# ПРОФЕССИОНАЛЬНОЕ Образование

УДК 372.874

DOI: 10.17853/1994-5639-2022-6-41-59

## HEUTAGOGICAL APPROACH TO MUSIC LEARNING IN VOCATIONAL SCHOOLS

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**Abstract.** Introduction. Music is one of the areas of expertise and skills existing in vocational schools in Indonesia, where students must master music in theory and practice. Due to the COVID-19 pandemic, music teachers are encouraged to design alternative learning methods in order to facilitate the students to learn music. This challenges the music teachers to provide interesting and well-delivered material during online learning since the teachers of vocational education have to adapt quickly and prepare the students to be ready in facing the today's challenges. In addition, the use of information and communication technology in teaching and performing music is growing rapidly, thus, the music teachers must master computer technology to address the complexities of today's music industry, and support the music learning process in theory and practice. The heutagogical approach is believed to be an innovative and trending approach to be applied in the music learning process, since it can adapt to the current changing times. It can also assist teachers to guide music theory and practice, develop and deliver direction and discussion through technology assistance with learning materials agreed in the classroom.

The *aim* of this article is to analyse the application of a heutagogical approach that focuses on improving learning, overall learning opportunities, and developing independent skills with technology assistance on music subjects in vocational schools in Bandung (West Java, Indonesia).

*Methodology and research methods.* This research employs grounded theory method by providing explicit analytical strategies with the ultimate goal of obtaining theories about certain processes, actions, or interactions that come from the teacher's point of view in teaching music in vocational schools.

*Results and scientific novelty.* It was found that teaching processes with heutagogical approach tend to be student-centred, enabling students to learn independently through self-determination, since it is the real implementation of student-centred educational theory that can help students hone skills and metacognition and reflect their own learning experience faster.

*Practical significance.* The current research aims at helping students studying music in vocational schools to apply self-determined learning, hence they can determine what to learn, how to learn it, when to learn, and where to get information to achieve the learning objectives.

Thus, students can decide when the best time to study music, explore their musical knowledge, and practice their music skills. In addition, students can be trained to design music lessons, build space patterns and learning opportunities, and develop themselves individually; hence that they can be responsible for the learning objectives they designed for themselves. As for the teachers, they can play their role as a guide and facilitator who can direct students in achieving their learning objectives.

*Keywords:* heutagogical approach, music, vocational school, online learning, self-determined learning.

**Acknowledgements.** The authors express their gratitude to Universitas Pendidikan Indonesia for funding this research project. Utmost gratitude and appreciation are also extended to partners and all parties, who have actively participated so that this research can be carried out, especially to the teacher representatives of Vocational High School (SMK) in Bandung (West Java, Indonesia).

**For citation:** Sukmayadi Y., Sella F., Midyanti H. I. Heutagogical approach to music learning in vocational schools. *The Education and Science Journal.* 2022; 24 (6): 41–59. DOI: 10.17853/1994-5639-2022-6-41-59

# ЭВТАГОГИЧЕСКИЙ ПОДХОД К ОБУЧЕНИЮ МУЗЫКЕ В ПРОФЕССИОНАЛЬНО-ТЕХНИЧЕСКИХ УЧИЛИЩАХ

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Аннотация. Введение. Музыка является одной из областей навыков и квалификации, существующих в профессионально-технических училищах Индонезии, где студенты должны осваивать музыку в теории и практике. Из-за пандемии COVID-19 преподавателям музыки рекомендуется разрабатывать альтернативные методы обучения, чтобы облегчить студентам прохождение программы. Поэтому они вынуждены выбирать интересные материалы и качественно их готовить при онлайн-обучении, так как преподаватели в сфере профессионального образования должны быстро адаптироваться к сегодняшним вызовам и учить студентов быть к готовыми к ним. Кроме того, использование информационно-коммуникационных технологий в преподавании и исполнении музыки быстро растет, поэтому преподаватели музыки должны осваивать компьютерные технологии для решения сложных задач современной музыкальной индустрии и поддерживать процесс обучения музыке в теории и на практике. Эвтагогический подход считается инновационным и трендовым, он должен применяться в процессе обучения музыке, поскольку может адаптироваться к текущим изменениям. Этот подход может также помогать учителям направлять теорию и практику музыки в нужное русло, разрабатывать и осуществлять руководство и обсуждение посредством технической помощи с учебными материалами, согласованными в классе.

Цель. Цель статьи – проанализировать применение эвтагогического подхода, направленного на улучшение обучения, общие возможности обучения и развитие независи-

мых навыков с технической помощью по музыкальным предметам в профессиональных школах в Бандунге (Западная Ява, Индонезия).

Методология и методы исследования. Исследование использует метод обоснованной теории, предоставляя четкие аналитические стратегии с конечной целью получения теории об определенных процессах, действиях или взаимодействиях, которые происходят с точки зрения учителя при преподавании музыки в профессиональных училищах.

Результаты и научная новизна. Было установлено, что преподавание с использованием эвтагогического подхода, как правило, ориентировано на учащихся, что позволяет им учиться независимо через самоопределение, поскольку именно реальное осуществление ориентированной на учащихся теории образования может помочь студентам оттачивать навыки и метасознание и быстрее анализировать свой учебный опыт.

Практическая значимость. Это исследование направлено на то, чтобы помочь студентам, изучающим музыку в профессионально-технических училищах, применять самоопределяемое обучение, поэтому они могут установить, что им учить, как и когда учиться и где получать информацию для достижения целей обучения. Таким образом, студенты могут решить, когда лучше всего изучать музыку, исследовать свои музыкальные знания и практиковать свои музыкальные навыки. Кроме того, они могут обучаться планированию музыкальных уроков, создавать пространственные модели и возможности для обучения, а также развиваться индивидуально, что позволяет им отслеживать поставленные ими цели обучения. Что касается преподавателей, то они могут играть роль руководителей и координаторов, которые направляют учащихся в достижении их учебных целей.

**Ключевые слова:** эвтагогический подход, музыка, профтехучилище, онлайн-обучение, самоопределяемое обучение.

**Благодарности.** Авторы выражают благодарность Университету Пендидикан Индонезия за финансирование этого исследовательского проекта. Авторы также выражают огромную благодарность и признательность партнерам и всем, кто принял активное участие в этом исследовании, особенно преподавателям профессионально-технической средней школы в Бандунге (Западная Ява, Индонезия).

Для цитирования: Сукмаяди Ю., Фенси С., Мидянти Х. И. Эвтагогический подход к обучению музыке в профессионально-технических училищах // Образование и наука. 2022. Т. 24, № 6. С. 41–59. DOI: 10.17853/1994-5639-2022-6-41-59

### Introduction

The revolutionary phenomenon of Industry 4.0 brings about a major change in the education system, especially vocational education [1–3]. All aspects of learning are expected to develop digital and virtual media [4, 5]. This is also in line with the characteristics of  $21^{st}$  century graduate competency or so-called the 4Cs (communication, collaboration, critical thinking and problem solving, and creativity and innovation) [6, 7]. The achievement of these four skills is still suboptimal, even in developed countries [8]. Some experts in developed countries state that vocational education requires mastery of actual and relevant

skills according to the needs of modern industry [9–11]. Education prioritises individuality, which makes competency become more flexible, necessitates development of programmes guiding students into the life spheres, where they will open up their capabilities and potential [12].

During the pandemic, teachers' creativity is essential. In particular, they are expected to use a creative learning approach so that the learning process remains effective. One subject that requires more practice is music. In practice, music teachers always try to help students achieve and master the competency of music practice material. Music subject is a theoretical and practical subject that must be mastered by students, thus, the teachers must be able to give maximum effort even though the pandemic presents many limitations in delivering classroom instructions. In music subject, the classroom instructions require practice, usually only by using musical instruments available at school. This is a challenge for music teachers to provide interesting and well-delivered material, in forms of online learning. In addition, teachers must be able to anticipate that practical learning can still be carried out properly using existing online media. The first thing to do is that the teacher must know the essential materials for the students in accordance with the curriculum. Essential materials are priority materials that must be given to students to increase the expected competencies during the pandemic. In carrying out practical learning in music subjects, teachers must pay attention to several aspects, namely essential materials, the students' internet connection availability, and the availability of tools, especially for ensemble material.

Based on the problems above, an effective learning approach is needed by implementing interactive learning systems and media. One approach that is found to be innovative and currently trending is the heutagogical approach. This approach focuses on improving learning, overall learning opportunities, and developing independent skills. The students' characteristics are highly influential and crucial because they are required to find everything independently, including information and data to support their music learning. With this approach, the teacher only functions as a facilitator who plays a role in showing the direction that students will take in learning.

## **Literature Review**

Education is increasingly important to ensure that students have the skills to help them learn and innovate by using technology and information media, in order to make them able to work and survive by using life skills. The 21<sup>st</sup> century is also marked by the amount of information that is available anywhere and can be accessed at any time, faster computing, automation that replaces routine jobs, and communication that can be done from anywhere [13, 14]. Advances in science

and technology allow internet users to carry out various activities in cyberspace interactively between themselves and their computers or with fellow users, either individually or in groups, in their own environment, or on other continents for an unlimited period of time. The Industrial Revolution 4.0 is marked by increased connectivity, interaction, and the development of digital, artificial and virtual systems. With the increasingly convergent boundaries between humans, machines, and other resources, information and communication technology will certainly have an impact on various sectors of life. The vision of Industry 4.0 will not only bring new approaches but also methodologies and technologies that must be introduced to companies, including the education sector [15]. The government programme "Making Indonesia 4.0" means overhauling the education curriculum by prioritising STEAM (Science, Technology, Engineering, the Arts, and Mathematics), aligning the national education curriculum with future industrial needs [16, 17]. Indonesia will work closely with industry players and foreign governments to improve the quality of vocational schools, as well as improve global labour mobility programmes to take advantage of the availability of human resources to accelerate skills transfer. The international experience of the solution of the arising problems in connection with globalisation of education market and a general crisis of education is summarised.

Independent learning has become a new era of education policy in Indonesia. Contextually, the condition of independent learning concept means independence in achieving goals, application of methods, materials choice, and learning evaluation models that apply to teachers and students [18]. Teachers or lecturers as educators are expected to be able to realise independent learning with the support of professional competency. The independent learning concept emphasises on active learning for students to get direct experience of various social phenomena occurring in the community so that they can improve the abilities of current and future students, both during and after the COVID-19 pandemic. However, the paradigm that occurs in the field shows that the implementation of the free/independent learning policy has not been fully implemented due to various problems. The readiness of human resources and supporting facilities is one of the factors that influence the free learning policy [19].

The form of learning activities [20] in accordance with the Regulation of the Minister of Education and Culture Number 3 of 2020 Article 15 paragraph 1, especially those relevant to this research, is the implementation of lecturer research involving students. In addition, through this research, there is also a schedule of coaching activities for vocational school teachers regarding certain competencies, such as providing digital literacy competencies.

The trend of combining student-centred teaching and the use of technology in the classroom has given teachers the opportunity to support students in

developing lifelong learning skills [21, 22]. Heutagogy provides a promising framework for capitalising on this growing trend [23, 24] by drawing on a theory of student-centred education and emphasising learner autonomy [25, 26]. The main principles of heutagogy point to students as central to learning, self-efficacy and ability, reflection and metacognition, and non-linear learning that provide the foundation for designing and developing a learning ecology. This potential can be maximised using digital media.

Heutagogy as an approach to adult learning and teaching; it holistically implies fundamental changes in learning and teaching processes. Heutagogical approach focuses on developing lifelong learning skills through an active and proactive learning process [27], where students are central in the learning process. It challenges good pedagogical practices and beliefs by advocating for increased student autonomy where, when, and how learning occurs. In addition, it revisits the teacher's role who relinquishes ownership of the learning pathway and process to students, and who negotiates learning and determines what will be learned and how it will be learned [28].

The main distinguishing factor of heutagogy compared from other pedagogical approaches is the notion of two-round learning where the learners think about possible solutions and act on the problems they face, which may not necessarily be in line with existing theories, values, and assumptions. This is a consequence of the actions and results of the reflection process during the learning process. Heutagogy can benefit both the learner and the facilitator. Students are given the right to determine how and what they will learn, and to build high intrinsic motivation [29–33]. Students develop skills that enhance active learning abilities since heutagogy focuses on discovering how students prefer to learn and developing certain methods [34–37]. New success is found with an independent learning process that can encourage students' better confidence.

Heutagogy provides an alternative to viewing and building activity-based educational components. Considering that heutagogy is often seen as something that is inherent in work-based learning opportunities, hence, heutagogy must be integrated in various aspects. One form of this learning process in vocational learning is apprenticeship. This expansive approach consists of a studentcentred lifelong learning system that emphasises the importance of learning and reflection. In a broad range of apprenticeship activities, both institutions and employers support apprentices in students' individual learning journeys, rather than dictating how and what students should learn.

The philosophy of student-centred technological transformation should be at the core of learning. Therefore, the quality of ICT-based learning delivery depends on ensuring facilities and accessibility, principles of adult learning, instructional design and appropriate delivery, and support services. There are

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several design models for the heutagogical approach, especially online learning, as follows: 1) Design a lesson plan in which the learning objectives are not the focus because, in heutagogical learning, the learning objectives will contain skills and behaviours; 2) Lesson plan needs to be prepared with the approval of the agency because the role of the teacher changes from being a teacher to being a facilitator; 3) The learning process must be flexible in terms of time and place; 4) Teachers must have trust in what they do and what the students do; 5) The rules for assignments in the learning process must be agreed upon; 6) Students must be collaborative; and 7) Learning is non-linear (explorative) covering all aspects of life that are around. It aims for students to be able to solve problems around them in the future. This way, students are agents of experience who are not just living experiences. Teachers as facilitators must be responsible for the surrounding environment in making learning designs with a heutagogical approach so to make the design supportive and does not threaten the environment [38]. In other words, the problem of originality of a student's work becomes very important for heutagogy. Therefore, the heutagogical approach is very concerned with the development of student creativity [39]:

1) Double Loop (emphasis on values and attitudes) where students are independent in determining what they have;

2) Reconceptualisation [40] in the learning process, where each student learns from the way other students learn and discover things, so that mutual attachment occurs and they can work together to learn from each other [41]. Finally, in every learning process, students must have the ability to monitor themselves [42] through the work they have done in order to improve their abilities and skills;

3) Provide support. Teachers become facilitators, providing feedback to guide students' future in learning; and

4) Committed as a facilitator.

## **Research Methods**

This research was not based or built on existing learning models but on the research findings, therefore, grounded theory method was employed. Grounded theory is a systematic method of conducting research in the form of data collection and providing an explicit strategy for analysing [43]. This method was used to obtain theories about certain processes, actions, or interactions that come from the teacher's perspective in teaching music subjects in vocational schools. The research instruments used in this study were music teacher lesson plans, interviews with music teachers, and data triangulation to ensure the validity of the data through collecting similar data from different data sources.

This research was started with an in-depth study of what is meant by the heutagogical approach through a focus group discussion by presenting speakers from Germany and Indonesia, and was attended by the research team, academics, and representatives of vocational teachers. This activity was aimed at obtaining comprehensive data from various perspectives. Following this activity was an in-depth literature study on the heutagogical approach. The research subjects acted as information providers in validating the problems in this research. In addition, the interviewed experts were positioned as expert resource to examine problems in the school.

In order for the research to run systematically and measurably, this research was carried out for 4 (four) months. The following was the design of the research:

• First, identification of the selected sites and individuals in order to understand the research problem. What needs to be understood at the initial stage was the setting of the research site, the participants who will be observed and interviewed, the field events experienced by the participants, and the actual events that the participants experienced in the research setting.

• Second, collection of various types of data with the most possible effective use of time to collect information at the research site. The data collection in this research involved some four types of strategies, namely, observation to vocational schools by conducting focus group discussion by presenting speakers from Germany and Indonesia, and was attended by the research team, academics, workshop and having discussion with the representatives of vocational teachers, and analysis of all the data collected, and implement it into a lesson plan in class. This activity was aimed at obtaining comprehensive data from various perspectives, documentation, and audio and visual materials.

• Third, data analysis based on the following steps: 1) processing and preparing data for analysis; 2) reading the entire data; 3) analysing the collected data more thoroughly; 4) applying the research stages in describing the setting, participants, categories, and themes to be analysed; 5) presenting heutagogy; and 6) interpreting the data.

• Fourth, development of a research report from the results of the data analysis in the form of a printed research report.

The results of the strategies above show that the heutagogical approach has been widely applied in vocational schools, but the teachers do not have enough knowledge about the heutagogical approach and lack experience in designing lesson plans using the heutagogical approach. In discussions with several teachers in vocational schools, they stated that a heutagogical approach was needed in vocational schools because it was in line with vocational learning outcomes in the form of products. However, there are several problems found in vocational schools in Indonesia at the current condition. Among other things, there is a lot of productive content that requires students to be accompanied by teachers in practical learning with various forms of measuring instruments, practicum materials, and other equipment that may not be available to students. Thus, if students are not able to explore independently, they will not be able to follow in terms of ability and teachers will find it difficult to encourage students to achieve learning goals. In addition, problems also arise when teachers have to change habits in the learning process because they are accustomed to teaching with a pedagogical approach.

Based on the results of the focus group discussion, this heutagogical approach has been implemented in vocational education, among others, by utilising technology as a means of building student independence. The use of innovative technology in the Industry 4.0 Era in learning, for example, such as: the delivery of theory-based learning online in the e-internship model, and digital devices to track learning to minimise costs. Apart from this, it is also intended to increase access, and improve the quality of learning. Therefore, ICT (Information and Communication Technology) can be used to deliver micro-learning that is relevant to the urgent needs of students in the formal and informal sectors. Technology like this must be used to support learning to be more transformative. The similar research shows that technology and social media in particular provide opportunities for students to actively explore, construct, and disseminate information, as well as many ways that media can be used to support a heutagogical learning approach [44].

Learning conditions with a heutagogical approach provide an overview of independence that is built on the basis of student-teacher-school collaboration. The involvement of various parties and the support of facilities and infrastructure is one of the keys to the successful implementation of learning with a heutagogical approach. The learning situation through the heutagogical approach, which was explained by all the speakers during the focus group discussion, became the basis for the implementation of music learning with the heutagogical approach at the vocational school.

#### **Results and Discussion**

There are several stages for implementing the heutagogical approach in vocational school especially on the music subject. The first is making a music subject lesson plan. At this stage, the teacher identifies the students' familiarity with the internet. In addition, the teacher also identifies how often students use music applications on their cell phones or laptops. In ensemble-type subjects, such as material about bands that are learned in vocational school, video collage applications are quite popular among students to keep the ensemble music practice. Therefore, the teacher must also be able to make a music subject lesson plan in accordance with the results of the identification at this early stage.

Further at this stage, the teacher designs lessons based on the FACE elements (Flexibility, Agility, Contracts, Inquiry). The application of the heutagogical approach in making lesson plans is elaborated in a three-stage process [45]. First, the heutagogical approach begins by defining a learning contract. At this stage, the teacher and students work together to identify learning needs and outcomes, determine what students want to learn, how to obtain learning outcomes, what should be done, and what learning experiences students want to get. It is important to note that the lesson plan must consider the learning environment and learning resources. Next, the teacher and students negotiate the process of evaluating and assessing the learning achievements; how learning will be assessed, who will assess it, and how to collectively determine that learning achievements have been achieved. All learning processes, from developing lesson plans to assessments, must be negotiated between the teacher and students.

The second stage in applying the heutagogical approach is the stage of designing learning activities. In order to achieve success at this stage, the teacher must create a challenging task that is achievable and beneficial for students, gives as much freedom to students as possible, and generates support from various parties on a cooperative and collaborative basis. The teacher and students negotiate and agree on the development of learning activities, then choose learning media (in the form of digital technology applications) that are relevant to the learning styles and characteristics of students and that support learning resources based on digital technology that are in accordance with the characteristics of Generation Z to support the success of the learning process and the achievement of the desired learning goals. During this stage of the process, the teacher must support students in defining learning activities, provide continuous feedback, be constructive, and provide opportunities for students to reflect on the new knowledge gained during the learning process.

The third stage in applying the heutagogical approach is to design an assessment or evaluation of learning outcomes based on student participation. Assessment of learning outcomes is used to determine whether the agreed/ negotiated results have been achieved and how the learning process is assessed based on a learning contract that has been determined together at the beginning of the learning process. The process of evaluating learning outcomes is carried out collectively by identifying and reviewing the learning process to find out whether specific competencies and skills have been achieved or not. This process is based on the principle that the heutagogical approach is student-centred, so the student is the main assessor of the learning process.



Fig. 1. Heutagogy learning cycle in music learning

The application of the heutagogical approach will certainly change the format of the lesson plans according to that approach. One of the changes is in determining the learning steps for band material in vocational schools. This learning material has learning objectives to understand musical notation, write arrangements, and practice band arrangements.

In the educational planning process, students are given the freedom to plan and divide the work to review the repertoire chosen by each group. Then, students look for repertoires to be studied, analysed and rearranged without any repertoire restrictions from the teacher. In practice, the teacher gives freedom to students to choose the repertoire, does not limit the arrangement, and students are free to use any application as needed. Students are also given the freedom to collaborate on playing musical instruments using applications such as video collages and others. Here, the teacher only monitors students so that students continue to meet learning objectives in accordance with the learning contract.



Fig. 2. Application usage for music learning

At the end of the material, students must be able to practice the arrangement in groups. Then, the teacher gives a reflection sheet to the students. Students can plan what to do next with the time that has been determined by the students themselves. After filling out the learning activity reflection sheet, the deadline is set by the students and approved and given input by the teacher, and then the learning contract is carried out again for the next learning meeting.

Based on the explanation above, there are several stages of learning integrating the heutagogy principles as basic knowledge for musical performance in band subjects. The relationship between students and educators undergoes a transformation as students gradually move from accessing structured learning resources to interacting in a more open learning environment. If in the offline band learning process, the world that is built by educators and the experience of students is mostly almost evenly distributed. However, in an online learning environment, students' experiences are not influenced to the same degree by educators because students are involved in the implementation of learning, and can determine for themselves what will be learned with a learning contract, according to the learning styles and interests of the students. Here, students' conceptual knowledge interacts more prominently with their experience in studying music. So that learning takes place through activities that involve more group learning and educators as facilitators. Learners can learn by interacting from various musical sources, and responding to feedback from both educators and peers, as well as feedback on themselves. From the learning results above, the process is as follows:

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Fig. 3. Process of music learning practice

Source: Adapted from Blaschke & Hase, 2015

The communication stages carried out in the music learning with band subjects are presented in Table 1.

Table 1

The communication stages carried out in the music learning subjects

Communica-	Learning stages	Learning tech-	Basauraaa
tion		niques	Resources
Discussion	Knowledge ac- quirement	Internet as learning source	Musical instruments, interface digital data, sheet music, audio data, video data
Interaction	Exercises and practices	Individual learning	Demonstration video and audio data, continuous and repeated practice
Adaptation	Feedback	Interned-as- sisted	Communication between stu- dents and educators
Reflection	Self-improve- ment	Independent and collabora- tive learning	Group discussions, two-way in- teractive videos with educators, collaborative discussions
Evaluation	Performance, demonstration, and assessment	Learning out- comes videos	Appearance of learning out- comes, portfolio

From the results of these observations, it was found that the use of technology allows for instant multimedia communication and responsiveness between teachers and students, where interactive practical learning can be carried out. Experience in learning activities with a synchronous heutagogical approach can be done well. Some learning materials, which are usually presented in offline learning, can be digitised and presented to students for reading outside of class time, and additional materials that they get themselves through websites and social media can make the projects they work on more interactive, direct, and collaborative. Technology can ideally offer a space to showcase student work in the form of a portfolio, whether consisting of videos of the teaching process, recorded compositions in the form of audio and video data, as well as other interactive projects that allow them to get feedback on the musical creations they have worked on.

However, each student tries to solve the technical challenges of using technology, which at the time of learning takes place, due to limited costs, supporting equipment, and knowledge. Therefore, the knowledge gained is not only theory and practice on music itself, but also other knowledge related to technology and music independently. So here, technology helps in facilitating online heutagogical learning experiences that in some cases are considered as real as live musical interactions. In addition, the use of technology in music learning with a heutagogical approach has several perceptions, namely the perception of usefulness and the perception of ease of use. In addition, students are given the opportunity to reflect in assessing the game themselves or their groups, what needs to be improved, and what must be done in the next learning process in order to get maximum results. In self-reflection by the students, it was found that smartphones, laptops, and computers were very helpful in the process of recording video and audio and speeding up the learning process so that students actively recorded their games and reviewed the results for better results.

## Conclusions

Based on the discussion and description of the problem above, it can be concluded that the application of the heutagogical approach in music subjects in vocational schools has relevant educational implications. Through the concept of heutagogy, band subjects that are ensemble or group can continue to be developed by students according to their capacity without any limitations on resources from the teacher. Students are free to develop skills and determine their own learning resources. Students do not only get evaluation results from the teacher as does the classical approach. But also free to give the results of their evaluation of other groups of students. Practical learning in music lessons in vocational schools requires more commitment from the teacher than conventional learning

approaches. Teachers take on more of the role of facilitator or mentor using this approach so they can continually evaluate what students need. Teachers also need to be genuinely positive about this approach in order to convince students of the value of trying something new. Teachers should have a desire to try something different and feel challenged by the prospect of working with students. Teachers must be confident with strong self-efficacy and have many resources at their disposal to work with rapidly evolving and changing students, especially the practical needs of the music subject. The use of innovative technologies, such as online delivery of theory-based lessons in the e-internship model, and digital tools to find effective learning resources can reduce costs, increase access, and improve the quality of work-based learning experiences. Information and communication technology can be used to deliver learning that is relevant to the needs of students in the formal and informal sectors. Technology should be used to support lifelong learning in vocational education through a heutagogical approach.

Heutagogical approach is a form of a natural development of the previous learning approaches. By realising an innovative learning and meeting 21<sup>st</sup> century competencies and challenges in Era 5.0, teachers can see an educational approach where students must be able to determine what will be learned and how the learning process is carried out. The world is currently undergoing the era of the Industrial Revolution 4.0, but it is possible that there will be faster technological developments in the future where knowledge can be organised and distributed widely, studied according to the environment and abilities of each student, and obtained and explored through digital media. By combining a heutagogical approach and the latest technology, such as exploring the use of social media or other technologies, it is expected that music learning can be designed and developed with a student-centred mindset to equip students with the necessary skills for lifelong music learning that follows technological developments. Thus, lifelong music learning will continue to evolve with the times.

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**Conflict of interest statement.** The authors declare that there is no conflict of interest.

Received 15.02.2022; revised 28.04.2022; accepted for publication 04.05.2022. The authors have read and approved the final manuscript.

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**Информация о конфликте интересов.** Авторы заявляют об отсутствии конфликта интересов.

Статья поступила в редакцию 15.02.2022; поступила после рецензирования 28.04.2022; принята к публикации 04.05.2022.

Авторы прочитали и одобрили окончательный вариант рукописи.