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Content Development: Character-Based Technopreneurship Education for Young Ganesha Entrepreneurs

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Abstract

These reforms should focus on curriculum updates, graduate competencies, teacher qualifications, funding, and the decentralization of education. One of the key responsibilities of educators is to innovate teaching materials, ensuring they prepare graduates with the necessary technological skills for future careers or entrepreneurship. The introduction of the "Technopreneurship" course under the "Merdeka Curriculum" has been positively received by students, as it equips them with practical skills such as business idea generation, market analysis, and financial proposal creation. However, many students face challenges in maintaining program continuity after receiving funding, with some misusing the funds for personal purchases. This situation underscores the moral obligation of instructors to guide students in becoming ethical entrepreneurs. To address these issues, it is essential to develop case studies that integrate character education into technopreneurship, promoting not only business skills but also honesty, responsibility, and a commitment to social values.

Keywords: Technopreneurship; Content Development; Entrepreneur

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INTRODUCTION

Government programs for entrepreneurship or technopreneurship are initiatives designed to support the growth and development of the entrepreneurial sector, particularly in technology and innovation. Various countries have launched these programs as part of efforts to stimulate the economy, create jobs, and enhance competitiveness in the global market. Examples of government programs for entrepreneurship include financial assistance and funding facilities: governments provide special funding and financing facilities to support initial funding and business development for entrepreneurs. This can take the form of soft loans, grants, or tax incentives. Additionally, support for skill development is provided through entrepreneurship training and education programs to equip prospective entrepreneurs with the skills and knowledge necessary to start and manage a business, including courses, workshops, and hands-on training.

Fresh funds are also allocated to support business incubators and accelerators, where governments facilitate the establishment of incubators and accelerators that provide co-working spaces, mentorship, access to networks, and other resources for startups and newly established companies. Efforts to develop startup ecosystems aim to create an environment that supports startup growth, including facilities, resources, market access, and collaborative networks between industry players, universities, and government. Governments also provide funding for research and innovation development across various sectors, including high technology, science, and creative industries, encouraging the creation of new products and services that can enter the market, especially through partnerships between secondary and higher education institutions (Permana et al., 2015).

In addition to national governments, local governments often promote SMEs (small and medium-sized enterprises). These programs aim to raise awareness and promote entrepreneurship by inspiring individuals to start their own businesses through publicity campaigns, events, and social media platforms. The specifics of these government entrepreneurship and technopreneurship programs may vary by country and level of government, but their primary goal is to create a conducive environment for entrepreneurial growth, facilitate job creation, and drive sustainable innovation.

Based on this, universities must innovate their technopreneurship courses. Developing the content for "Character-Based Technopreneurship Education for Young Entrepreneurs" should be based on understanding the current conditions and challenges

faced by young people in developing entrepreneurial skills in the digital technology era. The reality shows that an increasing number of young people are interested in entrepreneurship, but they face challenges in dealing with competition and market uncertainty. The main issue is the lack of understanding of technical skills and character development necessary for becoming a successful entrepreneur. This challenge is compounded by the absence of content that integrates technology, entrepreneurship, and character education into the higher education curriculum.

This curriculum will offer a holistic approach that combines theory and practice while utilizing technology as a primary learning tool. Through a combination of practical learning and character development, students will be prepared to become entrepreneurs who not only possess the necessary technical skills but also strong mental attitudes and high integrity. As a result, they will be equipped to face challenges and seize opportunities in the ever-evolving entrepreneurial world. The proposed solution is the development of course content that integrates technopreneurship with character education, specifically designed to meet the needs of young people interested in entrepreneurship in the digital era. This course will include practical learning on entrepreneurial concepts, product and service development based on technology, digital marketing strategies, and online business management. Furthermore, it will emphasize character development, including integrity, resilience, initiative, and courage in facing the dynamic challenges of business in society.

Study and Literacy

(Lutfiana, 2016) conducted research on the management of learning or PPP at SMK Negeri 3 Jombang, revealing that the learning media used as teaching aids in basic programming subjects still rely on PowerPoint. Therefore, a medium is needed to facilitate students in receiving lesson materials and foster their enthusiasm for learning. The Covid-19 pandemic brought a global challenge and impacted the education sector. Physical and social distancing measures required learning activities to be conducted online, utilizing technology and educational media. In fact, many educators were unprepared, and school facilities were insufficient in adapting to these changes through the development of online content (Narmaditya et al., 2021).

The use of technology in education has been widely applied in developing learning media and content. One application that supports the learning process is Canva. This research developed Canva to create innovative and creative digital-based learning content

on the topic of acids and bases using the application (Fatihah & Ruhiat, 2023). This research developed e-learning content to enhance meaningful learning in high schools. It was motivated by the inability to design and develop learning content that takes into account the principles of instructional message design. As a result, students struggled to understand and internalize the material. The e-learning content development used the ADDIE model (Azrul & Rahmi, 2021).

Content development has also been carried out with a focus on Bali's local culture, as described by (Pageh et al., 2021). This book discusses how to create unique content by packaging Bali's noble local culture. Entrepreneurship education with ethnopreneurship content aided by virtual reality aims to produce students with attitudes, interests, and the ability to create startups, as specifically addressed in a dissertation (Maydiantoro, 2023). (Yasa et al., 2022) developed engaging content in the field of sports, creating interactive blended learning-based content for volleyball games in grade IX at SMP Negeri 2 Kubutambahan. This research aimed to produce interactive learning content in physical education subjects on volleyball games.

Content development

Content development is the process of creating educational materials specifically for e-learning. This can include developing new course content, revising existing content, or creating new versions of already established courses. The goal of content development is to produce high-quality, engaging, and effective e-learning materials that meet the needs of both learners and instructors. The content development process begins by understanding the learning objectives and audience. Once these are established, the next step is determining the best instructional approach and format to achieve the objectives (Riverstone, 2024).

Content development involves designing, creating, and organizing relevant, informative, and engaging material for specific purposes. This can relate to creating digital media content such as websites, blogs, and social media, or educational content like textbooks, learning modules, or online courses. Key steps in content development include setting goals and understanding the audience, conducting research to gather necessary information, and planning and structuring content logically. The development phase focuses on producing the actual content, whether through writing, video production,

graphic design, or training materials, while ensuring it aligns with the target audience and educational goals.

After content creation, review and revision are crucial to ensure accuracy, clarity, and alignment with learning objectives. The final stages include publishing the content through appropriate platforms and continuously evaluating its performance. Feedback from users is important to maintain relevance and make necessary updates. Content development is an iterative process that requires attention to detail and a clear understanding of the intended audience and objectives. By following these steps, it is possible to create content that is both effective and valuable, achieving the desired outcomes.

The Concept of Technopreneurship

The concept of technopreneurship is a field that combines technology and entrepreneurship. This concept has gained importance due to the rapid advancement of technology and innovation, which have become essential in today's society. In the digital era, technopreneurship offers solutions to navigate increasingly competitive business environments. The technopreneurship course aims to equip students with the knowledge and skills required to build and develop businesses using a technology-driven approach.

In the basic technopreneurship module, students learn fundamental concepts and characteristics of technopreneurship, as well as techniques and strategies for establishing technology-based businesses. They explore topics such as identifying and analyzing business opportunities, creating and implementing business plans, product and service marketing strategies, innovation and product development, funding and equity, ethics, social business, and the practical application of technopreneurship in the business world. This comprehensive approach ensures students understand the process from inception to execution.

Additionally, students are introduced to factors that influence the success of technopreneurship, both internal and external. They also study the characteristics of successful technopreneurs and the use of technological applications to reach consumers and expand business promotions. Technopreneurship provides a foundation for students to develop both entrepreneurial and technological skills crucial for modern business. Influential figures in the field such as Howard H. Stevenson, William D. Bygrave, Joseph Schumpeter, and Chris Argyris have each contributed definitions that highlight the

significance of merging technology with entrepreneurship to create value and drive innovation.

Character Education Building

Character education begins from early childhood and continues through various stages of life. As parents observe their infant, they learn about the baby's character. Similarly, interacting with children, teenagers, and adults teaches us about their distinct personalities. Even in the care of the elderly, we continue to learn about the diverse traits that define individuals. Every person has unique characteristics shaped by their environment and experiences. According to the Kamus Besar Bahasa Indonesia (KBBI), character refers to a person's inherent qualities, mental attributes, and behaviors that distinguish them from others, highlighting that each individual is distinct.

Character is deeply linked to a person's moral values, influencing their actions, behaviors, and interactions. Even siblings born from the same parents can have entirely different characters, which makes character a significant personal identifier. The uniqueness of character relates to a person's mental quality, morals, and their identity in relation to their family, workplace, society, and nation. Numerous studies in counseling and psychology explore how character develops, particularly in the context of peer influence. Questions arise about whether individuals adopt negative behaviors, like substance abuse, gossiping, or criminal activity, from their environment, emphasizing the powerful role that surroundings play in shaping character.

As Doni Kusuma (in saintif, 2023) asserts, "a person's character is shaped by their environment." Therefore, it's crucial to be mindful of the company one keeps, as negative influences can lead to poor behavior patterns. Conversely, positive environments can nurture good character traits, such as kindness, generosity, and integrity. Good character is often seen in people who are helpful, friendly, and willing to share. Thus, character is not only a reflection of one's upbringing but also of the choices made in response to their surroundings. It is never too late to change one's environment and build a future grounded in positive values and character traits that benefit society.

Education is the process of learning, progressing from ignorance to knowledge. Indonesia's father of education, Ki Hajar Dewantara, emphasized that education is vital for the growth and development of children, enabling them to achieve happiness and success in life (smk1perhentianraja, 2023). Education is more than imparting academic knowledge

it is a holistic process of guiding and nurturing children to become intellectually, emotionally, and spiritually capable individuals. It teaches them essential life skills, including self-control and moral integrity, to ensure their success within society and the state.

METHODS

This research is a descriptive quantitative study, using a specific population or sample, which in this case consists of students from the Informatics Engineering Department at Undiksha. The descriptive quantitative method serves to provide a description or overview of the object being studied based on the data collected (Dewiruna et al., 2020). In the research development process, the Research and Development (R&D) model is employed to develop new products or refine existing ones. This method is widely used in the fields of natural sciences and engineering (Wijayanti et al., 2016).

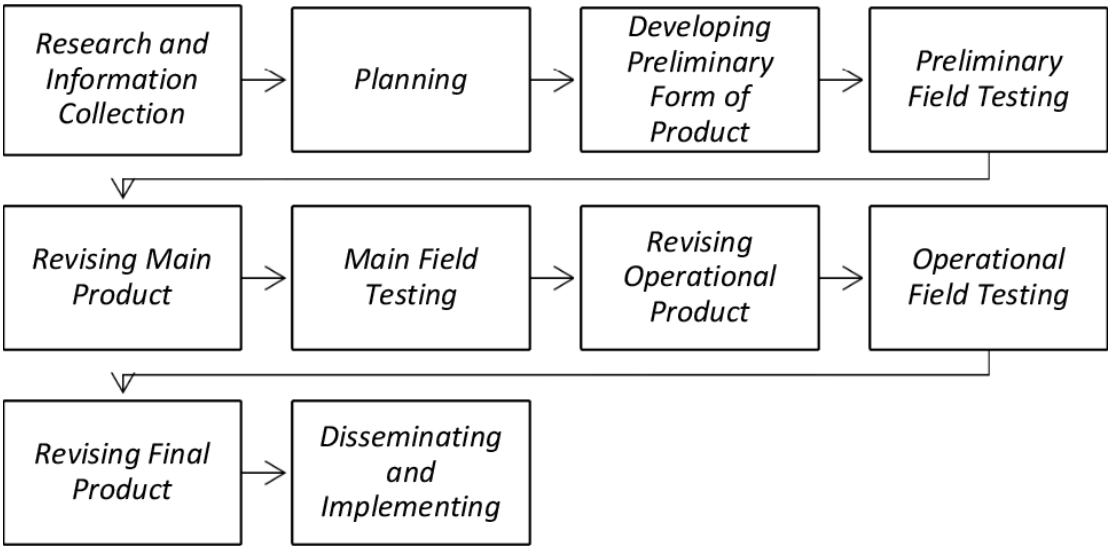


Figure 1. Stages of R&D Methods in general

The grand method of this research employs research and development techniques, as the R&D method can be effectively applied in software engineering research to facilitate communication between model developers. Each stage of the process is interconnected, and the importance of completing every phase is critical. Researchers must follow all steps to achieve optimal research outcomes. Validation can be conducted by potential users of the software, who provide feedback to determine whether the developed product is suitable for further development, ensuring the research is more effective and efficient

(Mufadhol et al., 2017). The stages of the system development process are illustrated in Figure 1.



Figure 2. ADDIE Method

(Source : https://nbfsoft.com/2023/01/model-addie/)

In the development of E-Learning content at Undiksha, the ADDIE method (Analysis, Design, Development, Implementation, Evaluation) will be applied. This approach is a structured process for instructional development and is recognized as one of the most effective and widely used models in instructional design. It is particularly appropriate for creating educational media in various formats, such as informational materials, videos, presentations, and teaching resources. One of the key benefits of the ADDIE method is its systematic nature, offering a clear framework that guides instructional developers step-by-step from analysis through to evaluation as in Figure 2.

Moreover, the ADDIE method is highly adaptable, allowing developers to modify the process to suit specific goals, target audiences, and learning environments. A major strength of the approach is its emphasis on the analysis phase, where a detailed examination of needs, objectives, and audience characteristics helps developers pinpoint learning challenges and devise suitable solutions. The method is results-driven, pushing developers to prioritize clear learning outcomes. Furthermore, quality control is integral at every stage, particularly during evaluation, ensuring the learning process's effectiveness and

facilitating ongoing improvements. This commitment to continuous refinement has made ADDIE a popular and versatile framework for designing impactful and relevant learning experiences.

The data for this study is sourced from journals, books, and online materials, which are then utilized in the content development process. Only relevant materials are selected for use, while those deemed irrelevant are excluded. The selection and evaluation of materials are carried out in alignment with the content development framework, which focuses on character education. The data collection process is illustrated in Figure 3.

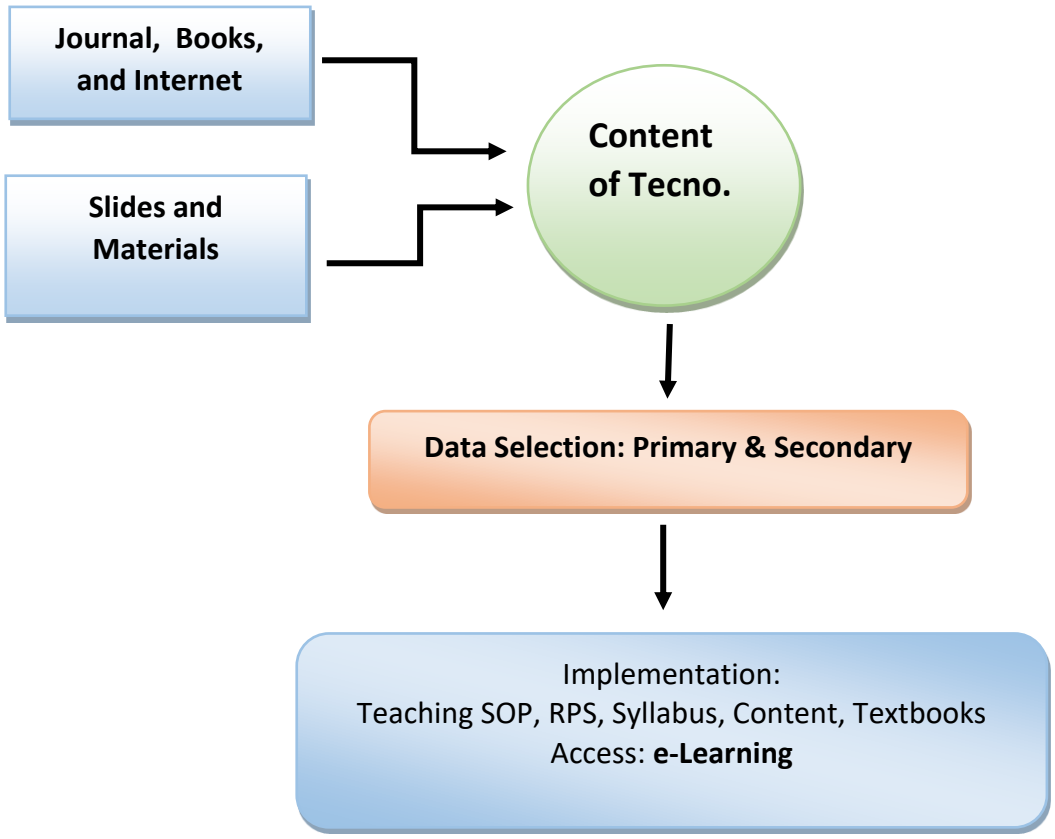


Figure 3. The Content Development Process

RESULTS

This research uses e-learning facilities, namely Google Classroom, which can be accessed at the link https://classroom.google.com/c/NjUyMjY1NTQ0NDU2 with a display like Figure 4 with a total of 34 participants as in Figure 5.

Table 1. Material for each meeting

No	Material	Evaluation
1	Introduction and Tuition Contract	Absence
2	Introduction to Technopreneurship	Absence
3	Characteristics of Being an Entrepreneur	Absence, Quis
4	Sharing Entrepreneurial Experiences	Attendance, Publication
5	Business Motivation and Innovation	Reports
6	Business ideas and business direction	Reports
7	Business analysis (competitor map), market feasibility	Reports
8	Making a pitchdeck and Pitching Techniques	Group task
9	Business Model Canvas Development	Group task
10	Presentation and discussion	Presentation
11	Field analysis	Publication
12	Entrepreneur Mindset, Business Ethics & Leadership	Absence, Quis
13	Promotion of services on social media	Publication Link
14	Project Proposal	Reports

The following is an example of an assignment to students and providing lecture material as content that must be read and understood first, as in Figure 4.

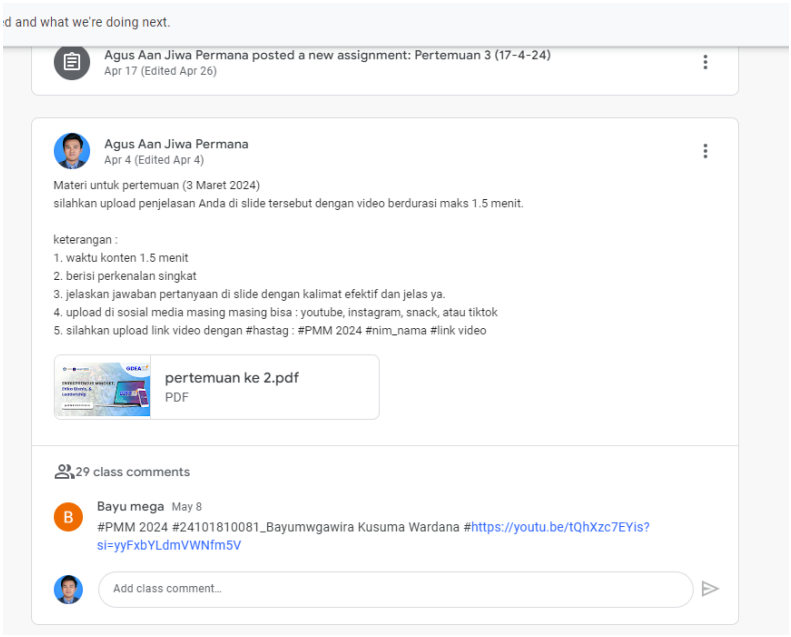


Figure 4. Lecture Content to provide materials and assignments

In the process of assessing learning outcomes, using the One Group pretest–posttest design data analysis technique, where research is carried out on one group. Before being given treatment, it was measured first by giving a pretest, then given experimental treatment using e-learning which was then measured again using a posttest.

Table 2. Pretest and Posttest Value Data

No.	Pretest	Posttest
1	61	86
2	52	86
3	54	86
4	63	86
5	50	86
6	58	86
7	61	86
8	65	86
9	63	89
10	59	86
11	61	86
12	53	86
13	50	86
14	59	86
15	59	86
16	57	86
17	52	86
18	52	86
19	52	89
20	57	86
21	63	86
22	59	89
23	62	86
24	62	86
25	64	86
26	50	86
27	53	86
28	51	89
29	57	89
30	60	86
31	57	86
32	60	86
33	58	86
34	62	86

Based on the results of analysis using statistics on learning outcomes, results were obtained as in Tables 3 and 4.

Table 3. Paired Samples Statistics Results

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	before using e-learning	57.53	34	4.587	.787
	after using e-learning	86.44	34	1.078	.185

The mean value before using e-learning was 57.53 with a standard deviation of 4.587, while after using e-learning the mean value was 86.44 with a standard deviation of 1.078 as in Table 3. This indicates that there was a difference in the mean before using e-learning after using e-learning it was 28.91.

Table 4. Paired Samples Test Results

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	before using e-learning - after using e-learning	-28.912	4.820	.827	-30.594	-27.230	-34.974	33	.000

Based on Table 4, the analysis results obtained p-value = 0.000, which shows that there is a significant increase in student learning outcomes after using e-learning to access Technopreneurship content.

DISCUSSION

The research on "Content Development: Character-Based Technopreneurship Education for Young Entrepreneurs" involved 34 participants and sought to determine whether they could successfully engage with E-Learning modules designed using the ADDIE method. The initial hypothesis was that participants would effectively follow the learning process, fostering the development of entrepreneurial spirit, high resilience, and a strong work ethic for achieving maximum results.

The ADDIE method (Analysis, Design, Development, Implementation, Evaluation) was instrumental in developing structured and well-organized content aimed at equipping young entrepreneurs with both technical and character-based skills. This systematic instructional design ensured that each phase of the content creation process was

aligned with learning objectives, focusing on both entrepreneurship and essential character traits such as perseverance, hard work, and a never-give-up attitude. The character-based approach was critical to molding participants into responsible and resilient entrepreneurs who are not only technically proficient but also possess the personal attributes necessary for success in competitive business environments.

The study utilized the Research and Development (R&D) method to continuously refine the learning materials through iterative testing and feedback. Participants were exposed to various modules that covered technopreneurship fundamentals, combined with lessons on character development to strengthen their entrepreneurial mindset. The integration of these two aspects aimed to instill a holistic approach to entrepreneurship, encouraging young entrepreneurs to strive for excellence while maintaining ethical standards and a strong sense of responsibility.

The results of the study supported the initial hypothesis, as the majority of participants successfully engaged with the E-Learning modules and exhibited growth in both entrepreneurial knowledge and character. The structured nature of the ADDIE-based modules, combined with the iterative R&D approach, allowed participants to not only grasp the technical aspects of entrepreneurship but also to develop key character traits necessary for long-term success. The study highlighted the importance of a balanced education in both technical skills and personal development for aspiring entrepreneurs, ensuring they are prepared to face challenges with resilience and determination.

CONCLUSION

Based on the problems faced in developing young Ganesha entrepreneurs. There are several things that can help, one of which is character development, so that when you experience problems you don't back down, let alone give up. Then you also need to have high fighting power and understand your potential as a true person. So that every word and action leads to positive things. With the content developed in this research, it can help direct potential young Ganesha entrepreneurs towards their targets. Based on the results obtained, the content developed can significantly improve students' abilities in technopreneurship subjects.

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