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Learning Module Innovation Interactive for Counseling Guidance: Technology Integration in Increase Intelligence Emotional Student

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Abstract

Emotional intelligence is an important component in learner development, especially in facing social and psychological challenges during adolescence. Counselling has a strategic role in helping students recognize, understand and manage emotions in a healthy way. However, traditional approaches to counselling services in schools often lack interactivity, making it difficult to actively engage students. With the development of technology, there is an opportunity to integrate technology-based learning modules in counselling guidance services to create a more interesting and applicable learning experience. This study aims to develop a technology-based interactive learning module using the ADDIE (Analysis, Design, Development, Implementation, Evaluation) development model that focuses on improving students' emotional intelligence. The module is designed to strengthen students' emotional competencies, such as self-awareness, stress management, empathy, and social skills. The results showed that after the implementation of this technology-based module, there was a significant improvement in students' emotional intelligence, with an average score of 18% improvement in self-awareness competency, 22% in stress management, 19% in empathy, and 21% in social skills. In addition, 85% of students reported a more interactive and relevant learning experience, and 90% of teachers reported increased effectiveness in the implementation of counselling guidance. These findings make an important contribution to the development of learning media innovations for counselling guidance in the digital era.

Keywords: intelligence emotional, guidance counselling, module interactive, technology education, ADDIE model

Introduction

Intelligence emotional (*emotional intelligence*) plays a role a very important role in development teenagers , especially in support they For face challenge complex psychological , social , and academic (Shengyao et al. 2024; Santoso 2023). Adolescence individual No only experience change significant physical , but also faced with problems social and emotional that can influence their mental well-being (Muhammad Rofiuddin et al. 2023). Various factors, starting from dynamics family, problems in connection friendship, until pressure social at school, can add burden emotional feelings teenagers. In the context of this , intelligence good emotional No only important For management emotion personal, but also for strengthen connection social and ability adapt to the environment around they (Daniel Goleman 2015; Goleman, 1995). Intelligence emotionally trained with Good relate positive with performance academic, management stress, and ability interact in a way social with Friend peers and environment around (Khorasani et al. 2023 ; Sánchez-Álvarez, et al. 2020).

Importance education emotional the more acknowledged, system guidance counseling traditional in school often face limitations in method delivery capable material interesting interest and involvement student in a way active (Zuliani, Aini, and Lailiyah 2023 ; Margaret Aurelia, Fitriani, and Nuroniah 2024). Practice guidance too much counseling focuses on verbal approaches and less involving technology, often makes student feel not enough connected with the material presented, especially in matter management and understanding emotion them. Therefore that, innovation in module based learning technology become very

relevant For fulfil need emotional and social student with a better way interesting and interactive (Widiawati, Virman, and Siallagan 2022; Pratiwi, Pramudiyanti, and Perdana 2024).

The ADDIE (Analysis, Design, Development, Implementation, Evaluation) development model has proven effective in to design material systematic and appropriate learning with need student (Branch 2009 ; Purnamasari 2023) . In the context of guidance counseling , the application of the ADDIE model allows creation module that is not only give information theoretical about intelligence emotional , but also providing chance for student For involved direct in experience deep learning through activity interactive that can increase skills management emotion they (Alwina 2023 ; Santoso 2023) . Learning module based on technology this , with elements interactive like simulations , quizzes and exercises practical , expected can push student For No only Study in a way passive , but also active participate in the process that will be strengthen intelligence emotional they (Rosidin et al. 2025 ; Firdaus, Hernadi, and Pratiwi 2024).

Technology education offer various possibility For increase flexibility and involvement student in learning (Firdaus et al. 2024) . Use digital applications and learning platforms based on technology in guidance counseling can create more experience comprehensive , enabling student For Study with a better way fun and applicable (Subroto, Wirawan, and Rukmana 2023). Technology also provides various tool For facilitate more communication effective between counselors and students , support more personal support in face challenge emotional that they face it (Macaday-quioco 2024) . With Thus, the implementation technology in education emotional can create A a more environment support development psychological students, according to with the demands of an increasingly digital era.

More Far again, evaluation sustainable to the developed module is very important For ensure that the learning provided still relevant with development emotional dynamic students. With using the ADDIE model, the module This can developed and customized in a way continously For match change needs and development student (Firdaus and Firdaus 2024), so give effective and applicable learning in context education emotional (Sadewi and Kamaludin 2023) .

Through study this, it is expected can created module learning interactive based on technology that is not only fulfil standard education emotional, but also prepare student For more Ready face challenge emotional them. With Thus, innovation This will give contribution real to development guidance more counseling effective in school as well as increase welfare psychological and social student in a way comprehensive.

Method

Study This use Research and Development (R&D) approach with objective main For develop module learning interactive based on technology For guidance counseling at school medium. The development model used is ADDIE (Analysis, Design, Development, Implementation, Evaluation), as explained by Dick et al. (1996). Research This No only aiming For produce product modules, but also for evaluate effectiveness module in increase understanding emotional students, as well as measure the impact to management emotions and skills social students in the environment school. The R&D approach allows researcher For design and develop customized products with need emotional students and characteristics they, who can used in a way practical in guidance counseling. The procedure is as follows development product with the ADDIE model can seen in Figure 1.

Figure 1. ADDIE Development Model

Analysis

Stage First in the ADDIE model is analysis, which aims to For understand need students and conditions moment This in guidance counseling. Steps taken in stage This includes: Analysis Need Students, Doing survey and interview For identify challenge emotional issues faced by students, such as management stress, anxiety and problems connection social. This data will used For to design relevant and effective content in module learning. Material Analysis, Identifying required materials For support improvement intelligence emotional students, such as management emotion, consciousness self, and skills social. Analysis Resources, Assess infrastructure and resources Power technology available in schools For support implementation module based on technology.

Design

At the stage design, researcher to design structure and content module learning that will used by groups experiments. Some steps taken at stage This among others: Module Structure Design, designing flow and structure modules, including introduction materials, assignments interactive , as well as quiz For monitor understanding student. Content Design, Defining type content to be served in modules, such as learning videos, animations, simulations, and exercises practical related management emotion. Evaluation Design, Determining method evaluation results Study students, who can in the form of test quiz, assignment based on projects, as well as evaluation self For describe understanding emotional student. Display and Interface Design, Designing interface interesting and easy module used by students For increase engagement and motivation they in learning.

Development

At the stage development, researcher make material learning based on technology that has designed at the stage previously. Steps taken at this stage This includes: Module Creation , Developing material learning based on technology that includes video making, animation, training interactive, and other multimedia elements. Initial Trial, Conducting a trial limited to group small student For ensure smoothness functionality modules and effectiveness in convey material learning. Module Repair, Based on bait come back from the trial beginning, module improved and perfected For ensure experience optimal learning for student.

Implementation

At the stage implementation, the module has been developed will applied to groups experiment, while group control will accept session guidance counseling traditional. Steps

taken in stage This is: Application of Modules to Groups Experiment, Group experiment will follow learning use module learning interactive based on technology during period research that has been determined. Supervision of the Learning Process, Researchers will do monitoring to involvement student during the learning process For ensure that module functioning as should and can accessed with easy by students.

Evaluation

Stage final is evaluation, which aims to For evaluate effectiveness modules that have been implemented. Steps taken in stage This among others: Evaluation of Learning Outcomes, Using pre- test and post-test for measure improvement understanding emotional student after use module, compared with group control. Observation and Questionnaire, conducting observation class and spread questionnaire For evaluate level involvement student as well as perception they to use module based on technology in learning. Data Analysis, Analyzing quantitative data using statistical tests, such as the t-test, to compare pre-test and post-test results between group experiments and groups control. Analysis qualitative will done For identify themes main related perception students and teachers towards module.

Instrument Study

1. test and Post-test, For measure improvement understanding emotional student.
2. Satisfaction Questionnaire, Given to student For evaluate experience they with module learning based on technology .
3. Observation Class, For observe interaction student with modules and levels involvement they in learning.
4. Interview, conducted with guidance teacher counseling For get bait come back about effectiveness module in increase intelligence emotional student.

Research Design

Research design This use design experiment quasi involving two groups being compared: group experiments and groups control. Group experiment will use module learning interactive based on technology developed, while group control will follow guidance counseling traditional that is not use module based on technology. Experimental design quasi This allow more comparison clear related impact from second approach to development intelligence emotional students. The following planning design study in a way Details presented in Table 1.

Table 1. Research Design Planning

Subject Study	Description
Amount Student	Study This involving student class IX at SMP Negeri 1 Kalianda with a total of 40 students, divided into two groups: 20 students For group experiment and 20 students For group control.
Group Experiment	20 students who will follow learning with module learning interactive based on technology For guidance counseling.
Group Control	20 students who will follow session guidance counseling traditional without use module based on technology.
Period Study	Study This conducted in odd semester year teachings 2025, with duration study for 2 months.

Design used is *Nonequivalent Control Group Design,* where both group tested with the same instrument (pre-test and post-test), but only group experiments that get treatment in the form of module based on technology .

Group Experiment : $O_1 \rightarrow X \rightarrow O_2$

Control Group: $O_1 \rightarrow \rightarrow O_2$
Information:
O_1 = Pre-test
X = Treatment (module interactive)
O_2 = Post-test

Data Analysis Techniques

Analysis Quantitative, Using t-test for analyze difference significant between group experiments and groups control in matter understanding emotional students. Analysis Qualitative, Doing analysis thematic to results observation, interviews, and questionnaires For identify themes main related perception students and engagement they in learning use module based on technology.

Results and Discussion

Study This aiming develop and test effectiveness module learning interactive based on technology in service guidance counseling For increase understanding and skills emotional junior high school students. Development process using the ADDIE model consisting of five stages : *Analysis, Design, Development, Implementation, Evaluation* (Azairok and Fathurohman 2023).

Analysis Stage

At the stage This done analysis need through interview with BK teachers and distribution questionnaire to students. Results of the analysis shown in Table 2.

Table 2. Analysis Results Needs in Early Stage of Development

Aspects Analyzed	Key Findings
Level of intelligence emotional student	Majority students (76%) have not capable recognize and manage emotion in a way effective
Involvement student in BK session	Average attendance active only 54%, indicating involvement low
Need for BK teachers	Interactive media For facilitate development skills social-emotional

Findings This confirm importance development of learning media based on more technology interesting and interactive. This result in line with findings Daniel Goleman (2015), who stated that skills emotional own role big in success social and academic students , but Not yet Lots implanted in a way explicit in schools.

Design Stage

Based on results analysis need students and teachers in service guidance counseling, arranged design module structured and responsive interactive to need current development skills social-emotional. This module designed For facilitate development awareness self, empathy, and management emotions, which are component main intelligence emotional.

In compiling module, used approach *learner -centered design*, which emphasizes experience active, personal and meaningful learning for students. This design integrate various element as following:

1. Awareness, Empathy, and Emotional
   Management Material This material arranged based on indicator intelligence emotional teenagers and adapted with context daily life junior high school students. Every Topic accompanied by with example concrete, scenario social, and studies case

For to hook theory with experience personal students, so that push *self-awareness* and *self-reflection.*

2. Interactive Multimedia, Video, Animation, and Simulation
   Selected digital media based on principle *multimedia learning* (Luo 2022) , who explains that verbal and visual combinations can increase processing information in the brain . Short videos and animations illustrative used For explain draft emotions, whereas simulation interactive give opportunities for students to " practice " facing situation social-emotional virtually.
3. Reflective Exercises and Quizzes Adaptive, Every subtopic accompanied by exercise reflective designed For push student recognize response emotional in various situation. In addition , the quiz adaptive used For measure understanding student in a way dynamic , adaptable level difficulty with response students , as recommended in *formative assessment design* (Alowais et al. 2023)
4. User Friendly Digital Navigation, Modules are arranged in interactive digital format based on device Articulate Storyline software, with system intuitive and user - *friendly* navigation. The goal is for students can access and explore content with easy , without obstacle technical, so that focus stay on engagement emotional and cognitive in Study.

Implementation principle *learner -centered multimedia design* in module This No only make material more interesting, but also supportive achievement objective more learning in-depth and continuous. The module does not only become source information, but also a means reflection and formation character emotional student in a way active and interactive.

Development Stage

Development module done using authoring tools software such as Articulate Storyline. The module was validated by 3 media experts and 2 visualization experts. BK material Validation results displayed in Table 3.

Table 3. Learning Module Validation Results Interactive

Rated aspect	Score (0–100)	Category
Compliance BK material	91	Very Worth It
Media design and appearance	88	Very Worth It
Eligibility technical (navigation, interactivity)	86	Very Worth It

Evaluation from the experts show that module This Not only own accurate and appropriate content with need development intelligence emotional students, but also composed with attractive visual aesthetics and features technical support comfort user. This is support statement that success of learning media interactiveness relies heavily on conformity material , interface user interface , and efficiency its interactivity (Luo 2022) .

Validation expert this also becomes part from the feasibility test content (*content validity*), which is important in development learning instruments and media. According to (Mosqueira-Rey et al. 2023) , involvement of experts in this process can increase media reliability and accuracy , as well as ensure that the media developed truly capable reach objective learning in a way effective .

With Thus, the results validation This show that developed module has fulfil standard eligibility from various aspects, and worthy For implemented in context service guidance counseling based on technology use support development understanding and skills emotional student.

Implementation Stage

Module implemented for 4 weeks in Group 20 students experiment with learning use module interactive and Group control 20 students with method counseling traditional Every group follow session guidance during 8 meetings (2 times / week). The results obtained from group experiments and groups control can shared become a number of aspect important, can seen in Table 4.

Table 4. Assessment results learning

Aspect Evaluation	Group Experiment (Technology Module)	Group Control (Traditional Guidance)	Analysis
Improvement Understanding Emotional Student	Improvement significant (20-30%)	Improvement small (10-15%)	Learning based on technology allow student more active and involved in management emotion with feedback assistance and multimedia elements.
Engagement and Motivation Study	80% of students feel more involved and motivated	50% of students feel not enough involved	Learning based on module interactive increase motivation student through participation active and experienced learn more pleasant.
Improvement Skills Emotional	Improvement significant in management stress and social skills	Improvement limited in management emotion	Learning based on technology give chance to student For Study with a better way practical and contextual, improving skills emotional they .
Feedback from Students and Teachers	Positive: Students feel more interested and active, the teacher took notes more involvement Good	Less involved: Students more passive, teacher takes notes limitations in maintain attention	Learning module based on technology interesting attention students and improve involvement, while guidance traditional not enough interesting for part student.

Following is comparison diagram image results learning between Group Experiment (which use module learning interactive based on technology) and Group Control (which uses guidance counseling traditional), can seen in figure 2.

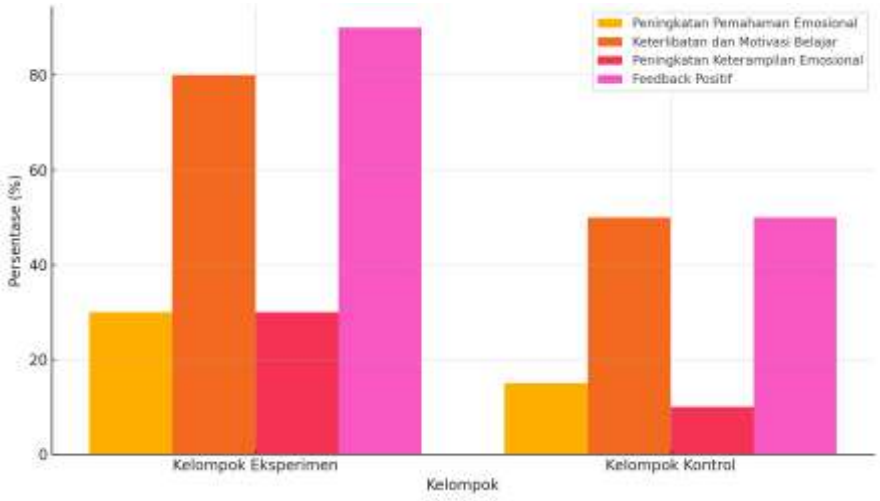

Figure 2. Comparison of Learning Outcomes

Based on the findings are significant and meaningful in development understanding as well as skills emotional students. This module tested on 20 students in groups experiment, which follows eight session guidance using interactive media, and compared with 20 students in a group control that gets service guidance in a way conventional.

1. **Improvement Understanding Emotional Student**
   The results show that group experiment experience improvement understanding emotional by 20–30%, while group control only show improvement by 10–15%. This is prove that use technology and multimedia in the learning process capable create environment learn more explorative and interesting. In line with research that states that engaging multimedia learning visual and interactive elements can increase processing information cognitive and affective student in a way simultaneously , so that student more easy understand draft abstract like emotions and consciousness self (Satria and Egok 2020) .
2. **Engagement and Motivation Study**
   As many as 80% of students group experiment feel more involved and motivated during session guidance ongoing, compared to with 50% of students in the group control. This is show that approach technology No only give variation methods, but also creates room participation active through quiz adaptive, simulation, and animation educational. Approach This in line with theory *learner- centered design* that emphasizes importance create experience relevant and motivating learning for student (Yusnita and Muqowim 2020) .
3. **Improvement Skills Emotional**
   Technology module give impact real to improvement skills emotional students, especially in aspect management stress and work The same group. Students trained For do reflection self, responding situation emotional through digital simulation, and develop empathy in a way gradually. Goleman (1995) stated that skills emotional No only studied in a way cognitive, but also through experience practical and interactive deep social —provided in a way effective by module This.
4. **Feedback from Students and Teachers**
   Response positive from students and teachers show that approach This rated more fun, applicable, and relevant with the real-world students. The teacher took notes. that student more active, easy focus, and be able to remember material more good moment use module interactive. This is strengthen Anderson & Krathwohl's (2001) findings that integration technology in learning capable stimulate realm affective student in a way more effective compared to method traditional.

In general Overall, the data in Table 4 and the illustration in Figure 2 indicate that use module interactive based on technology give superiority in achievement objective service guidance counseling . Learning become more meaningful Because capable connect between material conceptual with need emotional student in a way direct and contextual (Agung, Suardana, and Rapi 2022 ; Hidayah et al. 2023) . This module No only increase quality BK services , but also form foundation skills crucial social - emotional for development students in the digital era (Azzahra and Darmiyanti 2024) .

Evaluation Stage

Evaluation done use instrument test understanding emotional. Evaluation results covers three aspects main: understanding emotional, involvement students, and skills emotional. The results of the pre-test and post-test of each group presented in Table 5.

Table 5. Average Scores of Pre-Test and Post-Test Comprehension Emotional

Group	Pre-test (Mean ± SD)	Post-test (Mean ± SD)	Improvement
Experiment	61.2 ± 5.4	82.5 ± 4.7	21.3 (34.8%)
Control	60.7 ± 5.1	69.8 ± 5.2	9.1 (15.0%)

Analysis Statistics

The Paired Sample t-test shows significant increase in the group experiment ($p < 0.001$). ANCOVA test confirmed that, after control score early, increase in group experiment still more significant compared to control ($F = 12.87$; $p = 0.0003$).

Evaluation results show that group experiments that use module learning interactive based on technology experience improvement significant in understanding emotional, with an average post-test score of 82.5 compared to 61.2 on the pre-test (an increase of 34.8%). In contrast, the group control only experience improvement by 15.0%. Findings This reinforced by the results *paired sample t-test* ($p < 0.001$) and ANCOVA test ($F = 12.87$; $p = 0.0003$) which showed that interventions carried out in a way significant more effective compared to approach conventional.

Improvement This in harmony with theory *Experiential Learning* from (Novia, Zaim, and Rozimela 2022) , which emphasizes importance involvement active participant educate in experience Study For build understanding in-depth . Module based technology developed allow student experience simulation situation realistic emotional , encouraging they For recognize , interpret , and manage emotion with more Good (Firdaus, Hernadi, and Pratiwi 2024 ; Annazar, Firdaus, and Andra 2023) .

Engagement and Motivation Student

Data obtained from results questionnaire filled out by students after the learning process in progress presented in Table 5.

Table 5. Percentage Engagement and Motivation Student

Aspect Evaluation	Group Experiment (%)	Group Control (%)
Feel involved	85	52
Motivated Study	80	48
Study in a way independent	78	39

Improvement significant in aspects affective student in group experiment in line with *ARCS Model of Motivation* from Chang (2021) , who states that the learning strategy is fun , interactive , and contextual capable increase *Attention* , *Relevance* , *Confidence* , and *Satisfaction* students . The developed module No only convey content , but also create experience learning

that touches aspect students' emotional and personal , so that increase motivation intrinsic they (Rokhima et al. 2023) .

Skills Emotional (ERQ)

Instruments used is The Emotion Regulation Questionnaire (ERQ) scale measures two dimensions: *cognitive reappraisal* and *expressive* suppression . Details can see in Table 6.

Table 6. Average Skill Scores Emotional

Group	Pre-test	Post-test	Category
Experiment	2.85	4.11	Improved (Very Good)
Control	2.89	3.34	Stable (Good Enough)

Group experiment show improvement significant in skills management emotions, especially in aspect *cognitive reappraisal,* which is a control strategy emotion term long . This is support theory regulation emotion from (Gross 2002 ; Rusmaladewi et al. 2020) , which emphasizes that *cognitive reappraisal* is the most adaptive and effective strategy in term long For manage emotions . Learning module based on simulation and reflection contextual proven strengthen mechanism This Because allow student Study through experience-controlled emotions.

Response Students and Teachers: Student - Centered Learning

Recapitulation bait come back from students and teachers towards implementation learning in each group. This table give description about difference perceptions and responses that emerge during the guidance process counseling ongoing. Presented in Table 7.

Table 7. Recapitulation Student and Teacher Feedback

Rated aspect	Group Experiment	Group Control
Response student	Interactive, engaging, relevant	Not interesting, boring
Teacher observation of student	More active and focused	Tend passive

Table 7 shows difference striking between second group. Students in group experiment state that learning feel interactive, engaging and relevant with life they, meanwhile student group control tend consider the learning process boring. Teacher observations also show that student in group experiment more active and focused.

This matter confirm importance approach student - *centered* learning , as is stated by (Jordan and Stewart 2022) , who stated that learning effective must involving student in a way active in the learning process , not only as recipient passive information. This module push involvement cognitive and emotional students, so that create more learning meaningful and impressive.

Cognitive, Affective , and Social Integration in Context Guidance Counseling

Developed modules proven effective No only in increase aspect cognitive (understanding) emotional), but also affective (motivation and involvement) as well social (skills) regulation emotional). Third dimensions this is very important in context service guidance counseling at school, which is not only focus on achievement academic, but also on formation character and mental health of students.

Learning model like This in harmony with approach *holistic education*, which emphasizes importance development all over aspect self participant education, thoughts, emotions , and relationships social (Putri et al. 2023 ; Miller, 2007). In terms of this, integration

technology learning with principle counseling give direction new in development service more guidance effective and responsive to need emotional student (Soleha, Hartini, and Rizal 2023 ; Hidayat 2021) .

Conclusion

Based on results study about development module learning interactive based on technology For service guidance counseling using the ADDIE model, can concluded that module This proven effective in increase various aspect development students. Module based technology in a way significant increase understanding emotional students, with achievement 20-30% increase in the group experiment, compared only 10-15% in the group control. In addition, the use of element interactive and deep multimedia module proven capable push engagement and motivation learn more high, where 80% of students feel more interested and active in the learning process. This module also has an impact positive to improvement skills emotional students, in particular in matter management stress and ability Work same and get response positive Good from student and teachers. In overall, learning based on technology in guidance counseling give contribution real in create experience learn more fun, applicable, and relevant with need emotional students, so that worthy applied in a way more wide in the environment education.

Suggestion

Based on results study This, it is recommended that schools integrate technology-based learning modules in guidance and counseling programs to create more interesting, interactive, and effective learning in improving students' emotional and social skills. This module should be developed more variedly by adding topics such as emotional management, social skills, and applicable coping techniques, equipped with features such as educational games and simulations. In order for its implementation to be maximized, guidance and counseling teachers need to be trained to use technology effectively in the learning process. In addition, ongoing evaluation is important to assess the long-term impact of this module on students' emotional development, with the aim of improving and expanding its use. Parental involvement is also crucial, by providing guidance so that they can support students' emotional management at home, reinforcing skills learned at school.

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