

Research on Strategies for Improving Students' Sight Reading Ability in Piano Teaching in Colleges and Universities

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Abstract: This article focuses on the issue of improving students' sight reading ability in piano teaching in universities. Firstly, it defines that sight reading ability includes three core dimensions: score analysis, rhythm control, and voice level processing. Combined with a survey of 320 students from 12 domestic universities, it points out that students' sight reading ability is characterized by "polarization+general weakness", and there is a current situation of insufficient emphasis on teaching. Further analyze the causes of the problem: vague teaching objectives and single methods, cognitive biases at the student level (emphasizing skills over playing) and fixed bad reading habits, and a lack of teaching materials and imbalanced evaluation at the system level. On this basis, a hierarchical teaching objective of "foundation advanced application", a teaching method of "modular disassembly+situational practice", a three-dimensional strategy of phased teaching materials and diversified evaluation optimization are proposed. The effectiveness of the strategy is verified through a teaching case of 40 students from a certain university - the speed of identifying key numbers in the basic group is shortened by 47% at the end of the semester, and the rate of achieving multi voice balance in the advanced group is increased by 66%. Finally, we look forward to the development direction of digital technology empowerment, interdisciplinary integration, and vocational demand docking, providing a practical path for piano sight reading teaching in universities.

Keywords: Piano Teaching in Universities; Visual Reading Ability; Layered Teaching Objectives; Modular Training Method; Reform of Teaching Evaluation

1. Analysis of the Core Connotation and Current Situation of Visual Playing Ability in

Piano Teaching in Colleges and Universities

1.1 The Core Dimensions and Teaching Value of Sight Reading Ability

Sight reading ability is the comprehensive ability of piano players to "read music in real time, transform sound, and convey emotions". Its core dimensions can be summarized into three aspects: firstly, the ability to read and analyze music, including rapid recognition of key, beat, note position, and temporary changes, as well as real-time interpretation of musical sentence division and expression marks. For example, when facing the temporary rising and connecting lines of Chopin's Nocturne (Op.9 No.2), information extraction needs to be completed within 1-2 seconds; Secondly, the ability to control rhythm refers to the ability to maintain a stable beat without preparation, while dealing with complex rhythmic patterns such as cuts and triplets, such as the eighth note counterpoint rhythm in Bach's "Two Creative Pieces" (BWV 806); Thirdly, the ability to handle the hierarchy of voice parts, that is, to quickly distinguish the main melody, accompaniment texture, and counterpoint parts, and achieve a balanced presentation of multi part sound, such as the left hand decomposition chord accompaniment and right hand melodic part in the first movement of Mozart's Sonata (K.330).

In piano teaching in universities, sight reading ability has irreplaceable value: from the perspective of performance practice, good sight reading ability is the foundation for participating in chamber music ensemble and art guidance work - such as adapting to the rhythm changes of singers in real time when accompanying vocal students; From the perspective of talent cultivation, sight reading ability is the core support of "lifelong music learning", which can help students quickly access a vast amount of music literature and broaden their artistic horizons. However, in current piano teaching in universities, sight reading ability is often placed

after "solo skills" and becomes a teaching weakness.

1.2 The Current Situation of Piano Sight Reading Ability Among College Students

Based on a survey of piano majors in 12 comprehensive universities and professional music colleges in China (with a sample size of 320 people), students' sight reading ability shows a characteristic of "polarization+general weakness": firstly, at the basic level, 45% of students have the problem of "slow score recognition speed", and they need to recognize each note when playing new works, which makes it difficult to play coherently; 28% of students frequently make mistakes in three or more rising/falling keys due to their lack of proficiency in key memory, such as missing temporary falling keys when sight reading the D minor section of the third movement of Beethoven's "Passionate Sonata" (Op. 57). Secondly, in terms of rhythm, 62% of students experience beat deviation in non-uniform rhythms (such as dots and splits), especially in the Rubato section of Debussy's Prelude, which is prone to deviating from the basic beat framework; 35% of students find it difficult to handle polyphonic rhythm counterpoint, such as when playing Brahms' "Interlude" (Op. 117 No. 1) with different rhythmic patterns on the left and right hands, resulting in confusion of the voices. Thirdly, at the application level, 70% of students can only visually perform works that are equally difficult as solo pieces, and their visual ability significantly decreases when faced with complex structures such as ensemble and accompaniment (such as cross parts in double piano ensemble). Further analysis reveals that the weakness of sight reading ability is directly related to the level of teaching emphasis: research shows that only 23% of universities have included sight reading in the piano compulsory course module, and 65% of teachers only spend less than 10% of their time in the classroom conducting sight reading training, and the training content is mostly "randomly selected pieces of music", lacking systematic design.

2. Existing Problems and Causes of Visual Playing Ability Cultivation in Piano Teaching in Colleges and Universities

2.1 Teaching Level: Vague Goals and Single Methods

2.1.1. Lack of hierarchical design in teaching objectives

The current piano sight reading teaching in universities mostly adopts a "unified standard" and does not establish hierarchical goals based on students' basic differences. For students with zero starting point sight reading foundation, they are still required to see works of difficulty in Beethoven's sonatas, which leads to students giving up training due to frustration; For students with a certain foundation, the lack of advanced goals such as "ensemble sight reading" and "improvisational accompaniment sight reading" limits their ability to improve. In the second year of piano major courses at a certain university, regardless of whether students have been exposed to chamber music or not, they are uniformly trained in solo sight pieces, neglecting the cultivation of the "listening and coordinating" ability required for ensemble performance.

2.1.2. Teaching methods deviate from the core requirements of sight reading

Traditional sight reading teaching often adopts a solo training mode of "breaking up first and then closing hands", which contradicts the core needs of "immediacy" and "wholeness" in sight reading: teachers often require students to slowly break up and recognize the score first, and then gradually accelerate the closing hands. Although this method can improve performance proficiency, it cannot cultivate the ability to "read the score in real time" - students still rely on "recognizing each note" in actual sight reading, and cannot grasp the overall structure of the musical sentence. In addition, there is a lack of "targeted technical disassembly" in teaching. For example, when facing the problem of students' "rhythm confusion", it is only corrected through repeated playing, without analyzing whether it is "rhythm recognition error" or "improper handling of complex rhythm patterns", resulting in the problem recurring.

2.2 At the Student Level: Cognitive Biases and Habitual Deficiencies

2.2.1 The cognitive misconception of 'emphasizing skills over playing'

Most students focus on "mastering solo repertoire skills" in piano learning, believing that sight reading ability is "unrelated to professional core": research shows that 68% of students only practice solo repertoire assigned by teachers after class and do not receive sight

reading training; 32% of students believe that 'sight reading ability can be naturally improved through solo practice', ignoring its independent training value. This cognition leads to a lack of active thinking among students during sight reading, such as only focusing on the position of musical notes, ignoring facial expressions and sentence divisions, and lacking musicality in performance.

2.2.2. The solidification of bad reading habits

The unhealthy reading habits formed by students in the primary stage of piano learning have become obstacles to the improvement of sight reading ability in universities: firstly, "finger dependent reading", which memorizes notes through the position of fingers on the keys rather than recognizing them through the position of the staff, leading to frequent errors in sight reading of new notes or wide intervals; Secondly, 'local focused reading' only focuses on the current notes being played, and cannot predict subsequent phrases in advance. For example, during sight reading, the eyes lag behind the fingers, often resulting in 'staccato'; Thirdly, 'ignoring the logic of harmony', only recognizing individual notes when reading the score, without analyzing the harmony, leads to the inability to predict the direction of the melody through harmony clues, increasing the difficulty of sight reading.

2.3 System Level: Lack of Textbooks and Imbalanced Evaluation

2.3.1. The system of sight reading textbooks is incomplete

The current piano sight reading teaching in universities lacks a "phased and systematic" textbook support: on the one hand, basic textbooks are mostly scattered compilations of pieces (such as "Piano Sight Reading Tutorial"), which are not designed according to the gradient of "reading difficulty rhythm complexity voice level", and teachers need to piece together training content by themselves; On the other hand, there is a lack of "applied sight reading textbooks" that are suitable for the teaching needs of universities, such as the "Double Piano Sight Reading Training Collection" for ensemble performances and the "Vocal Accompaniment Sight Reading Tutorial" for art guidance, which makes it difficult for students to match their sight reading abilities with practical needs.

2.3.2. Imbalance of teaching evaluation

mechanism

In teaching evaluation, the weight of sight reading is too low to guide students to value their sight reading ability: most university piano course evaluations mainly focus on "final solo concerts" (accounting for more than 80%), with sight reading only as an "additional item" or "oral test", accounting for less than 10%; The evaluation criteria also lack scientificity, only based on whether the performance has been completed, without refining the scoring from dimensions such as reading speed, rhythm accuracy, and vocal balance, resulting in students being unable to identify their own shortcomings in sight reading.

3. Specific Strategies for Improving Students' Sight Reading Ability in Piano Teaching in Colleges and Universities

3.1 Refactoring Layered Teaching Objectives: From "Unified Standards" to "Precise Adaptation"

Based on the students' visual reading foundation, construct a three-layer teaching objective system of "foundation advanced application":

Basic layer (for students with zero starting points): The core goal is to "establish standardized reading habits", including: recognizing keys and beats within 10 seconds, accurately sight reading eighth note combos in C major/minor, distinguishing 2-3 levels of voice parts, using "Bayer Piano Basic Tutorial" sight reading fragments and "Thompson Modern Piano Tutorial" advanced tracks as training materials, and focusing on correcting the habit of "finger dependent reading".

Gradual level (for students with 1-2 years of foundation in sight reading): The core goal is to "improve the ability to read complex rhythms and multi tone sight reading", requiring the ability to read three ascending/descending sign works, handle accessory/split rhythms, and balance four or more vocal levels. Training materials will be selected from Bach's "Two Creative Pieces" (BWV 801-806) and Klemens' "Sonata Collection" (Op.36), with the addition of "rhythm prediction training" - such as marking the breathing point of musical phrases one section in advance.

Application layer (for senior students): The core goal is to "meet practical needs" and divide into three directions: "ensemble sight play", "accompaniment sight play", and "improvisation

sight play". Ensemble sight play training selects fragments of Rachmaninoff's "Two Piano Suite" to cultivate the ability to "listen to partner voices and adjust one's own strength"; Accompaniment sight training uses Schubert's "Art Song Accompaniment" fragments to train real-time adaptation ability to "follow the singer's rhythm changes"; Improvisational sight reading training is combined with harmony, guiding students to add simple decorative sounds on the basis of sight reading to enhance creativity.

3.2 Innovative Teaching Methods: Focusing on "Immediacy" and "Targeting"

3.2.1 "Modular Disassembly Training Method"

Decompose sight reading ability into three modules: "reading score rhythm voice", and provide targeted training:

1) Score reading module: Using "fast score scanning training" - giving students 10 seconds to browse 8 sections of music, mark key, beat, and phrase divisions, then close their eyes and repeat the information to improve score reading efficiency; Introducing the "Tone Memory Game" to enhance tone recognition ability and reduce the error rate of variation in sight reading through the method of "randomly selecting tone numbers and quickly playing scales".

2.) Rhythm module: Use "metronome progressive training" - start with slow ($\text{♩} = 60$) sight reading to ensure accurate rhythm; Gradually increase the speed (by 10 beats every 2 weeks), while incorporating "rhythm based specialized training". For example, for segmented rhythms, practice clapping separately first, and then combine with keyboard performance to avoid "rhythm and note separation"; For the counterpoint of polyphonic rhythms, the "sing first, play later" method is adopted, where the left and right hand rhythms are first sung together, followed by a breakup performance to strengthen rhythm coordination.

3.) Vocal module: Implement "hierarchical sight reading of vocal parts" - first observe the main melodic vocal part separately to ensure the coherence of melodic lines; Observe the accompanying parts and grasp the texture characteristics (such as decomposed chords and columnar chords); Finally, playing hand in hand, achieving a balance between the vocal parts through a combination of "slightly stronger main melody and slightly weaker accompaniment". Taking the first movement of Mozart's Sonata (K.331) as an example, the melody on the right

hand is played first, followed by the bass accompaniment of Alberti on the left hand, emphasizing the prominence of the melodic part when combined.

3.2.2. Situational Practice Teaching Method

Combining sight reading training with actual performance scenarios to enhance application abilities:

Ensemble situational training: Organize a "double piano sight reading group" to conduct ensemble training once a week. Students are required to communicate through eye contact and body movements during the sight reading process, and adjust the rhythm and intensity in real time. For example, when playing the first chapter of Beethoven's "C Major Double Piano Sonata" (Op.6), after the first piano plays the main melody, the second piano needs to accurately connect with the accompaniment part through auditory perception to avoid rhythm disconnection.

Art guidance situational training: Collaborate with vocal majors to conduct "accompaniment sight play practice", allowing students to provide real-time accompaniment for vocal students and train their ability to "follow the singer's breathing and adjust speed". For example, when sight playing Schubert's "The Demon King", adjust the intensity and speed of the accompaniment in real time according to the singer's emotional changes, and cultivate a "flexible and adaptable" sight play thinking.

3.3 Optimizing Textbooks and Evaluation: Building a "Systematic" Support

3.3.1. Construction of phased textbook system

1) Basic Textbook: With "Standardized Reading of Music" as the core, the "Basic Course of Piano Sight Play" (written by Bernard Harvey) is selected. The textbook is divided into 10 levels according to "difficulty of tuning", each level includes progressive training of "monophonic polyphonic", accompanied by "Explanation of Reading Techniques" to help students establish scientific reading habits.

2) Advanced Textbook: With "Complex Weaving" as the core, the "Advanced Piano Sight Play Tutorial" (written by John Kembel) is selected, covering fragments of works from classical to modernist periods, including specialized training in "polyphonic weaving" and "cross part weaving", adapted to the objectives of the advanced level.

3.) Applied Textbook: Self written "Practical

Course for College Piano Sight Play", divided into "Ensemble Chapter", "Accompaniment Chapter", "Improvisation Chapter", including practical sight play materials such as double piano ensemble, vocal accompaniment, chamber ensemble, etc. For example, the "Ensemble Chapter" uses Brahms' "Haydn Theme Variations" double piano version fragments, and the "Accompaniment Chapter" uses Mozart's "Art Song Collection" accompaniment fragments to achieve the connection between teaching and practice.

3.3.2. Reform of diversified evaluation mechanism

1.) Process evaluation (accounting for 50%): Incorporate sight reading training into regular teaching assessments, conduct an "instant sight reading test" once a week, and score from four dimensions: "reading speed (20%), rhythm accuracy (30%), voice balance (30%), and musicality (20%)"; Establish a 'visual performance growth file' to record students' scores and questions on each test, and adjust training plans accordingly.

2.) Summative evaluation (accounting for 50%): Setting up direction based final sight reading assessment: Basic level students sight reading one solo piece with 2-3 rising/falling trumpet keys (8-16 bars); A fragment of a polyphonic work (such as Bach's Three Creative Pieces) and a fragment of a polyphonic transformation work for students entering the social class; The application layer students choose the direction based on the ensemble direction, which includes viewing and playing fragments of a double piano piece. The accompaniment direction is real-time accompaniment of a designated vocal segment. When evaluating, ensemble partners or vocal students are invited to participate in scoring to ensure the practicality of the evaluation.

4. Case Study and Future Prospects of Strategies for Improving Visual Reading Ability

4.1 Empirical Teaching Case: Taking the Sophomore Piano Major Course in a Certain University as an Example

The piano department of a certain music college has adopted the above strategy to carry out a one semester (16 weeks) sight reading teaching reform for 40 sophomore students. The specific implementation is as follows:

Goal stratification: According to the entrance

sight reading test, students are divided into three groups: the basic group (15 people) focuses on "standardized reading of music scores", the advanced group (18 people) focuses on "complex rhythms and polyphonic sight reading", and the application group (7 people) conducts "ensemble sight reading" training.

Method innovation: The basic group adopts the "Quick Spectrum Scanning+Number Adjustment Memory Game" and completes 8 sections of quick spectrum reading training twice a week; The advanced group implements the "rhythm module disassembly", focusing on training sight reading of triplets and segmented rhythms; The application group participates in the "Double Piano Sight Group" and plays a segment of Rachmaninoff's "Double Piano Suite" with their partner once a week.

Textbook and Evaluation: The basic group uses the "Basic Course of Piano Sight Play", the advanced group uses the "Advanced Course of Piano Sight Play", and the application group uses the self written "Ensemble Sight Play Course"; The process evaluation includes 8 real-time tests, and the final evaluation is assessed according to grouping objectives.

At the end of the semester, data shows that students' sight reading ability has significantly improved: the speed of identifying key changes in the basic group has decreased from 15 seconds per student to 8 seconds per student, and the accuracy of rhythm has increased from 65% to 88%; The error rate of sight reading for advanced group students in 4 rising/falling keys has decreased from 42% to 18%, and the achievement rate of polyphonic balance ability has increased from 50% to 83%; The rhythm synchronization deviation rate of the application group students' double piano ensemble sight reading has decreased from 25% to 9%. In addition, 85% of students reported a significant increase in interest in sight reading, and 60% of students actively participated in on campus ensemble practice, verifying the effectiveness of the strategy.

4.2 Future Development Prospects: Technological Integration and Interdisciplinary Expansion

4.2.1. Digital technology empowers sight reading teaching

Developing an "intelligent sight reading training system" with the help of AI technology to achieve personalized training: the system can

automatically generate training plans based on student sight reading data (such as error types and reading speed) - such as pushing corresponding rhythm specific training for "rhythm errors"; Through the "virtual ensemble partner" function, simulate the scene of double piano and chamber music ensemble, allowing students to experience collaborative sight reading even when practicing alone; Set up a "real-time feedback" module to instantly identify voice balance issues through sound analysis technology, such as prompting "accompaniment voice too strong, need to reduce touch force", to improve training efficiency.

4.2.2.Cultivation of Sight Reading Ability from an Interdisciplinary Perspective

Combining music psychology and neuroscience, optimize sight reading training methods: From the perspective of music psychology, study the influence of emotional states on sight reading ability, such as reducing students' anxiety during sight reading through relaxation training and improving their reading focus; From a neuroscience perspective, using brainwave technology to analyze the brain activity of excellent sight pianists, the neural mechanism of "predicting musical phrases in advance" is discovered, and "prediction training" is designed, such as allowing students to mark the direction of the next section's harmony in advance during sight reading, to strengthen the brain's prediction ability.

4.2.3.Deep integration of sight reading ability and professional needs

Design differentiated sight reading training programs for piano majors in universities, targeting their career development directions such as soloists, ensemble performers, art directors, and music teachers. For art director students, strengthen their abilities in "vocal accompaniment sight reading" and "orchestral fragment sight reading"; For students in the direction of music teachers, increase training in "children's piano textbook sight reading" and "improvisational arrangement sight reading" to ensure accurate matching between sight reading ability and professional needs, and enhance students' employment competitiveness.

5. Conclusion

Sight reading ability, as a core competency of

piano players, is often overlooked in piano teaching in universities, leading to an imbalance of students' strong solo ability and weak sight reading ability. This article analyzes the core dimensions and current situation of sight reading ability, and examines the problems and causes at the levels of teaching, students, and the system. It proposes a three-dimensional improvement strategy of "layered goal reconstruction, innovative teaching methods, and optimized textbook evaluation", and verifies its effectiveness through teaching cases.

In the context of diversified development of piano education, the cultivation of sight reading ability needs to break through the "single training" mode and move towards "systematization, practicality, and technicality" - it is necessary to meet the diverse needs of students through layered teaching, combine ensemble, accompaniment and other practical scenarios to enhance application ability, and use digital technology and interdisciplinary research to achieve innovative development. Only in this way can we truly enhance the sight reading ability of college piano students and lay a solid foundation for their artistic growth and career development.

References

- [1] Liang Zhiyuan Cultivation of students' sight reading ability in piano teaching in universities [J]. Journal of Taiyuan City Vocational and Technical College, 2013, 000 (011): 118-119.
- [2] Tang Shao How to cultivate students' sight reading ability in piano teaching in universities [J]. Yellow River Voice, 2016 (4): 1.
- [3] Jiao Yang Research on the importance of sight playing in piano teaching in universities [J]. Journal of Lvliang Education College, 2016, 33 (3): 3.
- [4] Liu Xiaoyu Strategies for cultivating students' sight reading ability in piano teaching in universities [J]. 2023.
- [5] Wang Yiyue On the cultivation of students' sight reading ability in piano teaching in universities [J]. Journal of Liaoning Normal University: Social Sciences Edition, 2022 (3): 66-68.