# Development of Interactive E-Modules on Integrated Learning Model Materials of Moderation Values Religious

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**Abstract : Title is rewritten here Development of Interactive E-Modules on Integrated Learning Model Materials of Moderation Values Religious.** The diversity of tribes, languages, cultures, and religions owned by Indonesia should become a treasure trove of the nation's wealth. However, recently this diversity has become a trigger for disharmony, especially when it is associated with religion. Problems of religious disharmony such as intolerance also occur in educational institutions. Examples of intolerance are the spread of false news (hoaxes) and increased persecution among high school students, bullying and the emergence of differences based on religion, ethnicity, and others are forms of intolerance. One way to overcome this is to integrate the values of religious moderation in the lecture process through learning media. Therefore, the aim of this study was to produce an e-module learning model in the Chemistry Learning Strategy course integrated with religious moderation values that are valid and practical. The research method used is Research and Development with a 4D model. The object of this research is students in the fourth semester of the Department of Tadris Chemistry at UIN Mahmud Yunus Batusangkar. The results of this study indicate that the language validity value of the e-module is 0.89 with a very high validity category, material validity is 0.76 high validity category, and construct validity value is 0.76 high validity category. The results of the practicality test according to students were 0.89 in the very high practicality category. Based on these findings it can be concluded that the e-module learning model in the Chemistry Learning Strategy course integrated with religious moderation values is very valid and very practical to use in the lecture process.

**Keywords:** religious moderation values, e-modul, learning models.

**Abstrak:** *Pengembangan E-Modul Interaktif pada Materi Model Pembelajaran Terintegrasi Nilai-Nilai Moderasi Beragama.* Keberagaman suku, Bahasa, budaya dan agama yang dimiki oleh Indonesia seharusnya menjadi khanazah kekayaan bangsa. Namun, belakangan ini keberagaman tersebut menjadi pemicu disharmonisasi terutama jika dikaitkan dengan agama. Masalah disharmonisasi keagamaan seperti intoleransi juga terjadi dalam lembaga pendidikan. Contoh sikap intoleransi adalah penyebaran berita tidak benar (hoaks) dan persekusi yang meningkat dikalangan siswa SMA, bullying dan timbulnya pembedaan didasari agama, suku dan lainnya merupakan bentuk intoleransi. Salah satu cara mengatasi hal tersebut adalah mengintegrasikan nilai-nilai moderasi beragama pada proses perkuliahan melalui media pembelajaran. Oleh karena itu, tujuan penelitian ini adalah menghasilkan e-modul model pembelajaran dalam mata kuliah Strategi Pembelajaran Kimia terintegrasi nilai-nilai moderasi beragama yang valid dan praktis. Metode penelitian yang digunakan adalah Research and Development dengan model 4D. Objek penelitian ini adalah Mahasiswa semester IV Jurusan Tadris Kimia UIN Mahmud Yunus Batusangkar. Hasil penelitian ini menunjukkan bahwa nilai validitas Bahasa dari e-modul adalah 0.89 dengan kategori validitas sangat tinggi, validitas materi 0.76 kategori validitas tinggi, nilai validitas konstruk 0.76 kategori validitas tinggi. Hasil uji praktikalitas menurut Mahasiswa adalah 0,89 kategori

praktikalitas sangat tinggi. Berdasarkan temuan tersebut dapat disimpulkan bahwa e-modul model pembelajaran dalam mata kuliah Strategi Pembelajaran Kimia terintegrasi nilai-nilai moderasi beragama sangat valid dan sangat praktis digunakan dalam proses perkuliahan.

*Kata kunci:* *nilai moderasi beragama, e-modul, model pembelajaran.*

- **INTRODUCTION**

Indonesia as a country with high diversity is an indisputable fact. This diversity must be addressed appropriately and wisely by all citizens and is expected to color and enrich the treasures of the nation's civilization. Recently, this diversity has triggered disharmonization, especially if the diversity and differences concern religion(Hermawan, 2019) Religious disharmonization according to the Judge is triggered by different backgrounds. These triggers include exclusivism attitudes of diverse religious sects or understandings, attitudes of excessive sentiment towards tribes and religions and the establishment of houses of worship that are not in accordance with the rules (A.Hakim, 2012) This is also the case in West Sumatra, which has recently faced the problem of disharmonization in religious life. Silvia's research shows that religious intolerance in West Sumatra in 2014-2015 experienced an increase such as rejections of the construction of religious facilities other than Islam. This is an indicator of the low attitude of religious tolerance of the community (Silvia, Hanani, 2019). According to Halimah, intolerant attitudes arise due to various things. First, the process of understanding religion and beliefs that are not yet fully correct, resulting in an attitude of intolerance. Second, the notion that difference is a threat to be resisted and there is zero tolerance for difference. Third, political dynamics and technological advances such as the internet are one of the many propaganda tools for intolerability. Intolerant attitudes can also be fertile because they are catalyzed by a certain group of people through content on social media(Halimah, 2018).

Such a problem of religious disharmonization as intolerance also occurs in educational institutions. Examples of intolerance are the spread of false news (hoaxes) and persecution that increases among high school students, bullying and the emergence of discrimination based on religion, ethnicity and others are forms of intolerance. This indicates an imbalance in the application of Pancasila (Amir, 2018). Subagyo's opinion states that the attitude of intolerance in Indonesian society is currently worrying. Intolerance has become a "virus" that affects the younger generation such as students, youth, adolescents, and college students. Like intolerance disease has spread rapidly in the world of education from elementary school to higher education (Subagyo, 2020). PPIM UIN Syarif Hidayatullah Jakarta in 2017 in 34 provinces in Indonesia conducted research on students and educators from basic education to higher education. The results stated that intolerant religious views tend to be shared by students and students with a description of 58.5% having a radical opinion, 51.1% being opinionated with internal intolerance and 34.3% opinionated with external intolerance (PPIPM, 2018).

The concept of religious moderation will encourage a person to have a balanced attitude in religion between the practice of one's own religion (exclusive) and to reward religious activities of different beliefs (inclusive). This is able to prevent a person from being fanatical, extreme, and excessive revolutionary attitudes in religious life. Religious moderation is a solution to two extreme camps in religion, namely the extreme right or ultra-conservative camp and the other extreme left or liberal (Akhmadi, 2019).

Researchers have conducted preliminary research by conducting interviews with 27 students majoring in Chemistry in semesters III and V about the values of religious moderation. Based on the open interview, it was found that 24 people from students did not know the term religious moderation at all. 3 of them claimed to have heard the term, but did not know its meaning. All of these students do not know the values and meanings of religious moderation.

However, some of them agreed to respect and cooperate in religious and interfaith life except in the field of aqidah.

Internalizing the values of religious moderation in educational institutions can be done using integrated learning media for these values of religious moderation. Several studies seek to internalize the values of religious moderation in teaching materials. The research, among others, was conducted by Abdul Aziz et al on PAI teaching materials in Higher Education. The results of this study stated that the PAI teaching materials at STIE Putra Perdana were PAI books by Prof. Dr. Daud Ali. The book does not explicitly discuss the value of religious moderation but its content contains the values of religious moderation. These values are internalized in the discussion of religion and the universe, the basic sources of Islamic law, religion and man and Akidah, the basic framework of Islam, sharia and Morals (Aziz, 2020). Although there have been studies that try to link the values of moderation with teaching materials, there is still very limited, there has been no research that has developed integrated learning media for religious moderation values with courses or subjects outside PAI. Likewise, in the IAIN Batusangkar environment, there is no learning media that is integrated or contains the values of religious moderation, especially in the Chemistry department and in educational courses. Therefore, it is necessary to develop learning media that integrates the values of religious moderation in certain courses.

One of the courses that can integrate the values of religious moderation is Learning Strategies. This subject is a compulsory educational course that must be taken by students of the Chemistry Tadris Department in semester IV. The material discussed is models, approaches, strategies, methods, techniques and tactics of learning as well as the application of the syntax of the model. This subject is important because it is directly related to the profile of graduates as prospective chemistry teachers. A prospective chemistry teacher must be skilled in applying various learning models through the syntax contained in the model to learning tactics. The learning models that will be taught in the Chemistry Learning Strategy course are learning models that are in accordance with the current curriculum, namely the 2013 Curriculum. The chemistry learning models that are in accordance with the 2013 Curriculum are Problem based Learning, Discovery and Inquiry Learning and Project based Learning, Contextual Learning and Cooperative Learning models. Each learning model has a distinctive syntax. Through the skills in applying the syntax of the learning model obtained in this learning strategy course, it is hoped that a prospective chemistry teacher can integrate the values of religious moderation. The values of religious moderation that will be integrated in the learning model are national commitment, anti-radicalism, tolerance, anti-violence and accommodating to local culture. All learning processes including Chemistry Learning Strategies require learning media. One of the learning media that can be is computer or android-based electronic learning media. According to Larson, students should be facilitated with a variety of technological innovations such as computers, modules and electronic whiteboards by educators. This is because students or students need innovative learning resources that can be used wherever and whenever they can be used (Zhang et al., 2017) Research on the development of electronic-based learning media in the learning media course, among others, was carried out by Imania. This research is entitled Development of Flipped Classroom in Mobile Learning-Based Learning in Learning Strategy Courses (Imania & Bariah, 2020).

Another example of learning media with information technology is electronic modules (e-modules). In addition, according to Siddiq, to reduce the boredom of students learning to use modules, digital teaching materials can be developed in the form of electronic modules as interactive learning media or as interactive e-modules (Ricu Sidiq & Najuah, 2020). According to Kurniawan, another reason for choosing electronic modules is that in 2016 smartphone users in Indonesia reached 65.2 million. Based on his observations, almost 100% of students have smartphones and it can be concluded that developing electronic modules is the right choice

(Untu & Kurniawan, 2021). According to Ningsih, apart from being an android-based smartphone communication medium used by students, it also plays a role in supporting virtual mobile learning in higher education (Ningsih & Adesti, 2019)

According to Adiputra for self-study, electronic modules in electronic format are presented which are systematically organized into the smallest learning units in order to achieve learning objectives (Desty Sugiharti et al., 2019) Meanwhile, according to Sugianto, the e-module is a teaching material used independently in systematically arranged learning which is displayed in an electronic format consisting of audio, animation and navigation (Sugianto et al., 2017) Some of the advantages of electronic teaching materials or e-modules are (a) the content of electronic teaching materials which include material and practice questions presented varies not only text but there are images and videos that support learning materials, (b) electronic teaching materials or e-modules can make it easier for students to learn in certain parts as desired. The weakness of electronic teaching materials or e-modules is the lack of adequate learning devices such as computers or other electronic devices (Puspitasari et al., 2020) According to Ricu, the e-module is a computer-based module and contains fragments with questions in each fragment so that users can more easily understand the material and can help the lecture process more effectively and efficiently and can strengthen student learning independence by improving the quality of learning in the learning strategy lecture process (Ricu Sidiq & Najuah, 2020). According to Nursidik, emodul can increase student motivation in learning madiri during the online lecture process (Puspitasari et al., 2020)

One of the applications of interactive e-module learning media is Lectora Inspire, which is an application for making presentations and learning media. This application is very user friendly in making learning media and can be used to make exam questions or evalution. Lectora inspire-based learning media can be used online or offline. Through this medium, students can learn independently. The test or evaluation material can display feedback and directly display the score. This application provides 8 types of question forms. This makes it easier for educators to carry out assessments(Shalikhah, 2016) Interactive e-modules are modules provided for online and offline student learning that can be accessed at any time and are interactive, meaning that lecturers and students can communicate learning materials in a special column provided in the e-module (Sugianto et al. 2017).

Maintaining the harmony of religious life and conveying the values of religious moderation is the responsibility of every citizen and all religious people in accordance with their respective roles and duties. One of the ways researchers as lecturers play a role in maintaining religious harmony and conveying the value of religious moderation is through integrated learning media through courses that are capable and in accordance with the profile of graduates from the Chemistry Tadris Department of IAIN Batusangkar and post-pandemic learning conditions. Based on such reasons, research and development is needed that meets the stages and scientific procedures to produce valid and practical interactive e-modules in the learning strategy course, especially in the material of integrated learning models of religious moderation values through research entitled "Development of Interactive E-Modules in Learning Model Materials in the Integrated Learning Strategy Subject Religious Moderation Values.

- **METHOD**

**Research Design**

This research is a development research (R & D) using a 4D model from Thiagarajan consisting of Define, Design, Defelop and Deseminate.

**Research Subject and Location**

The subject of this study is an e-module of learning models in the course of Integrated Chemistry Learning Strategies for the values of religious moderation.

### Research data sources

The source of data in this study is data on the validity value of the material from the assessment of the UIN Chemistry Tadris Lecturer Imam Bonjol Padang, the media validity value from the UIN Mahmud Yunus Batusangkar Learning Media Lecturer, the language validity value from the UIN Mahmud Yunus Batusangkar Indonesian Lecturer and the validity value of religious moderation from the UIN Islamic Religious Education Lecturer Mahmud Yunus Batusangkar. In addition, the source of practicality data comes from the assessment of fourth semester students of the Department of Chemistry Department, FTIK UIN Mahmud Yunus Batusangkar.

### Research Instruments

The instrument used in this study is a validity questionnaire to test the level of validity of the e-module by experts in each field (material, language, media and values of religious moderation). The instrument used to test the level of practicality of the e-module by students is a practicality questionnaire.

### Research Flow

In accordance with the development model used, namely the 4D development model, the first stage carried out is Define. At this stage, an analysis of the needs of lecturers and students is carried out in the lecture process. The data from this analysis is that Lecturers and Students need an e-module that integrates the values of religious moderation in their courses. The second analysis carried out is the CPL and CPMK analysis of the Chemistry Learning Strategy course which supports the graduate profile. The third analysis is the analysis of student characteristics, at this stage it analyzes the cognitive abilities of students based on GPA. The fourth analysis is an analysis of the tasks that will be contained in the e-module.

The second stage is Design. At this stage, the preparation of instrument grids for validity tests and practicality tests is carried out. In addition, at this stage a selection of media is carried out. The selected medium is an e-module learning model in the integrated Chemistry Learning Strategy course on religious moderation values using the Lectora application version 18. The final step at this stage is to determine the format. The format created is an e-module that contains all the components of the module.

The third stage is Develop. At this stage, an e-module validity test is carried out by lecturers who are experts in their respective fields and practicality tests by fourth semester students of the Department of Chemistry Tadris FTIK UIN Mahmud Yunus Batusangkar.

The fourth stage is Dessemination. This stage is the distribution of e-modules to students for use in the lecture process.

### Research Data Analysis

Data obtained from validators (lecturers) and practitioners (students) are analyzed and tabulated based on the classification made. The respondent's answer score refers to the Linkert scale in table 1.

**Table 1.** Score Alternative Answers

| No | Answer Choices | Shoes |
|----|----------------|-------|
| 1  | Tall           | 2     |
| 2  | Keep           | 1     |
| 3  | Low            | 0     |

Data validitas of material, language, media and the value of religious moderation that have been obtained from the questionnaire will then be analyzed. The alternative answers contained in the questionnaire are transformed into quantitative data to obtain interval data. The data is then processed so that the kappa moment is obtained with the formula:

$$moment\ kappa\ (k) = \frac{Po - Pe}{1 - Pe}$$

$$Where\ Po = \frac{Score\ from\ experts\ or\ pratitioners}{Max\ score}$$

$$Pe = \frac{Max\ Score - Score\ from\ experts\ or\ practitioners}{Max\ Score}$$

Kappa moments (k) range from 0 to 1 with interpretations according to Boslaugh & Watters (2008: 12) presented in Table 2.

**Table 2.** Interpretation of Moment Kappa

| Interval   | Category  | Information                      |
|------------|-----------|----------------------------------|
| 0.81-1.00  | Very High | Highly Valid, with no revisions  |
| 0.61-0.80  | Tall      | Valid, slight revision           |
| 0.41-0.60  | Keep      | Less Valid, partial revision     |
| 0.21-0.40  | Low       | Invalid, total revision          |
| 0.01-0.20  | Very Low  | Very not Valid, unusable         |

▪ **RESULT AND DISCUSSION**

The first validity to be tested is the validity of the material. The validity of the material indicates a product developed based on the relevant curriculum, or a learning product developed based on a strong theoretical rationale (Haviz, 2016). Validity is a representation of the accuracy of information. Validity in this study uses content validity and construct validity. Content validity is a type of validity that is taken into account through testing the contents of measuring instruments with rational analysis, namely the extent to which items in a measuring instrument cover the entire area of the content of the object to be measured by the measuring instrument concerned or related to the representation of the entire area (Gall, Gall, & Borg, 2012). Based on the data obtained 2 out of 3 validators rated the validity of the contents of the developed e-module as 0.82 and 0.85 very high categories and 1 validator rated 0.75 high categories. The average validity of contents based on the overall assessment of validators is 0.76 with a high validity category. The result obtained from the validity of the material is as follows:
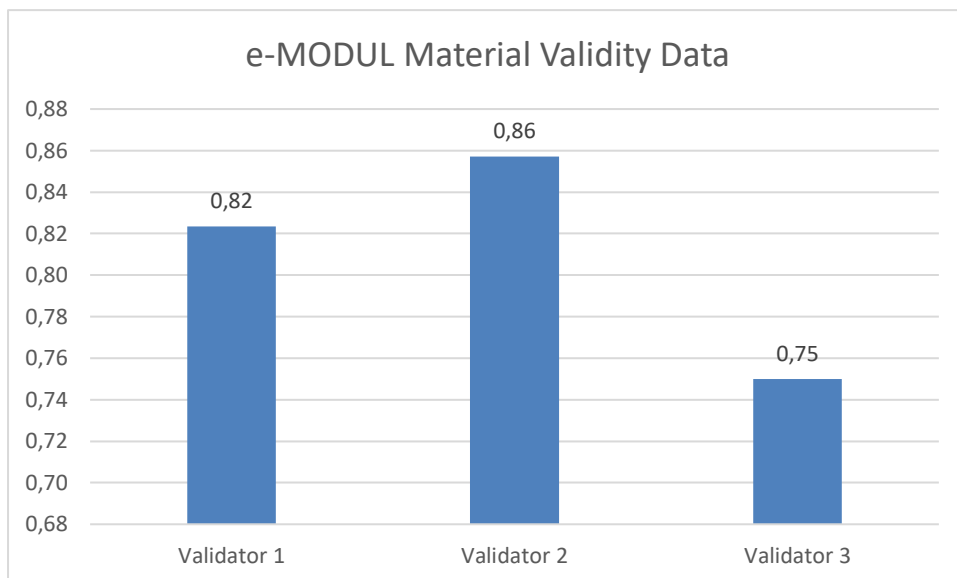
**Figure 1.** e-Modul Material Validation Results

The second validity tested is the validity of the media. Media validity indicates internal consistency between product components (Haviz, 2016). The validity tested in the second is the validity of the media. The validity of the construct indicates the internal consistency between the components of the product (Haviz, 2016). Based on the data obtained by 3 validators assessed the validity of the contents of the developed e-module, namely 0.736, 0.76 and 0.8 with an average of 0.76 high categories. The results obtained from the validity of the contents are as follows:
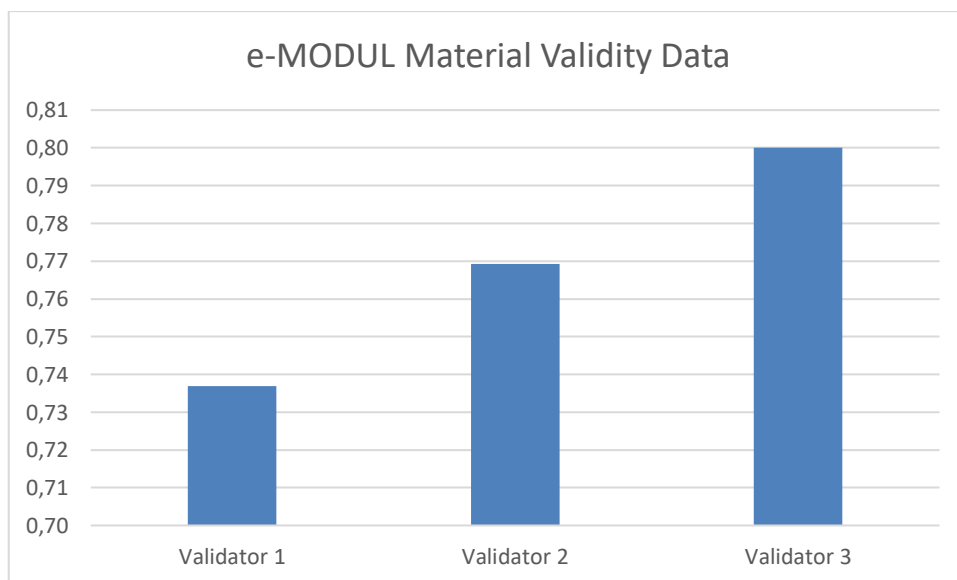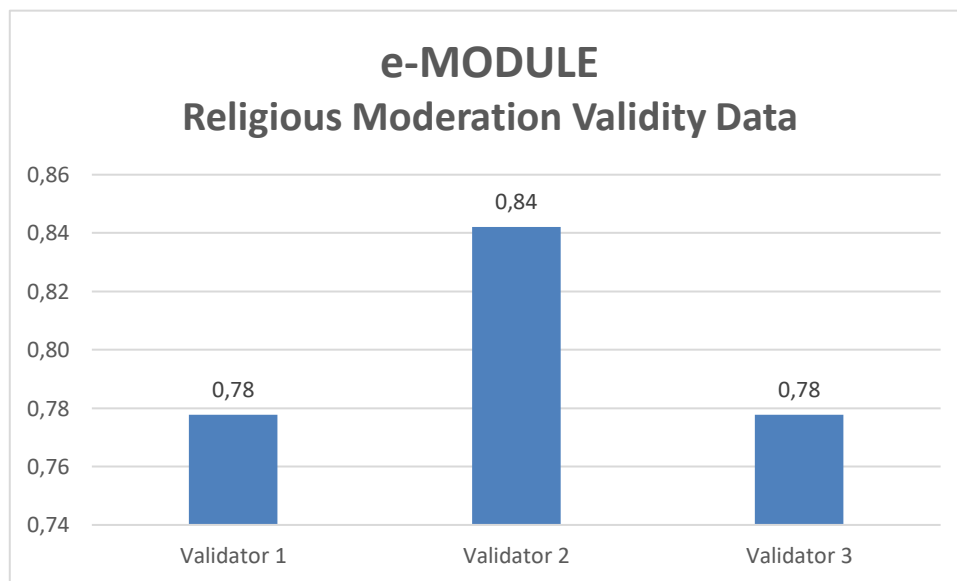


**Figure 2.** e-Modul Media Validation Results

The third validity tested is Language validity. This validity refers to the language standards used in the developed e-module. Based on the data obtained that both validators assessed the language validity of the developed e-modules with values of 0.93 and 0.85 with an average of 0.89 so that they were categorized very high. The results obtained from the validity of the language are as follows:

## e-MODUL Language validity data

Figure showing bar chart: Validator 1 = 0,93; Validator 2 = 0,86
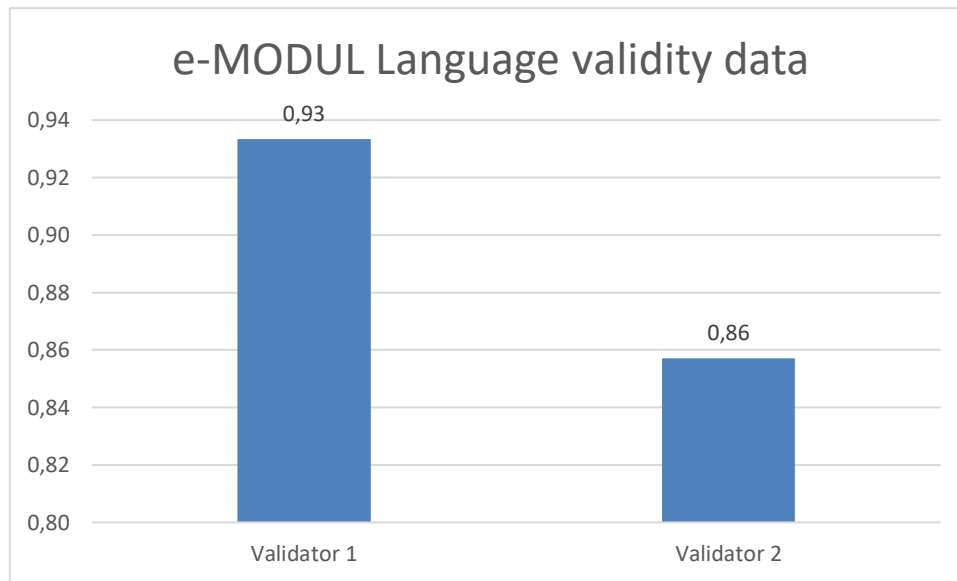
**Figure 3.**  e-Module Language Validation Results

The fourth validity tested is the validity of religious moderation content. This validity relates to the content of the value of religious moderation integrated into the syntax of the learning model. Based on the assessment of religious moderation content validators, namely 0.77, 0.84 and 0.77 with an average of 0.79 high validity categories.   The results obtained from the validity of the contents are as follows:

## e-MODULE
### Religious Moderation Validity Data

Figure showing bar chart: Validator 1 = 0,78; Validator 2 = 0,84; Validator 3 = 0,78
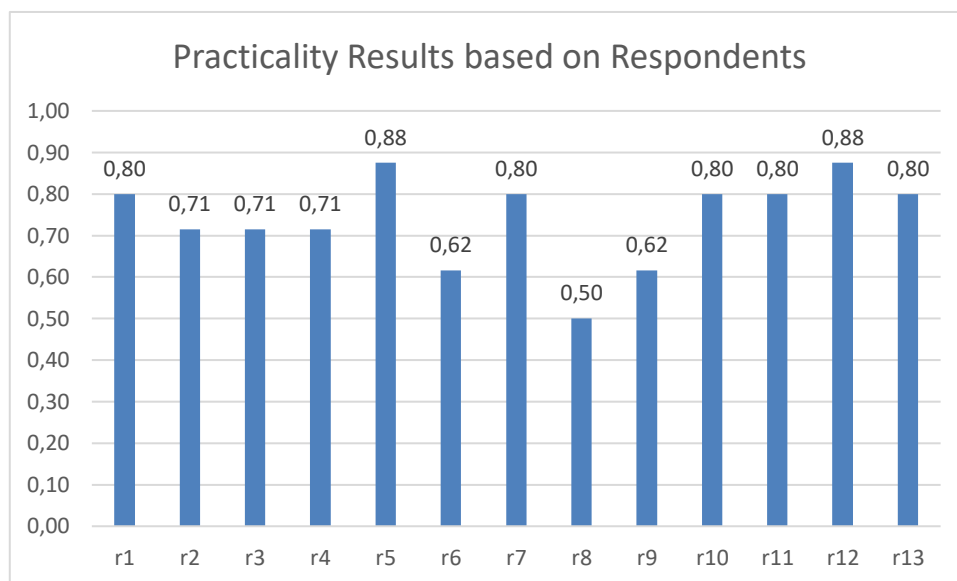
**Figure 4.**  e-Modul Religious Moderation Validation Results

The next test that is carried out is the practicality test. The second aspect of determining the quality of learning products is practicality. The practicality aspect is determined from the results of the user's or user's assessment. The second aspect of determining the quality of learning products is practicality. The practicality aspect is determined from the results of the user's or user's assessment. Assessment of practicality by the user or user, looking at the answers to the questions: (1) whether the practitioner argues that what is developed can be used under normal conditions; and (2) whether reality suggests that what is developed can be applied by practitioners, e.g. lecturers and students ( Haviz, 2016).  Based on the data obtained from the results of the e-module practicality by practitioners, it was found that as many as 2 practitioners assessed 0.88 with a very high practicality category, 5 practitioners assessed 0.8 with a high

practicality category, as many as 3 practitioners assessed 0.71 with a high practicality category, as many as 2 practitioners rated 0.62 with a high practicality category and 1 practitioner rated 0.50 with a medium category. The average practicality of practitioners is 0.74 with a high practicality category. The results of the practicality test are as follows:



**Figure 5.** Results of e-Modul Practicality

- **CONCLUSION**

Based on the description of the results and discussion, it can be concluded that the Interactive e-Module on the Integrated Learning Model Material of Religious Moderation Values developed has a very high validity value, this is based on an assessment of the results experts in terms of material, media, language and integrating the values of religious moderation. In addition, the e-module also has a very high practicality value based on the assessment of practitioners, namely students. In general, it can be concluded that this e-module is feasible to use in the Chemistry Learning Strategy course.

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