Academic Journal of Art and Design
ISSN: 3080-9924 (Print), ISSN: 3080-9932 (Online) | Vol. 2, No. 2, 2026

Application of Artificial Intelligence in Music Education: New Opportunities for Teaching Popular Music Creation.

Kaijie Yin

School of Faculty of Humanities, The Education University of Hong Kong, Hong Kong, China

Abstract: There are many stages in the production of pop music creation courses, and the students' initial skills vary greatly. Only by observing the end result can one learn about the creation process. The Position of artificial intelligence in the classroom should be considered in light of different stages of teaching. Based on the publicly available functions of tools such as Udio, AIVA, Magenta and LANDR, this paper explores the tasks that artificial intelligence can perform in the five areas of teaching materials, melody and harmony drafting, arrangement and production judgment, aesthetic evaluation of lyrics and style, and copyright ethics and evaluation. AI can be used to create the first draft and several revisions of this work. It should not replace students in the organisation of melody and arrangement selection for lyrics. Specify in the classroom which stages permit the use of AI-generated content and which require handwriting, and limit its application via process records. The evaluation should also consider the prompt design, selection of version, modification of materials, decision-making reasons and copyright annotation, etc., not just the completeness of the final product. AI can reduce the barrier to entry and accelerate trial-and-error. However, the students need to undertake the auditory training, style analysis and original expression themselves.

Keywords: Artificial Intelligence; Music Education; Popular Music Creation; Generative AI; Teaching Evaluation.

1. Introduction

There has always been a problem with the composition course in popular music: all-round abilities are required for composition, but there is limited time in class. Although there are many individual classes for melody writing, harmony connection, arrangement layers, lyric expression, timbre selection, mixing and mastering, etc., when students reach the stage of overall composition, they often get stuck at one of these links. Those who can sing the tune may not be able to compose; those who can write words may not be able to organise paragraphs; and those who know the software may not be able to present the style system. The old way is to have teachers correct the mistakes of all students and then have them repeat, so it's not very efficient.

Recently, text-to-music generation and online mastering have begun to be used by the public. According to the official page of Udio, users can create songs by writing text descriptions, or they can upload existing audio and use AI editing functions; AIVA's official page reports that more than 250 styles of music can be generated in a few seconds; The Magenta project page says that it applies machine learning to generate music, and both the models and tools are open-source, though the repository has been archived and now serves mainly as a reference for research papers; LANDR's official page indicates that it offers an online AI mastering service. These functions have shifted the zero-based starting point of the composition course, but the ability of the tool to generate music does not equate to learning composition. Although it is convenient, there is no guarantee that the results will be good; it may not be in style, the lyrics may be poor, or there could be copyright infringement. If the class is still limited to clicking for generation and playing a finished product, the composition course will be reduced to a demonstration class; otherwise, we will fail to explore the current methods of music creation. Therefore, it is necessary to introduce the position, tasks and corresponding evaluation methods of AI in popular music composition teaching [1]. Based on the official page descriptions of the tool functions, this paper does not infer classroom experimental data and does not directly link tool demonstrations to teaching effectiveness. The subject of the discussion is not the tool itself, but rather how to change the relationship in the classroom.

2. Teaching Orientation: Reintegrate the Generated Results into the Creative Process

Students of the popular music composition class often focus on the final work and believe that they can create a complete song to demonstrate their ability. The end product is necessary, but the creativity may be in the process. Why employ this chord? Increase the Number and expressiveness of the chorus. To achieve the purpose of changing instruments in the second verse. Why is there no follow-up? The above are the relevant problems. AI tools in the classroom should be used carefully; otherwise, there is a risk of easy generation of the final work. Students enter prompts, and the tool can generate song snippets in the style of the final work. Students may not be aware of which choices can be explained and which can be altered. The teacher will use the above results as a basis for grading by "analogy". Therefore, there is no expression of the creative process and students cannot explain their choices.

The most appropriate place for the AI tool is in the process. There are about three things that can be done [2]. First, students write a melody motive or a fragment of lyrics, then use the upload and editing functions of the tool to create several style-oriented versions. The results are presented and are not to be considered the final answer. Different styles or different descriptions can be used for the same prompt to

attract students' attention and make them choose whether it is popular music, out of place, or inappropriate. Prompts, the resulting works, modifications and reasons for exclusion are all stored to build a queryable creative archive. It is also convenient for teachers to study. Students can see their modifications and the corresponding reasons. The produced result is not a work of art but a material for classroom study and modification. The intermediate object can show problems and retain modification history.

Auditory Training, Style Analysis, Structural Judgment and Aesthetic Expression all require the active participation of students. Tools are not available. The teacher should not tell the students which buttons to press; instead, the teacher should help the students ask good questions. Is the Singing Melody in this edition too difficult? Is the drum group in the chorus better than the lyrics? Is the generated harmonic progression in conflict with the original motive? [3] Only when students can answer this question will AI be used in teaching. Classroom rules need to be explicit. Which parts are for generation, which parts need to be handwritten, how to label the generated materials, and what modifications were made by the student in the final work. Clearer rules will reduce the risk of the tool being used improperly, and students will be able to present the reasons for their creativity more rationally. The following discussions of melody and harmony teaching are in accordance with this "comparable" system.

3. Melody and Harmony: Starting from a Blank Page to a Comparable Draft

Melody and Harmony are the foundation of teaching popular music composition, and they are also one of the parts that are most intimidating to beginners. Students do not often lack ideas; rather, they are unable to connect these fragmented thoughts, and although a single line of melody can be sung or three or four chords can be played, there is no way to create a whole piece. AI tools can help organise the scattered materials into an interactive game quickly and provide students with tangible learning materials and practice exercises. First, write the text of the description and use Udio to generate a song clip; then, bring this clip to the classroom for discussion and return to the keyboard or DAW to make modifications. First, selection and then modification are used. Submission of the generated result is not completion.

Harmony teaching can be reversed and used for generated results. According to the official page of AIVA, more than 250 styles of music can be created; although the repository of Magenta is now archived and serves mainly as a supplement to research papers, its models and tools are still available for melody and harmony experiments. Teachers can inform students that the harmony in their work is too monotonous. Has it become one of the popular repetitive patterns in popular music? Is the New Key Position strange? Does the Bass Line Support the Melody? The generated results can be employed as a reference answer for testing the harmony rules learned in class, but not copied. Students need to specify the part that was not saved, which part was deleted, and why. To be able to explain the reasons is to understand how harmony is achieved, rather than just knowing the result of generation. In doing so, it also helps to train one's sense of hearing for harmony.

Also, the deficiencies of AI in melody creation need to be addressed [4]. Although the melodies of public domain works are often beautiful in isolation, their overall organisation, motif development and harmony with the lyrics still need to be modified by people. In the writing of popular songs, one should pay attention to the expression of tone, stress, breathing and syllables in the lyrics, etc. Although AI can offer a good structure, it may fail to consider the meaning of the words in a song. The more reliable functions of AI are "initiation" and "comparison": it can help reduce the anxiety of a blank page during initiation, and it can also show students the differences in style through comparison. Teachers can have students handwrite the motifs, submit AI-generated drafts and manually revised versions, and provide a short explanation for each [5]. Immediate feedback has been applied; however, handwriting training and judgment training are still in progress. After the drafts are ready for comparison, we will address the problem of organisation and creation of music next.

4. Arrangement and Production: Training on Judgment after the Threshold Drop

Production is also required in the teaching of pop music composition. In the past, in order to create a good demo, one needed to learn DAW operations, select sound sources, drum programming, mixing and mastering, etc. The upper limits of equipment and software are fixed. With the addition of AI-assisted tools, it is now relatively easy: LANDR's official page reports that it offers online AI mastering, Udio can generate song snippets based on text descriptions, and AIVA can create music in various styles through text prompts. The thresholds for timbre and arrangement are now relatively low [6]. It is a good development; however, the focus of teaching has changed. If the classes continue to focus on "how to make the project sound good" and "how to use presets", the students will be able to finish their final works faster, but the quality of the arrangement may also decrease.

The basic ideas of the teaching of arrangement are levels and purposes. How to create an atmosphere in the introduction, how to leave space in the verse, how to raise the chorus, and how to build contrast in the bridge will not be intuitively understood by students through AI-generated accompaniment. The generated results can be used as additional teaching materials; have students listen to the automatic arrangement version, point out whether the drum group is too heavy, if there is mud in the low frequencies, whether the chorus lacks vocal space, etc., and then modify the project. The Selections of Timbres are the same. Although AIVA can generate many styles rapidly, students still need to be able to explain why a particular timbre is used, whether it is suitable for the emotions of the lyrics, and where it fits in the whole work of music. The purpose of the evaluation will be to show that one can apply what has been learned.

Stage Mastery is more suitable for courses on "Standards" and "Aesthetics". Although the automatic mastering tool is fast, the processed version of pop music is not always louder. Different Styles Have Different Dynamic Requirements. Students can compare the clarity of the human voice, the tightness of the low frequencies, and the overall fatigue level before and after automatic learning in class, then discuss which changes are technical and which are aesthetic. AI mastering cannot replace the judgment of mixing; if there are problems with the balance of individual tracks, automatic processing will only hide them and fail to solve the problem.

A more reliable method is to use AI production tools for the "quick prototype": first, create an audible demonstration, and then focus on the arrangement structure, relationships among voice parts, and style identification [7]. Finally, what the students submit is not only audio but also arrangement explanations and records of timbre selection/modification. Together, the three can present the origin and foundation of the arrangement judgment. The reduction in the operating threshold of the tool does not mean a reduction in the judgment threshold, and the problem of lyrics and style is even more serious.

5. Lyrics and Style: Screening, Rewriting, and Aesthetic Explanation

In the teaching of pop music composition, it is difficult to determine whether the lyrics are good and whether the style is correct by a single standard. Large Language Models can generate lyrics according to a theme, rhyme and emotion. The resulting output is relatively coherent, and there are rhymes, emotional words, and a complete verse-chorus structure; however, it is dull to read, and the same things are repeated without specific experiences or emotions. Sometimes, the actual effect of relocating lyrics is achieved by changing the place name, behaviour or a regular phrase. Although AI can offer a rhyming system, it cannot replace students' own experiences in creation [8]. Therefore, in the lyrics class, AI is more suitable as a rewriting material than as a replacement for writers.

The three Stages of training are as follows: First, have the students write a few versions of the lyrics according to the same theme, and then compare them to find out which sentences are clichés, which create vivid images, and which are easy to remember. Then, have the students recall a rhyme or sentence pattern that can be used, and substitute the general part with a specific detail, such as a scene or a quote. Finally, sing it back to the tune and check the stress and syllables. Screening and revision are carried out; no creation occurs. Style judgment can also be done this way: Use Udio to generate fragments based on text descriptions, use AIVA to create music in various styles, and have students compare which result aligns better with the mood of the lyrics, which instrumentation is characteristic of a particular style, and which is excessive. Do not assess the quality of the AI's output by listening to it. Alternatively, they can have the students explain for themselves why this edition is more suitable.

Aesthetics is also about awareness of patterns. The output of the generation tool is often in a uniform style and has the general features of a good melody, full arrangement and clear emotion, but lacks individual characteristics. Students can consciously look for patterns in the generated results during class, such as the increase in volume of the chorus, adding hand claps to the drum section, and reducing the speed in the bridge part. Then, they can learn when to use these patterns and when not to [9]. Students should not learn to avoid patterns, but learn when to use certain patterns. With the introduction of AI in the classroom, the evaluation of lyrics and style should focus more on modification explanations and comparison bases: Can students point out the problems in the generated text, explain the reasons for rewriting, and connect the choice of style to lyric expression? In this way, AI can be used to help learn about beauty and art. Problems of Authorship, Copyright and Evaluation Norms also occur.

6. Copyright, Ethics and Evaluation: Using Boundary and Process Archives

Copyright and Ethics in the Use of AI-generated Content in the Classroom. According to the 2023 Copyright Registration Guidelines of the US Copyright Office, these materials lack human authorship and are therefore not eligible for copyright protection; China has also issued regulations on the management of generative artificial intelligence services in the "Interim Measures for the Management of Generative Artificial Intelligence Services". These documents cannot solve the specific problems in the classroom; therefore, teaching should not only focus on "how to use" but also on "whether to use", "how to label", and "who is responsible" [10]. Teaching the composition of popular music can help students learn whether the created parts are suitable for their homework, how much modification constitutes originality, how to cite the creator, and what risks are involved in commercial use.

First of all, there are the annotation requirements. For all applications of AI-generated music, lyrics, arrangements or master recordings, attribution should be given to the tool used, a summary of the prompt, the time of generation and modifications, etc. Furthermore, it is necessary to leave a process trail, save the handwritten reasons, generated versions, revised drafts and reasons for discarding, etc., to build an auditable creative archive. At a higher level is the issue of copyright. Have the students compare the three cases: "direct submission after generation", "substantial modification after generation", and "use only as a reference", and then discuss attribution, originality and permissible applications. The teacher does not need to give the answer, but needs to put forward the problem [11]. The mode of assessment should also be modified to focus less on the perfection of the final work and more on the process, such as the clarity of the prompt, the existence of a basis for version comparison, whether the revision is in line with personal judgment, and the completeness of the copyright notice.

The purpose of the norms is to promote creative education, not to restrict the use of tools. When students submit AI-generated results as their own work, they save time in the short run but lose a learning opportunity in the long run; teachers can only grade the final products and cannot assess the actual abilities of the students. A feasible way is to add the use of AI to the evaluation criteria, allow for its application but disclose it, and promote comparison by having students rewrite and discuss copyright without making extensive legal judgments. The classroom can also use the output of public tools to discuss ethical problems in vocal synthesis, style imitation and lyrics generation, such as whether to appropriate a specific singer's style or use others' lyric fragments. The goal of teaching popular music composition is not to produce people who can operate a generation button, but to cultivate creators who can judge, modify and be responsible. A small Partition will be convenient for many years.

7. Conclusion

According to the publicly available functions of tools such as Udio, AIVA, LANDR and Magenta, song fragment generation, the provision of style variations and automatic mastering have entered the classroom, and thus the cost of

trial-and-error has decreased accordingly. Teaching should not neglect the process; although melodies and harmonies can be generated with it, handwritten motives and auditory analysis still need to be learned, arrangement production can be carried out quickly by using it for rapid prototyping, but lowering the threshold does not improve judgment ability, lyrics and style teaching can use it to generate comparison materials, but clichés should not be used as expressions, and copyright and ethical discussions also fall under this scope, so false certainty should not be given.

In some classrooms, the focus of teaching should be shifted from "creating a good song" to "explaining the reasons behind the writing, revision and application of this song". What students need to learn is how to design prompts, filter versions, rewrite materials, annotate sources and explain decisions; teachers should broaden the scope of evaluation from the completeness of the final work to the process archive, comparison basis and copyright statement. AI is not to be regarded as a substitute for human creation in music education, and while it can be used to generate materials, it is also prone to producing clichés. Classroom activities can be used to practice judgment in actual life, learn by comparison, and understand responsibility through rules. For this reason, the process of judgment will also be introduced here.

Limitations of this paper: The content of this paper is based on publicly available functions of tools and policy documents; no classroom experiments have been conducted, no data from student samples have been collected, and the teaching suggestions are the result of logical deduction rather than empirical testing. How students of different grades and with different levels of foundation use these tools still needs to be investigated through classroom observations and comparative studies. Further research can be combined with the curriculum to document the process of students' design prompts, version selection and material revision, compare changes in judgment ability under different rules, and track the effect of tool updates on teaching arrangements. AI has not been used to teach popular music creation for a long time, and which practices are truly effective still need to be verified by continuous teaching practice.

References

[1] Kasneci, E., Seßler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., ... Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. Learning and Individual Differences, 103, 102274. https://doi.org/10.1016/j.lindif.2023.102274.

[2] King, A., Himonides, E., & Ruthmann, S. A. (Eds.). (2019). The Routledge companion to music, technology, and education. Routledge.

[3] Ruthmann, S. A., & Mantie, R. (Eds.). (2017). The Oxford handbook of technology and music education. Oxford University Press.

[4] Sturm, B. L., & Ben-Tal, O. (2017). Taking the models back to music practice: Evaluating generative transcription models built using deep learning. Journal of Creative Music Systems, 2, 32–60. https://doi.org/10.5281/zenodo.1037245

[5] Hogenes, M., van Oers, B., Diekstra, R. F., & Sklad, M. (2016). The effects of music composition as a classroom activity on engagement in music education and academic and music achievement: A quasi-experimental study. International Journal of Music Education, 34(1), 32–48. https://doi.org/10.1177/0255761415576605

[6] Kardos, L. (2012). How music technology can make sound and music worlds accessible to student composers in Further Education colleges. British Journal of Music Education, 29(2), 143–151. https://doi.org/10.1017/S0265051712000056

[7] Bell, A. P. (2018). Dawn of the DAW: The studio as musical instrument. Oxford University Press.

[8] Bown, O. (2021). Beyond the creative species: Making machines that make art and music. The MIT Press.

[9] Temperley, D. (2018). The musical language of rock. Oxford University Press.

[10] Holmes, W., Porayska-Pomsta, K., Holstein, K., Sutherland, E., Baker, T., Shum, S. B., ... Koedinger, K. R. (2022). Ethics of AI in education: Towards a community-wide framework. International Journal of Artificial Intelligence in Education, 32(3), 504–526. https://doi.org/10.1007/s40593-022-00284-5

[11] Eaton, S. E. (2023). Postplagiarism: Transdisciplinary ethics and integrity in the age of artificial intelligence and neurotechnology. International Journal for Educational Integrity, 19(1), Article 23. https://doi.org/10.1007/s40979-023-00134-8.