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REVIEW ARTICLE

PROJECT-ORIENTED CULTIVATION OF HEARING-IMPAIRED STUDENTS' CREATIVE AND PRACTICAL ABILITY

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ABSTRACT

Purpose of this study is particularity of special liking impaired students in higher education, combined with characteristics of their physical and mental development, study of different levels and types of project-oriented talent cultivation throughout session, tapping potential of hearing-impaired students. The aim is to enable students from passive to active state, effectively mobilize enthusiasm of students of creativity, innovation, and practical ability to improve hearing-impaired students' ability and application, allowing system and effectively train both a solid theoretical foundation, but also has practical experience of special talents.

KEYWORDS

Hearing-Impaired Students, Projects, Innovative Practices, Personnel Training

1. INTRODUCTION

Some experts believe that project is from heart of purposeful action, purposeful activity based on internal learning needs of students is a new era of college students Talents core. With global of Inclusive Education initiative, a special education school for hearing-impaired students' ability and strong features, aspects tend to open for project-oriented courses, such as printing of technical training courses in the United States is included in curriculum of school for the deaf printing school envelopes, letterhead notification, magazine, debris teaching work is building a memorial on campus flower beds, planting flowers species lesson to teach deaf students, and foreign sales, etc., in this process, not only exercise hearing-impaired students practical ability, system also train students ability to innovate, team collaboration, self-learning ability and ability to work independently. Another example is Xie Dianwei's solutions in hearing-impaired students in course of western-style pastry made one of five teaching method, proven hearing-impaired students in project implementation process to better understand what they have learned to master product production skills, stimulate students learning initiative, which greatly improved students' communication skills, ability and ability to apply knowledge of practical operation, for this special group of personnel training has a positive effect (Li, 2015).

Analysts believe that domestic experts and scholars to promote personnel training hearing-impaired students in a project-oriented approach, especially strong practical curriculum is not much research, such as decoration art design, art design, animation design professional, and most guidance is theoretical, theory and practice of contact does not close, specific application in teaching process, how reasonable application, model construction, what problems encountered and methods to solve problem set forth is not comprehensive enough to system (Choi et al., 2021).

2. LITERATURES REVIEWING

In our traditional concept of education environment, project design-

oriented personnel training mode in our country greatly welcomed and recognized by domestic experts generally believe that this method not only pay attention to basic theory of discipline, but also to students' practical ability to cultivate and improve practical skills of students' creative ability has a very important significance. Hearing impaired students in higher education in a special group, they have unique individual characteristics, if more stable willpower, strong hands, beautifully designed, sophisticated technology and other advantages. Schools can use a solid foundation and teaching resources, research to different levels and types of project-oriented talent cultivation throughout session, fully reflects combination of engineering thought, based on job requirements, in this case, hearing-impaired students' positive performance was mobilized them possess all basic qualities and potential will get to play (Shen, 2010). So culture needs to adapt to social and economic development, a solid foundation, with strong creative and practical ability of special talents.

3. RESEARCH DESIGN

Since hearing impaired students of physical defects, as well as their own psychological factors, there are some social factors, leading them after graduation employment problems faced. By universities should actively expand development of a new way, in today's healthy immune employment situation, how to improve employment rate of hearing-impaired students is imminent. Based hearing impaired physical and psychological characteristics of college students, traditional training model is not suitable, too much theory, difficult issue, for hearing-impaired students are not easy to understand (Cao et al., 2017).

3.1 Irrationality Personnel Training Program

According to characteristics of hearing-impaired students, they are more suitable for learning art painting, art and design courses. The source art special education training programs mostly are based on a reference from training program based on sound education on human art, where there is a "also, empty and big phenomenon. Setting too many courses, too difficult, too theoretical, to gather all things that cause hearing impairment in the

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cloud to fog out state of chaos from start to finish school student, cannot understand core curriculum, finding direction and purpose. This training program is unreasonable, there is no set for hearing impaired students characteristics, where there are no unique hearing impaired students for study and training of specialized training program (Ma and Bennett, 2021).

3.2 No Special Curriculums Based on Job Requirements

Since hearing impaired physical and psychological particularity of college students, current social employers hearing impaired students graduate not a lot of demand for their posts very few. This requires that schools need market demand for in-depth research, survey clearly what the community in end unit receiving hearing impaired students office, what you really need to listen to what impaired students should have necessary knowledge and ability, which posts for hearing impaired students long-term stability work (Sun, 2014). However, some special education for hearing impaired Training targeting college students is not clear, nor refinement, more importantly, is to ignore reference to corporate post setting and capacity requirements, there is no systematic, in-depth analysis of typical tasks performed. Of course, it cannot be effectively cultivated hearing impaired students must have the ability to post (Cheng, 2015; Wu and Zhu, 2017).

3.3 Teaching Mode Lag

Art special education courses, majority of teachers still take traditional lectures and case studies of multimedia teaching mode, final arrangements for proposed topics from analog of training in curriculum. This relatively old, hysteresis mode of teaching seriously out of line with market demand, more is not suitable for hearing-impaired art students of classroom. Furthermore, teaching practices due to limited schools can provide training equipment and training venues, resulting in no or a limited number of special education training conditions, which is very unfavorable in terms of teaching practice, seriously lagged listen to impaired college students' ability of innovation practice requirements.

3.4 Teachers' Lack of Sign Language Ability

An investigation report had stressed that deaf students think sign language communication skills of teachers need to be improved. This problem is embodied in two aspects: first, teachers will not sign language; second, teachers are not using a standard sign language. Special art education in hearing-impaired teaching is more as a halfway decent before most do not understand sign language. However, do not use sign language teaching is not enough, simply use blackboard or multimedia teaching lessons seriously affect speed and efficiency, resulting in many teachers' knowledge and skills cannot be effectively delivered to students, teaching forms a bottleneck. Teachers' ability to solve problems in sign language is imperative (Du and Zhu, 2010).

3.5 Double Teacher Scarcity

Currently, hearing impaired students of art education teachers from three sources: one is that school is directly after graduating from school to teach a class of ordinary art by professional teachers who come halfway to switch, where there is a class transferred from enterprise to school teaching (Du and Cheng, 2015). Because theory of light practice long-standing tradition of higher education in China, resulting in double teachers extreme lack here directly from school to school teachers, they received systematic education in colleges and universities on first two categories, but a general lack of job skills and practical expertise with actual project design process-related, almost no practical experience in professional relevant companies. According to surveys on project-based activity, teachers of mathematics seldom use project-based activity due to the lack of corresponding theoretical knowledge and methodical abilities to create a problem situation, organize school students' project-based activity in general, and its assessment (Luneeva and Zakirova, 2017). Therefore, actual requirements and latest developments in these two types of teachers with knowledge and skills relevant companies have professional touch.

4. DISCUSSION

4.1 Reform Training Mode and Focus on Project-Oriented Research Training

For the past few years, improving self-innovation ability and establishing a new innovation nation has become the key to improve the comprehensive national strength and thus enhancing the China's competence.

4.2 Injection of Project Teaching to Classroom

Traditional way of teaching students trapped in classroom, has certain limitations, stressing that one size fits all, march to restrict personality

development of students and interests. The 21st century is an era of emphasis on creating personalized, schools should adapt to situation of students personality and innovatively ability. To this end, vigorously adjust current teaching model, consciously injected with various design projects in tutorial teaching each course, and actively expand variety of projects as core content of second classroom activities is very important (Ge, 2006).

4.3 Project-Oriented Issue of Student's Own

Courses teaching job settings to undergraduate purpose of theoretical knowledge as guiding ideology, to be able to drive from hearing-impaired students' research interests as a starting point to consider production and integration and project work related learning resources for learning, classroom becomes work room, teacher becomes manager, students become designers, work becomes work, work into a product, final product can be put into a commodity to sell to market, so that students get outside recognition results of project, which is hearing-impaired students' ability certainly the largest, for their future learning and work has a great help, and even lit a beacon for their future life road. And there must be convergence between upper and lower courses to form a progressive relationship of project. This process of students for their own project work can do our best to do a good job, but with deepening of the curriculum, students can gradually improve their own projects and a higher level of innovation, improve students gather information, analyze problems, problem-solving ability and innovative practices, real teaching and project work closely together to achieve training objectives based on project-oriented creative and practical ability of students (Lee and Shieh, 2015).

4.4 Teachers Bring their Own Projects.

Students in courses of study, generally get difficult to come into contact with actual design project. After teacher to explain theory of teaching content, they can undertake their own research or design projects outside into classroom, so that students 3-4-member research team, research and design to reflect actual project under teacher, this process teachers conscious awareness permeate scientific and research capabilities, and actively carry out academic activities as core of project content, this information is relatively closed for hearing impaired students can stimulate their interest in learning, innovation, teamwork, develop their practice ability It has positive significance. I once brought their undertake a design project into classrooms, in theory to explain process of gradual penetration of content will give students requirements of customers and some of its corporate philosophy, etc. conceptualized in students' work arrangement, take a research group in form of small-scale research teams, students at the same time in homework around concept of customer's business requirements and be designed to avoid the fantasy, stray and some unrealistic ideas.

This makes content of classroom teaching becomes full, full, fun, lively, and truly project-oriented classroom teaching, cultivate a hearing-impaired students' innovative ability (Lu and Xue, 2017). Whether students or teachers themselves project into classroom teaching projects, compared with traditional approach, which has a certain openness, teaching methods and flexible teaching process, unlike traditional teaching methods as determined and systematic, since teaching during student-centered, so many uncertainties encountered a problem and needs of teachers and students in the process of implementation of project constantly sum up and reflect on process of teaching teachers to dare to innovate, in order to successfully implement project teaching method (Li, 2015).

4.5 Establishment of School Studio to Undertake Internal and External Design Projects

Teaching and learning of science at primary level was more on retention of knowledge where students have to involve themselves with too much writing and too little practical). If school hardware conditions permit, you can build a school for hearing impaired students design studio, and arrange professional instructor and hearing-impaired students in each studio, following introduction of social enterprise campus or even a real design project, it can make hearing impaired students with a real project docking. This task is extremely practical and practicality, hearing-impaired students need to complete project work courses 2/3 before taking office, otherwise undertake projects fail to achieve goal, as students themselves are also inadequate.

To undertake project must be suitable for hearing-impaired students to participate in, and be able to fully reflect professional training objectives and direction, which will help hearing-impaired students' professional ability, taking into account business, school interests of both sides. At the same time also to development of science, sound, clear studio teaching management system for smooth development studio teaching activities

escort. Selected studio head teacher of 1 to 2, to formulate relevant rules and regulations teaching studio system, including the organization of daily teaching studio, teaching management, to undertake project work, learning aspects of arrangement, project inspection, assessment measures. This mode is for art students with hearing impairment targeted skills and employability, and to explore a line with hearing-impaired students' psychological and physiological characteristics, suitable for them to learn new ways of industry-university cooperation practice. Studio to undertake project implementation steps is shown in Figure 1.

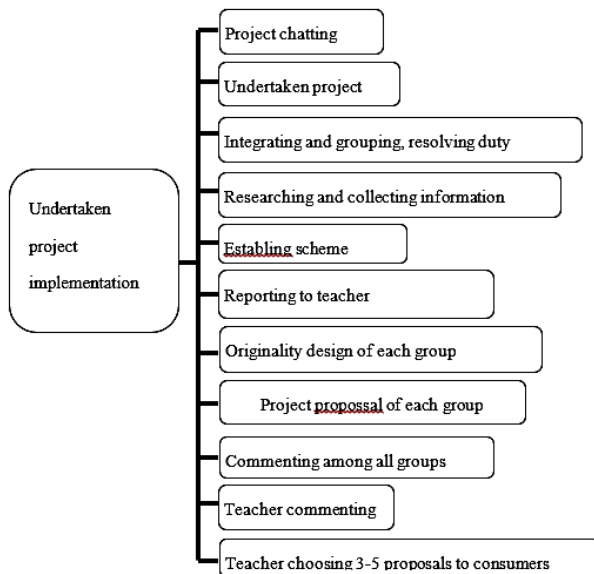


Figure 1: Studio to undertake project implementation steps

4.6 Build A Stable Off-Campus Practice Base with Enterprises

Project-oriented training models have strong theoretical and practical features, so there is practice of its vital base or studio. Like German Bauhaus design school as a foundation for students to learn lessons after school to enter factory to learn practical skills. While schools can also establish cooperation practice base outside school, school-based, a partnership with surrounding related businesses. School-enterprise cooperation between schools and enterprises not only two sides can win-win effect, in which students are benefited.

In implementation process, through studio practice platform or base, some students work to become company's products, resulting in a good social benefits, special education and promotion of local economic convergence, employment for hearing impaired students built a bridge. Author of Changchun University of Visual Communication Design Institute of Special Education currently has four campus practice bases, namely Shandong Zibo Special Education Center, Beijing to the village of Songzhuang Art Co., Ltd., Changchun City, or Cultural Communication Co., Ltd. and Changchun City one hundred million camp Motor Service Ltd. (Geely Automobile 4S shop Planning Department). Student after completion of certain courses, where schools led them to these four-campus practice base for practice, to undertake community design projects, or design their own practice of social work can show sold directly at the base, which is for hearing-impaired students' practice outcome is a good validation, and more to stimulate hearing-impaired students' creative practice enthusiasm, gave them greatly encouraged.

4.7 Formation of Project Implementation Team, with Overall Responsibility for Project Organization, Implementation and Students' Ideological Work

Instructor in a dominant position is in project implementation process, and project is to ensure final results and quality prerequisites. Project implementation team should be the direction of professional discipline leader; responsible comrades and teachers practice bases and production technology backbone. Team members in carrying out process of project, not only serve as role of teachers, but also participants in enterprise projects, requiring teachers to be excellent theoretical knowledge, but also need to have a strong practical ability and a wealth of technical experience, serious and responsible work, ambition, but also have a certain degree of organization and management skills and interpersonal skills, to develop project implementation plan based on project degree of difficulty, can reasonably arrange content and order process practical projects, prepare students ideological mobilization, proposed principle requires

implementation of specific measures, and able to deal with various problems encountered during project progress.

Furthermore, in order to strengthen professional capacity and operational capacity of the team of teachers, where teachers should regularly out of school, to relevant professional counterparts to learn, deep into enterprise, time to understand production processes, job standards and skill requirements and every detail, and constantly improve their practical ability, in order to better guide practice of hearing-impaired students. Teams of teachers should always keep in touch with industries and enterprises. The pace of technological development is always traveling forward. Therefore, teachers should always concern about latest progress of professional fields or related companies, otherwise, their level of expertise will always remain at current level, moving away from actual development of society (Du et al., 2015).

5. CONCLUSION

Based on practice, it begins with a question. Talents special practice-oriented higher education and premise is teaching practice in project design can be made. Practice research training creative talents of this project-oriented, which is a positive and effective exploration and attempt, on one hand for hearing impaired students provides a teaching, learning, doing integration of actual combat interactive platform clear special education hearing-impaired university students training objectives, to enhance usefulness of hearing-impaired students training quality professionals, and adapt to needs of enterprise job; on other hand, take advantage of school studio, off-campus practice base of resources, not only to enhance practice of hearing-impaired students' ability, but also enhance ability of schools to social services, which greatly limits to achieve a hearing-impaired students, schools, positive interaction and resource sharing business cooperation.

AUTHOR'S CONTRIBUTION

Qiulei Du contributed to the motivation, the interpretation of the methods, the data analysis and results. Jian Xiao provided the data and results, the revised versions and references.

DATA AVAILABILITY STATEMENT

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

CONFLICTS OF INTEREST

It is declared by the authors that this article is free of conflict of interest.

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REFERENCES

- Cao, Y., Kirilova, G.I., and Grunis, M.L., 2017. Cooperative research projects of master's students (education programs) in the open informational educational environment. *Eurasia Journal of Mathematics Science and Technology Education*, 13 (7), Pp. 2859.
- Cheng, W., 2015. A case study of action research on communicative language teaching. *Journal of Interdisciplinary Mathematics*, 18 (6), Pp. 705-717.
- Choi, Y., Wang, J., and Zhu, Y., 2021. Students' perception and expectation towards pharmacy education: A qualitative study of pharmacy students in a developing country. *Indian Journal of Pharmaceutical Education and Research*, 55 (1).
- Du, Q., and Cheng, X., 2015. Teaching staff establishment thinking of engineering industrial design. *Journal of Changchun University*, 25 (02), Pp. 129-131.
- Du, Q., and Zhu, Z., 2010. Sign language teaching in special art education. *Journal of Changchun University*, 20 (02), Pp. 81-88. doi: 10.3969/j.issn.1009-3907-B.2010.01.029
- Du, Q., Pan, L., and Cheng, Z., 2015. Research on teaching faculty construction of mechanical specialty innovation base. *Advanced*

- Management Science, 4 (01), Pp. 36-39. doi: 10.7508/ams.2015.01.006
- Ge, H., 2006. Thinking of practice ability cultivation of students. *Journal of Anhui Agricultural University (Social Sciences)*, 15 (06), Pp. 91-93. doi: 10.3969/j.issn.1009-2463.2006.06.024
- Lee, Y., and Shieh, C., 2015. Key success factors in the curriculum design of higher education in Taiwan. *Journal of Interdisciplinary Mathematics*, 18 (6), Pp. 857-867.
- Li, X.J., 2015. Project methodology applied in vocational school teaching for hearing impaired students (Shandong Normal University, 2015). *Dissertation Abstracts*, Pp. 7.
- Lu, J., and Xue, X., 2017. Training mode of innovative talents of civil engineering education based on TRIZ theory in China. *Eurasia Journal of Mathematics Science and Technology Education*, 13 (7), Pp. 4301-4309.
- Luneeva, O.L., and Zakirova, V.G., 2017. Integration of mathematical and natural-science knowledge in school students' project-based activity. *Eurasia Journal of Mathematics Science and Technology Education*, 13 (7), Pp. 2821-2840. doi: 10.12973/eurasia.2017.00720a
- Ma, Y., and Bennett, D., 2021. The relationship between higher education students' perceived employability, academic engagement, and stress among students in China. *Education & Training (London)*, 63 (5), Pp. 744-762.
- Shen, C., 2010. Necessity and urgency of students' practice abilities. *Science & Technology Monthly*, (05), Pp. 102-104. doi: 10.3969/j.issn.1672-2272.2010.05.047
- Sun, G.J., 2014. Studio system project-driven vocational education in deaf art and design curriculum application, taking Zhongzhou University deaf decoration art design specialty as an example. *Journal of Zhongzhou University*, 31 (05), Pp. 98-101. doi: 10.3969/j.issn.1008-3715.2014.05.020
- Wu, Z., and Zhu, L., 2017. Cultivating innovative and entrepreneurial talent in the higher vocational automotive major with the "on-board educational factory" model. *Eurasia Journal of Mathematics Science and Technology Education*, 13 (7), Pp. 2293-2300.

