

Increasing Students' Intrinsic Motivation to Learn Music: The Teacher's Voice in Cello Ensembles

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Abstract

This study uses interpretive phenomenological analysis (IPA) to explore the specific ways in which cello teachers can improve students' intrinsic motivation through strategies such as personalized teaching and positive feedback. The main goal of the study is to identify the strategies used by teachers in the teaching process, specifically in ensemble teaching, to enhance students' intrinsic motivation by meeting their psychological needs (autonomy, sense of competence, and sense of relatedness). Through semi-structured interviews, the study found that personalized teaching, interest-oriented content selection, positive feedback, and providing performance opportunities can significantly improve students' autonomy and enthusiasm for learning. The research results provide practical teaching strategies for cello teachers, and also provide directions for future research on the relationship between motivation and learning effectiveness.

Keywords: Learning Motivation, Teaching Strategies, Cello Teaching, Personalized Teaching, Intrinsic Motivation

Introduction

Motivation is an important topic in educational psychology and is defined as "the process of initiating and maintaining goal-oriented activities" (Cook & Artino, 2016). It basically refers to the motivation to inspire and maintain students' learning, especially in music education, where motivation plays a more prominent role in highly technical subjects such as cello. In cello learning, students may be very interested in the early stages of learning, but as the learning content deepens, motivation tends to weaken. How to maintain students' enthusiasm for cello and help them overcome difficulties in learning is a challenge faced by every cello teacher.

In the past few years, many studies have proposed different theories to explain the internal mechanisms of learning motivation. Self-determination theory (Ryan & Deci, 2000) believes that students' motivation is influenced by three basic psychological needs: autonomy, ability, and belonging. Simply put, when these needs are met, students' intrinsic motivation will be

improved. In cello teaching, teachers can meet these needs by customizing personalized teaching, providing positive feedback and emotional support, thereby helping students maintain their learning motivation (Evans, 2015; Shaheen, 2021). In addition, the flow theory (Csikszentmihalyi, 1990) also emphasizes that when students feel that they are capable of coping with challenges in learning, they will enter a state of high concentration, thereby improving learning outcomes and lasting motivation.

Research on self-determination theory shows that when these psychological needs of students are met, it can not only stimulate their intrinsic motivation, but also improve learning outcomes (Mihaylov, 2018; López-Íñiguez & McPherson, 2020). For example, in cello teaching, if the teaching content can be adjusted according to students' interests, performance opportunities can be provided, and timely feedback can be given, these strategies will greatly enhance students' learning motivation and autonomy (MacIntyre et al., 2018). This study interviewed three experienced cello teachers and analyzed the strategies they used in their teaching to explore how these strategies can help students meet their psychological needs and thus improve their learning motivation.

Research Questions

The focus of this study is to explore how teachers can enhance students' intrinsic motivation in the teaching process, especially in the application of personalized teaching and feedback strategies? Next, the relevant motivation theories and research will be reviewed and their specific applications in music education will be explored in order to provide a theoretical basis for subsequent analysis.

Literature Review

Definition and Theoretical Framework of Motivation

Motivation is usually defined in education and psychology as the force that drives an individual to engage in a certain behavior. It is divided into intrinsic motivation and extrinsic motivation. Intrinsic motivation is the individual's active participation due to interest and pleasure in the activity itself, while extrinsic motivation relies on external rewards or results, such as grades or praise (Deci & Ryan, 1985). Self-determination theory emphasizes that students' intrinsic motivation comes from the satisfaction of autonomy, competence, and sense of connection (Ryan & Deci, 2000). Research shows that the satisfaction of these three basic psychological needs is crucial to students' lasting motivation in music learning (Hallam, 2010).

In the field of music education, students' motivation is driven not only by intrinsic motivation but also by external incentives (Ryan & Deci, 2000). However, research shows that long-term reliance on external rewards may weaken intrinsic motivation (Deci & Ryan, 1985). Therefore, balancing internal and external motivation, especially in the challenges of learning complex instruments, becomes an important task for music teachers.

External and internal factors of learning motivation

Students' learning motivation is influenced by a variety of internal and external factors. Internal factors include students' interests, sense of achievement and self-efficacy, while external factors include teachers' feedback, praise, reward and punishment system, and social support. Studies have shown that when learning content can meet students' interests, they will show higher learning enthusiasm and persistence (Vallerand et al., 1992).

In addition, extrinsic motivation (such as praise, rewards, and performance opportunities) can increase students' enthusiasm for learning in the short term. Studies have found that although external incentives (such as praise, reward and punishment systems) can effectively increase students' learning enthusiasm in the short term, long-term reliance on external rewards may weaken intrinsic motivation (Deci & Ryan, 1985; Vallerand et al., 1992). Therefore, teachers need to balance the relationship between internal and external motivation to ensure that students can obtain intrinsic satisfaction while enjoying performance (Deci & Ryan, 1985).

Motivational Challenges in Cello Learning

The motivational challenges in cello learning are mainly reflected in the difficulty for students to master complex techniques and music theory knowledge. Learning the cello requires high skills and long-term repetitive practice, which may make some students feel bored and lack a sense of accomplishment (Smith, 2018). In addition, the difference between ensemble and solo performance will also affect students' motivation. In an ensemble, students need to cooperate with others, which may bring pressure to some students with low self-confidence, thus affecting their motivation (Hallam, 2010).

The Influence of Cello Teachers on Students' Motivation

Cello teachers play an important role in improving students' learning motivation. Studies have shown that teachers' teaching style, feedback methods, and support strategies have a direct impact on students' motivation levels (Ryan & Deci, 2000). Personalized teaching is one of the effective ways to improve students' intrinsic motivation. Teachers can enhance students' autonomy and participation by developing targeted teaching plans based on students' interests, abilities, and goals (Smith, 2018). In addition, positive feedback and emotional support provided by teachers can help students maintain a positive attitude when facing learning difficulties, thereby enhancing their learning motivation (Csikszentmihalyi, 1990).

In ensemble teaching, teachers can motivate students by providing performance and competition opportunities. Studies have found that performance not only enhances students' self-confidence, but also promotes their ability to cooperate, enhances their sense of social connection, and further enhances their motivation to learn (Hallam, 2010).

The Impact of Teaching Strategies on Motivation

Different teaching strategies play a key role in improving student motivation. Personalized teaching strategies meet students' autonomy needs by adjusting teaching content and teaching methods, and are an important means to enhance intrinsic motivation (Ryan & Deci, 2000). Teachers can significantly increase students' enthusiasm for learning by selecting repertoire that matches students' interests (Vallerand et al., 1992). In addition to personalized teaching strategies, teachers' positive feedback and encouragement are also effective means to improve students' learning motivation. In addition, cooperative learning and performance opportunities are also effective means to enhance extrinsic motivation. By arranging students to participate in band performances or competitions, teachers can set short-term external goals for students and stimulate their motivation to learn (Csikszentmihalyi, 1990). However, teachers need to pay attention to balancing the development of extrinsic incentives and intrinsic motivation to prevent students from relying solely on extrinsic rewards and ignoring the fun and sense of achievement of learning itself (Deci & Ryan, 1985).

In summary, self-determination theory provides an important theoretical framework for explaining learning motivation, emphasizing the key role of autonomy, competence, and relationship in improving intrinsic motivation (Ryan & Deci, 2000). Personalized teaching and positive feedback can meet students' psychological needs and significantly improve their learning motivation. At the same time, performance and competition opportunities serve as external incentive mechanisms that can promote students' progress in the short term, but teachers need to balance the development of extrinsic and intrinsic motivation to ensure that students can enjoy long-term learning motivation while enjoying external incentives (Csikszentmihalyi, 1990). In summary, self-determination theory provides an important framework for understanding students' learning motivation. Personalized teaching and positive feedback can satisfy students' autonomy and sense of competence, and significantly enhance intrinsic motivation. Although performance and competitive opportunities can motivate students in the short term, teachers should pay attention to balancing the development of extrinsic and intrinsic motivation to ensure students' long-term motivation to learn.

Methodology

Research Design

Phenomenological Case Study

This study used interpretive phenomenological analysis (IPA), which is particularly suitable for exploring teachers' subjective experiences in teaching (Smith & Osborn, 2008). Through in-depth interviews, we captured deep insights into how cello teachers can improve students' learning motivation through personalized teaching strategies. Phenomenological research emphasizes revealing the essence of phenomena through individual subjective experiences and is suitable for exploring complex human experiences. This study pays special attention to teachers' specific strategies, feelings, and experiences in teaching practice, aiming to reveal how teachers can promote student learning by coping with motivational challenges.

The advantage of phenomenological research is that it not only focuses on "what happened", but also emphasizes the deep understanding of these experiences, that is, "what these experiences mean to the participants". Through the case analysis of cello teachers, researchers can deeply explore the unique insights and solutions of these teachers when facing student motivation problems, and reveal the application of motivation mechanisms in actual teaching situations.

Research Subjects

The subjects of this study were three experienced cello teachers, who had been teaching for 15, 20, and 25 years, respectively. These teachers taught a wide range of students, from elementary school to university, at different ages and levels. These teachers were chosen as the subjects of the study because they had accumulated rich experience in long-term teaching practice and could provide deep insights into motivational challenges for this study.

Teacher Selection Criteria

1. Rich teaching experience: Participants have more than 10 years of teaching experience in the field of cello teaching. They are all graduates from professional colleges, teach at universities, have bachelor's and master's degrees, and can provide mature teaching strategies.

2. Diverse student groups: The students taught by the research subjects ranged from beginners to advanced learners, covering different ages and skill levels, which can reflect the motivational challenges and strategies of students at different levels.

3. Insights into motivational issues: The subjects were able to identify changes in students' motivation and try different strategies to address these changes in teaching.

Data Collection Method

Semi-Structured Interviews

The data for this study were collected through semi-structured interviews. Semi-structured interviews are a flexible interview format that includes both a preset question framework and allows interviewees to express their ideas freely. The researcher designed open-ended questions to encourage teachers to describe in detail their teaching strategies, motivational challenges, and how they coped with them. This interview method allowed the researcher to gain in-depth insights into the teachers' actual experiences and perspectives and provided rich material for subsequent analysis.

Interview Design

1. Question framework: Design an interview outline based on the motivation theory framework to ensure that the core elements of motivation are covered, such as intrinsic motivation, extrinsic motivation, motivational challenges, teaching strategies, etc. Specific questions include:

How do you improve students' learning motivation in teaching?

What strategies do you use to help students overcome a decline in motivation?

How do you personalize instruction to meet the needs of different students?

What motivational changes do you think students show during the learning process?

2. Interview process: Before the interviews, the purpose of the study was introduced to the teachers to ensure that they clearly understood the content of the interviews and to obtain their informed consent.

Each interview lasted approximately 60 to 90 minutes and was recorded using an audio recording device.

During the interviews, the researcher asked follow-up questions based on the teachers' responses to gain deeper insights.

3. Data recording: All interviews were recorded and transcribed in detail to ensure the integrity and authenticity of the data. The researcher conducted a preliminary review of the data after the interviews to ensure that it accurately reflected the views of the interviewees.

Data Analysis Method

Interpretive Phenomenological Analysis (IPA)

Data analysis used interpretative phenomenological analysis (IPA), which is suitable for understanding how individuals experience, perceive and give meaning to certain phenomena. IPA emphasizes starting from the perspective of the respondents and exploring their subjective experiences in depth, so it is very suitable for analyzing teachers' understanding and response to motivational issues.

Data Analysis Process

1. Read Line by Line and Understand it

The researcher first read all the interview records line by line to gain a comprehensive understanding of each teacher's teaching experience. This process requires the researcher to understand the teaching scenarios and strategies described by the teachers as objectively as possible without any preconceptions. The researcher focused on marking the content related to the research topic at this stage, such as the teaching strategies mentioned by the teachers, motivational issues, and student reactions.

2. Open Coding

The second step is to open code the text, that is, to conceptualize and preliminarily categorize the teachers' descriptions. For example, when a teacher mentioned "encouraging students to participate in performances to improve their motivation", this passage would be tagged as "performance and motivation improvement". The goal of open coding is to extract a large number of preliminary concepts from the interview transcripts to lay the foundation for further analysis.

3. Form Themes and Categories

After completing the open coding, the researchers grouped similar codes into higher-level themes. For example, "personalized teaching" and "interest-based repertoire selection" can be integrated into the theme of "personalized teaching strategies." During the theme classification process, the researchers continuously compared different codes to identify the core strategies used by each teacher in teaching.

4. In-depth analysis and Interpretation

In this phase, the researchers conducted interpretive analysis of the themes identified. By deeply analyzing each teacher's specific strategies in teaching, the researchers attempted to reveal the motivational mechanisms behind these strategies. For example, how personalized teaching meets students' need for autonomy, or how performance goals enhance students' sense of achievement and competence. This process involves combining teachers' practices with motivational theories (such as self-determination theory) to establish a connection between theory and actual teaching.

5. Make Connections and Summarize

Finally, the researchers looked for commonalities and differences in the cases of different teachers and established connections between different themes. For example, the correlation between personalized teaching strategies and positive feedback may be found to be an important combination for improving student motivation. By integrating these connections, the researchers were able to provide a comprehensive explanation of how cello teachers can improve students' intrinsic motivation through teaching strategies.

Research Reliability and Validity

In order to ensure the reliability and validity of the research results, this study took the following measures:

1. Triangulation: This method ensures the reliability of the results by cross-validating different data sources (interviews and classroom observations). By observing the teachers' teaching

behaviors, the researchers can verify whether the strategies mentioned in the interviews are effectively implemented in actual teaching.

2. Peer review: At different stages of the analysis, the researchers invited other experts in the field of music education to review the coding and themes to ensure the scientific and logical analysis. This process helped to enhance the credibility of the research.

3. Member checking: After the data analysis was completed, the researcher fed back the preliminary results to the interviewed teachers to solicit their opinions and ensure that the research results truly reflected their teaching experience.

Ethical considerations

Throughout the research process, researchers strictly followed ethical standards to ensure that the rights and privacy of participants were protected.

1. Informed consent: Before the study began, all teachers signed an informed consent form, indicating that they fully understood the purpose and content of the study and agreed to participate.

2. Privacy protection: The identity information of all participants was anonymized, and researchers used numbers or pseudonyms in the report to ensure privacy was not disclosed.

3. Data security: All interview recordings and text data were stored in encrypted digital devices and only members of the research team had access to the data.

Findings and Discussion

After an in-depth analysis of the interview data from three cello teachers, this study identified five main themes. These themes reflect the specific strategies and methods that teachers use to deal with student motivation issues in their teaching practice, and how these strategies affect students' learning motivation. The following is a detailed discussion.

Theme 1: Personalized Teaching Strategies

Personalized teaching strategies are one of the key factors mentioned by all interviewed teachers to improve students' learning motivation. Each teacher noted that there were significant differences in students' motivation levels, interests, and abilities, so they used personalized teaching methods in their teaching to meet the individual needs of their students. Teachers develop targeted teaching plans by assessing students' musical foundation, learning styles and goals.

For example, Teacher 2 mentioned that for students who have a foundation in classical music, they will set more difficult repertoire to enhance the sense of challenge and thereby enhance their sense of achievement; while for students who have no foundation or are interested in pop music, they will introduce pop music. Musical repertoire is adapted to cultivate students' interest first, and then gradually guides them to learn classic repertoire. This method of teaching students in accordance with their aptitude effectively meets students' needs for autonomy, thus improving intrinsic motivation (Smith, 2018).

Personalized teaching strategies play an important role in improving students' autonomy, especially in music learning. When students can independently choose the repertoire to practice or set learning goals, their intrinsic motivation will be significantly enhanced. Research shows that autonomy support can stimulate students' intrinsic motivation and thereby improve learning effects (Shaheen, 2021). According to self-determination theory, personalized teaching strategies effectively improve students' intrinsic motivation and learning needs by paying attention to students' interests, abilities and learning needs. Motivation to learn (Cheng & Southcott, 2016). This teaching method places special emphasis on student autonomy and helps students achieve better learning results through personalized learning plans (Ryan & Deci, 2000). Research shows that when students can choose their own learning content, their engagement and motivation are significantly enhanced (Shaheen, 2021).

Theme 2: Interest-based Teaching Content

Through the analysis of the interviews, interest-based teaching content was considered another key factor in stimulating students' learning motivation. Both Teacher 1 and Teacher 2 mentioned that choosing music that matches students' interests can significantly improve students' learning enthusiasm. For example, Teacher 1 shared a case where students originally found learning cello boring, but when he introduced a movie soundtrack that the students liked very much, the students' practice enthusiasm and class participation quickly improved.

This strategy shows that when the teaching content is aligned with students' interests, students show higher levels of focus and enthusiasm. This interest-based teaching approach meets students' need for a sense of connection in their learning, i.e., they feel a deeper emotional connection with the music, which further enhances their intrinsic motivation (Csikszentmihalyi, 1990).

Theme 3: Positive feedback and Encouragement

Positive feedback and encouragement have also been shown to play an important role in improving students' motivation. Research shows that when teachers are able to provide specific, positive feedback and point out students' progress in learning, it can not only enhance students' self-confidence, but also help them stay motivated in future learning (Vallerand et al., 1992). Teacher 2 mentioned that she would give specific, positive comments on students' progress at the end of each class, such as "*Your grasp of rhythm was very good this time, and your performance was very stable.*" This kind of feedback not only allows students to clearly understand their progress, but also enhances their confidence and motivates them to work harder.

There is a close connection between positive feedback and competence in music practice. Research shows that when students feel that they have made progress in their skills and receive positive feedback from teachers, their sense of competence increases and their intrinsic motivation also improves (Valenzuela et al., 2018). Research shows that positive feedback not only helps students to make clear progress, but also enhances their sense of competence and promotes long-term learning motivation (Ryan & Deci, 2000).

*Theme 4: Performance and Competition Mechanism**Performance and Competition Mechanism*

It is a strategy used to motivate students to persist in practicing for a long time. Teacher 3 and Teacher 1 both mentioned that by organizing small concerts or letting students participate in competitions, they can provide students with clear goals and enhance their learning motivation. This mechanism not only gives students the opportunity to show themselves and gain recognition, but also increases their sense of responsibility and commitment to learning the cello.

For example, Teacher 1 shared a case: a student originally planned to give up cello studies, but after being recommended to participate in orchestra rehearsals and performances, he rediscovered his passion for music and showed a higher motivation for learning. Although this kind of external goal of performance and competition is extrinsic motivation, it can effectively improve students' concentration and engagement in the short term. Research has found that participating in performances can significantly enhance students' sense of accomplishment and self-confidence (Woody, 2020). Performance opportunities provide students with a platform to showcase their skills, stimulate their intrinsic motivation, and prompt them to be more engaged in practice (Cheng & Southcott, 2016). However, teachers should pay attention to combining extrinsic incentives with students' intrinsic growth goals to avoid students relying on extrinsic rewards and ignoring the essence of learning (Csikszentmihalyi, 1990).

Theme 5: Strategies to Overcome Decline in Motivation

Finally, teachers discussed how to deal with declining student motivation. Strategies to overcome declining motivation included adjusting the difficulty of the repertoire, changing the teaching method, and helping students through the trough through encouragement and support. Teacher 2 mentioned that when students showed declining motivation, she would usually rekindle their interest by adjusting the teaching repertoire or sharing inspirational stories of cellists. In addition, teachers emphasized the role of communication with parents in maintaining student motivation.

When students' learning motivation declines, teachers can effectively help students restore their motivation by adjusting teaching content or providing emotional support. Ryan and Deci (2000) found that emotional support provided by teachers helps students reestablish emotional connections with learning content, enhances their need for relationship, and thus enhances intrinsic motivation.

This chapter analyzes the teaching practices of three cello teachers and identifies five key themes that improve student motivation. These themes show how teachers can help students improve intrinsic motivation through personalized instruction, interest-based content, positive feedback, performance opportunities, and strategies to overcome motivational decline. Research shows that positive feedback not only enhances students' sense of competence, but also motivates them to further improve their skills (Valenzuela et al., 2018). When students receive positive feedback during their learning process, their self-confidence and intrinsic motivation increase significantly (Ryan & Deci, 2000).

Conclusion

The main purpose of this study is to understand how cello teachers can improve students' intrinsic motivation through strategies such as personalized instruction, positive feedback, and emotional support (Evans, 2015; Shaheen, 2021). Research believes that by meeting students' psychological needs such as autonomy, ability and belonging, teachers can effectively stimulate students' learning enthusiasm and lasting motivation, and help them maintain active participation and self-improvement in music learning (Mihaylov, 2018; MacIntyre et al., 2018). Research has found that when teachers design course content based on students' individual needs and build good teacher-student relationships through positive feedback and emotional support, students' intrinsic motivation increases significantly.

The focus of this study was to evaluate the effectiveness of individualized instruction and feedback strategies in promoting intrinsic motivation in cello students. Through interviews with three senior cello teachers, we found that when teachers tailor teaching strategies to each student's interests and learning progress, students' autonomy and motivation to learn are significantly improved. In particular, teachers can effectively promote students' intrinsic motivation by encouraging students to express interests, provide positive feedback, and create more opportunities for performance (López-Íñiguez & McPherson, 2020; Shaheen, 2021). These strategies not only increase students' interest in learning, but also help them maintain perseverance and self-confidence in the face of learning challenges.

Research results show that personalized teaching and feedback strategies can significantly improve students' learning autonomy and enthusiasm, help students overcome learning difficulties, and maintain high learning motivation. Specifically, when teachers use personalized teaching methods and provide emotional support, students show higher motivation and engagement in learning, which also helps them maintain continued interest in cello learning. However, this study also has some limitations. The sample size is small, based on interview data from only three teachers, and may not fully represent common practices in cello teaching. The study period was too short to fully assess the long-term effects of these strategies (MacIntyre et al., 2018). Future research can adopt a longitudinal design to track students' motivation changes during the long-term learning process to further explore the sustained effects of these strategies.

The purpose of this study was to design and evaluate teaching strategies based on self-determination theory to see how they can improve students' intrinsic motivation in the short term. Through the data collected through interviews, the study provides educators with practical examples of how to effectively improve student motivation in cello teaching. The study also found that emotional support is closely related to students' intrinsic motivation, which provides a solid theoretical basis for future teaching practice (Shaheen, 2021). Future research can explore the applicability and effectiveness of personalized teaching and feedback strategies in various settings through a wider sample, including students from different cultural backgrounds and age groups.

This study aims to explore how personalized teaching and feedback strategies can improve students' motivation. The results of the study suggest that music educators should pay more attention to students' psychological needs and provide personalized support based on students' individual differences (MacIntyre et al., 2018; López-Íñiguez & McPherson, 2020).

Teachers can stimulate students' intrinsic motivation by paying attention to their interests, giving positive feedback, and creating a suitable learning environment. This not only helps students maintain motivation in the short term, but also lays a solid foundation for their future music learning. The study also suggested that policymakers should provide teachers with more professional development opportunities to help them master effective personalized teaching and feedback strategies to improve students' intrinsic motivation and learning outcomes (Shaheen, 2021). Promoting these practices and policies can help teachers better stimulate students' interest and motivation and promote their long-term success in music learning.

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