Validity of a Massive Open Online Course on Career Planning: Supporting Resilience and Career Adaptability in Adolescents

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Abstract

Adolescents must possess essential career planning skills to achieve career resilience and adaptability, especially during times of economic uncertainty. To develop these abilities effectively, appropriate training materials are crucial. This study focuses on the development and validation of a career planning training material through a massive open online course (MOOC) platform, supporting the resilience and career adaptability of adolescents. Employing a Research and Development (R&D) design with the ADDIE model (analysis, design, development, implementation, and evaluation), the study produced MOOC content, including handouts, PowerPoint presentations, infographics, videos, motion graphics, and podcasts. Based on the concepts of resilience and career adaptability in adolescents, the material was divided into two parts: one for teachers and one for students. Expert validation of the MOOC product rated it as good to excellent. The validated product contributes by providing strategies and career planning training material through MOOC, offering novel findings that significantly benefit the development of adolescents' resilience and career adaptability.

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I. Introduction

The Covid-19 pandemic has added complexity to career challenges in the era of the fourth industrial revolution. Economic uncertainty resulting from the pandemic has triggered career stress and anxiety among various groups, especially adolescents (Hite & McDonald, 2020; Mahmud et al., 2021a). This problem has been observed among adolescents in several countries, including Turkey and Hong Kong (Demirtaş & Kara, 2022; Jung et al., 2021; Mahmud et al., 2021b; Rahimi et al., 2022). Preventive efforts are needed to anticipate the increasing problem of career anxiety among adolescents in the face of global uncertainty.

Career anxiety can occur due to a lack of self-understanding, low career self-confidence, limited career information, and weak career planning skills among adolescents (Ansell et al., 2009; Dolan, 1995; Mature & Employment, 2015; Tomy & Pardede, 2019). Self-understanding is the ability to recognize one's potential, which is crucial in making career choices, while career self-confidence refers to a strong belief in one's potential for success. These two abilities are essential aspects of career planning.

Career planning skills contribute to adolescents' career readiness, which involves designing desired career targets and plans. Career planning includes the process of analyzing and making career choices, as well as finding ways to achieve them. Therefore, effective career planning can strengthen adolescents' career readiness and identity, helping them to face career uncertainty (Cardoso & Moreira, 2009; Layton et al., 2020; Magnuson & Starr, 2000; Meijers & Lengelle, 2012; Stebleton et al., 2020; Tarigan & Wimbarti, 2011). Thus, career planning skills are influenced by career resilience and adaptability, two crucial abilities in one's career journey.

Career resilience is an important concept that involves an individual's ability to adapt and endure various situations in career development (Fourie & Van Vuuren, 1998; Papaioannou et al., 2022). Through career resilience, adolescents can confidently choose a meaningful and satisfying career path (Park et al., 2022). On the other hand, career adaptability emphasizes an individual's ability to identify and adjust to changes in the workplace, enabling them to overcome environmental changes and achieve career goals effectively (Savickas, 1997). Individuals with career adaptability can continue learning, develop new skills, and face workplace challenges (Lee et al., 2021a).

Career resilience focuses on an individual's ability to adapt, function positively, and recover from challenges in the workplace, helping adolescents cope with challenging situations such as failure or changes in career choices. Additionally, career adaptability reflects adolescents' ability to adjust their goals, values, and preferences over time, further strengthening career resilience. This adaptability helps adolescents face challenges with resilience and positive growth, making the connection between career resilience and career adaptability critical in providing a strong foundation for their career success and satisfaction (Santilli et al., 2020; Xu et al., 2020).

To develop career planning abilities, education and career guidance that emphasize resilience and career adaptability in adolescents are essential (Awad et al., 2017; Mercu et al., 2020; Mghweno et al., 2014; Muslihati, Atmoko & Zen, 2020; Vondracek et al., 2019). Essential materials to be presented include self-understanding, searching for and understanding career information, and making career choices with careful consideration. Education and career guidance can be provided through face-to-face or online training (Evans, 2017; Thul-Sigler & Colozzi, 2019; Tomy & Pardede, 2019; Yang et al., 2017).

Such education and guidance can enhance adolescents' self-efficacy, adaptability, and career resilience, which are crucial for their readiness to face various career challenges and solve career-related problems (Delle & Searle, 2020; Fasbender et al., 2019; Santilli et al., 2017; Taber & Blankemeyer, 2015; Zacher et al., 2015). Strengthening career resilience can be facilitated through parental support and educational programs in schools (Hou & Leung, 2011; Lee et al., 2021b; Martin et al., 2019). These efforts can be achieved through the development of current technology platforms, such as Massive Open Online Courses (MOOC).

MOOC are widely used online learning platforms today. This platform model has many advantages as training and learning materials are presented systematically and concisely through an online pattern, accessible to a broad audience through online learning management. MOOC have seen significant growth in the realm of career and educational facilitation due to the rapid advancement of information technology, adolescents' increased use of social media, and the demand for restrictions during the Covid-19 pandemic (Flowers, 2002; Mishra et al., 2020).

In the last three years, MOOC have been widely used to enhance self-regulation to support self-paced learning (Jansen et al., 2020; Wong et al., 2021). Several research findings have demonstrated the significant benefits of using MOOC in training and learning, resulting in high satisfaction among users (Li, 2019; Lung-Guang, 2019). Due to these advantages, MOOC are widely employed in education and career settings (Kim et al., 2020).

The urgency to develop concise and physically relevant online career guidance platforms underpins this research process. This study aims to develop MOOC content related to individual career planning to support career resilience and adaptability in adolescents. The results of this research contribute to enriching models of interactive online career education and facilitation.

II. Methods

This research and development study employed the ADDIE model (Branch, 2009), consisting of five stages:

- Analysis: The analysis stage focused on understanding the students' needs concerning career planning material. This phase involved comprehensive research to identify specific requirements.

- Design: Based on the analysis of students' needs and in alignment with the MOOC framework, the researchers designed the career planning training material. The design process encompassed curriculum development, interactive content creation, interactive case studies and stories, and the implementation of mentoring models and training evaluations.

- Development: The complete content of the career planning training was developed, and the product was then validated by career guidance experts and media specialists (Hadi, 2017). Validation criteria included accuracy, ease of use, attractiveness, and usefulness. The product underwent validation by counseling and guidance experts as well as learning media experts.

- Implementation: In this stage, the product was assessed by potential users to gauge its usability, effectiveness, and overall reception.

- Evaluation: The final stage involved a comprehensive evaluation of the overall product, considering its impact, effectiveness, and appropriateness for the intended audience.

The discussion in this article only covers the product development process up to the validation stage by experts.

III.   Results

This research produced career planning training materials in the format of handouts, PowerPoint, infographics, videos, motion graphics, and podcasts. All product formats are uploaded on the Malang State University MOOC platform. The products were developed based on the draft curriculum topics that were arranged to answer the needs of adolescents as potential training targets. The resulting products consist of eight handout topics, eight presentation slide topics, four explainer video topics, four audio topics, two motion graphic topics, four audio topics, and four infographics. Table 1 (in Appendix 1) presents the topics of career planning training materials and the distribution of the types of products developed.

To ensure the acceptability of this MOOC training material on career planning, a content quality assessment or validation was conducted by career guidance and counselling experts and learning media development experts. There are four aspects of acceptability criteria, namely accuracy, convenience, attractiveness, and usefulness which are used as indicators of assessment by guidance experts and learning media experts. Table 2 (in Appendix 2) shows the results of the validation of this training material, along with suggestions from the validators.

As a follow-up to the product validation results, researchers have revised the product according to the suggestions given by the validators. Improvements aim to perfect the product before implementation and comprehensive evaluation. All products have also been uploaded to the State University of Malang MOOC page. Prior to the effectiveness test, the career planning training MOOC materials could only be accessed by the research team and the data management team.

IV.   Discussion

Rising from the downturn of social and economic life post the Covid-19 pandemic has become a challenge for various countries, including Indonesia. The impact of the Covid-19 pandemic has significantly affected the job market. The increasing competition in the job and industry world has intensified the competition. Each individual must possess specific competencies to survive and compete in the job market. This condition requires schools and universities to prepare high-quality graduates who can compete globally and master technological advancements, which are crucial for everyone's future (Lindstrom et al., 2022)

Education becomes increasingly important to ensure that students have the skills to learn and innovate, skills to use information technology and media, and the ability to work and sustain themselves using life skills. The 21st century is also marked by (1) abundant information available anywhere and accessible anytime; (2) faster calculations; (3) automation replacing routine work; and (4) communication that can be done from anywhere and at any time (Saputra, 2021). Currently, education is in the knowledge era with tremendous knowledge growth acceleration. This acceleration is supported by the implementation of media and digital technology known as the information highway (Zhang et al., 2019)

In the world of education, related services also need attention amidst the rapid developments of the current era. Career information services are provided to give knowledge and understanding to students about various useful aspects for self-awareness, planning, and development of life patterns as students and members of society so that the understanding gained through career information can serve as a reference in improving learning activities and achievements, developing aspirations in everyday life, and making decisions (Hidayati, 2015).

Adaptability is an individual's ability to adjust to new situations or changes without difficulty (Janssen & Van der Voort, 2020). This adaptation skill can be acquired by individuals through careful career planning. Good career planning will facilitate an individual's career adjustment, including successful career task fulfilment and personal development (Saraswati & Nugroho, 2021). Career planning is seen as an effort to integrate an individual into their social environment (Zhang et al., 2019). Therefore, individual career planning should be developed based on interests, talents, potential, and career aspirations.

Adolescents are individuals in a transitional period with a series of career development tasks. During this time, individuals make various preparations and develop career plans, including directions for further studies. Adolescents often do not know how to seek career information and which career fields to pursue. They face the challenge of making the right career decisions to avoid failure traps due to career choices that do not match their potential (Santrock, 2017).

Self-understanding about career choices is an important component for adolescents. Self-understanding involves in-depth knowledge of skills, interests, and personal goals related to future careers (Nair & Fahimirad, 2019). Self-understanding helps individuals identify career fields that align with their interests and skills, providing a strong foundation for making the right career decisions (Fransson et al., 2019). Without self-understanding, adolescents may feel confused or dissatisfied with their chosen career paths (Haluch et al., 2022; Sharma, 2022).

In addition to self-understanding, understanding career information is also crucial in managing careers for adolescents. Undeniably, in the ever-evolving job market, career information plays a role as a guide to understanding industry trends, job opportunities, and professional development (Cortesi et al., 2020). Understanding career information helps adolescents explore various career options, know the required qualifications and competencies,

and understand the changes occurring in the job market (Perkins et al., 2022; Smith & Wood, 2020). With a good understanding of career information, adolescents can make decisions that align with the changing times, enabling them to build sustainable career paths (García-Pérez et al., 2021).

Self-understanding and career information knowledge in adolescents can be optimized through career planning training. Career planning training helps individuals develop skills such as career decision-making, job interviews, professional networking, and personal development (Ayoobzadeh, 2022; Kanar, 2020). With career planning training, adolescents can enhance their abilities in seeking suitable jobs based on their interests and skills, navigating career changes, and planning steps to achieve long-term career goals (Secundo et al., 2019). Career planning training also provides the necessary support and guidance in facing challenges and difficulties that may arise in their career journey.

Another factor that can influence individual career planning is parental support. Parents play a significant role in an individual's development and life, including career development, work plans, and success in the job market (Pradnyawati & Rustika, 2019). Parental support affects an individual's career choices because parents often provide information about jobs, values, and experiences to the individual (Santrock, 2017). Additionally, teachers also play a role in an individual's career planning and choices. Teachers are essential figures in developing an individual's knowledge and skills. Therefore, in planning students' careers, the role of teachers and parents is crucial.

One lesson to achieve or gain many of these skills is based on MOOCs (Massive Open Online Courses). Massive Open Online Courses are online learning innovations on the Internet, developed openly. This principle marks the beginning of the democratization of knowledge, skills, and individual autonomy, creating opportunities for everyone to use technology productively and effectively (Nafa et al., 2021). The media used in MOOCs are quite diverse, including handouts, PowerPoint presentations, infographics, videos, motion graphics, and podcasts (Nafa et al., 2021; Suyetno & Solichin, 2020). Another information technology role that is significant in preparing 21st-century learning is using MOOC-based learning (Handayani & Siswoyo, 2023).

The MOOC career planning training for adolescents consists of several sessions. The first session provides an overview of the training and invites participants to commit to it. The second session focuses on self-understanding and enhancing career resilience. The third and fourth sessions focus on collecting career information to enhance career knowledge and adaptability. The fifth session focuses on planning further studies based on practical experience. The sixth session helps participants solve career planning-related problems. The seventh and eighth sessions focus on follow-up efforts and closure. This training aims to help adolescents make career choices with a focus on strengthening career resilience and adaptability. For teachers participating in this training, they will become facilitators for students in planning their careers in the future. This concept has been validated by experts and is expected to achieve the goal of this research (Committee, 1994), which is to support career planning to promote resilience and adaptability in adolescents' careers.

V.   Conclusion and Recommendations

In conclusion, this research and development endeavor resulted in comprehensive career planning training materials, comprising eight handout topics, eight slide presentation topics, four video explainers, four audio topics, two motion graphic topics, and four infographics. All products have been packaged and uploaded on the MOOC (Massive Open Online Courses) platform. These products have been validated by counselling and educational media experts and received favourable assessments, ranging from good to excellent, thus making them worthy of proceeding to the effectiveness testing and product implementation phase.

Moving forward, the implementation of these MOOC training activities, holds great promise in assisting adolescents with their career choices while emphasizing the enhancement of career resilience and adaptability. For teachers participating in this training, they can act as facilitators for students in planning their careers in the future. For future research, it is recommended to employ an experimental research design to assess the efficacy of the MOOC content. This study could involve comparing two groups of high school students, with one group exposed to the career planning MOOC training and the other acting as a control group. Through a thorough effectiveness analysis, the impact of the training on students' career choices, resilience, and adaptability can be measured and evaluated.

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Appendix 1

Table 1. MOOC-assisted Career Planning Training Materials

No	Topic	Description Training	Materials and Media	Instruments
1	Introduction and Over View Course	Explanation of MOOC class objectives, MOOC class topics, MOOC class activities and learning regulations for participants. MOOC pre assessment instrument and recommendations according to the assessment results.	Hand Out 1 Video Explainer 1 Slide Presentation 1 Assessment / Quiz 1	Inform Concern
2	Let's Understand Yourself	Procedures and techniques for understanding self-potential for career planning, self-understanding processes and procedures, self-understanding instruments, completion and analysis procedures. Let's understand yourself quiz	Hand Out 2 Audio 1, Slide Presentation 2 Video Explainer 2 Motion graphic 1	Self-understanding Quiz
3	Gather Information (1)	Variety of information on further study after graduating from high school strategies for gathering further study information, Practice of selecting further study information and Quiz on Gathering Information	1 Hand Out 3 Slide presentation 3 Video Explainer 3 Infographic 1	Career Information Quiz
4	Collect Information (2)	Career information, alternative further studies, strategies for collecting career and further studies information after high school, practice learning and selecting further studies information and alternative career information. Collect Information Quiz 2	Hand Out 4 Slide presentation 4 Infographic 2	Career Information Quiz 2
5	Let's take action	How to plan for further studies and career, how to plan for further studies and career after high school. Let's Act Quiz	Hand Out 5, Audio 2, Infographic 3 Slide Presentation 5 Video Explainer 4	Career/Advanced Study Plan Form
6	Consultation	Procedures and techniques for career consultation with counselors, Collaboration strategies between counseling teachers and parents in assisting high school students' further study planning. Procedures for formulating consultation results and self-evaluation.	Hand Out 6 Slide Presentation 6 Info Graphic 4 Audio 3	Consultation result form
7	Follow Up	Career planning experience sharing procedure. Peer support through Focus Group Discussion and participant self-evaluation	Hand Out 7 Slide presentation 7 Evaluation/Quiz 7 Infographic 4	Self Evaluation of FGD Results
8	Closing	Participant reflection, motivation and follow-up suggestions and Evaluation of learning outcomes	Hand Out 8 Audio 4 Slide Presentation 8 Motion graphic 2	MOOC evaluation

Appendix 2

Table 2. Validation Results and Suggestions

Validators	Products	Assessment result	Suggestions for MOOC for teachers	Suggestions for MOOC Materials for students
Material Expert	Handout	Good	Theoretical reinforcement and clarity of citations are needed	More detailed instructions are needed
	Powerpoint	Excellent	No suggestions	No suggestions
	Infographics	Good	Need to add types of non-test techniques for self-understanding	No suggestions
	Motion graphics	Excellent	Sound volume adjustment	No suggestions
	Video	Excellent	No suggestions	No suggestions
	Podcast	Excellent	No suggestions	No suggestions
Media Expert	Handout	Good	Use licensed illustrations. There needs to be an explanation of the contents of the book in addition to the table of contents.	Use fonts and tables that are easy to read and easy to understand.
	Powerpoint	Good	Use the same PPT theme	Use the same PPT theme
	Infographics	Excellent	No suggestions	Use easy-to-understand diction
	Motion graphics	Good	Use an appropriate combination of text, image, and audio animations.	Use an appropriate combination of text, image, and audio animations
	Video	Good	Complete with relevant subtitles, images, and animations	Complete with relevant subtitles, images, and animations
	Podcast	Excellent	No suggestions	No suggestions