √ |
| 15 | teaching materials | 7 | × | × | √ |
| 16 | bilingual instruction models | 7 | × | × | √ |
| 17 | teaching methods | 7 | × | × | √ |
| 18 | teachers' English proficiency | 8 | × | × | √ |
| 19 | previous subject knowledge | 6 | × | × | √ |
| 20 | the impact of learners’ English proficiency on the effectiveness of bilingual instruction | 8 | × | × | √ |
| 21 | students' Chinese proficiency | 8 | × | × | √ |

**Table 2 The scoring results of round 2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Ten factors in round 2 | Scores | Exclusion | In round 3 |
| 1 | attitudes towards bilingual instructions | 2 | √ | × |
| 2 | class size | 1 | √ | × |
| 3 | students’ self-esteem | 2 | √ | × |
| 4 | students’ self-confidence | 2 | √ | × |
| 5 | teachers’ reputation | 2 | √ | × |
| 6 | students’ acceptance of English culture | 2 | √ | × |
| 7 | curriculum designs | 4 | × | √ |
| 8 | teachers’ training | 5 | × | √ |
| 9 | students’ motivation | 7 | × | √ |
| 10 | students’ learning strategies | 6 | × | √ |

**Table 3 The scoring results of round 3**

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Fifteen factors in round 3 | Scores | In round 4 |
| 1 | curriculum designs | 2 | × |
| 2 | teachers’ training | 1 | × |
| 3 | students’ learning strategies | 2 | × |
| 4 | students’ motivation | 7 | √ |
| 5 | bilingual instruction modules | 3 | √ |
| 6 | subject language feature | 8 | √ |
| 7 | sentence complexity | 7 | √ |
| 8 | subject content | 6 | √ |
| 9 | teaching materials | 6 | √ |
| 10 | bilingual instruction models | 8 | √ |
| 11 | teaching methods | 7 | √ |
| 12 | teachers' English proficiency | 7 | √ |
| 13 | previous subject knowledge | 4 | √ |
| 14 | the impact of learners’ English proficiency on the effectiveness of bilingual instruction | 6 | √ |
| 15 | students' Chinese proficiency | 8 | √ |

**Table 5 List of acronyms and abbreviations**

|  |  |
| --- | --- |
| F. | factor |
| BIE | bilingual instruction effectiveness |
| SLF | subject language feature |
| SCO | sentence complexity |
| SC | subject content |
| PSK | previous subject knowledge |
| BIM | bilingual instruction model |
| TM | teaching method |
| TMA | teaching materials |
| BITM | bilingual instruction teaching module |
| SCP | students’ Chinese proficiency |
| SEP | students’ English proficiency |
| TEP | teachers’ English proficiency |
| SM | students’ motivation |