Ingénierie des Systèmes d'Information
Vol. 29, No. 5, October, 2024, pp. 2061-2076
Journal homepage: http://iieta.org/journals/isi

# Modifying TAM to Understand Religious Application User Acceptance

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https://doi.org/10.18280/isi.290537

**Received:** 6 May 2024
**Revised:** 10 August 2024
**Accepted:** 8 October 2024
**Available online:** 24 October 2024

***Keywords:***
*TAM, eKatolik app, user satisfaction, religious experience, content quality, information credibility, computer experience, spiritual practices*

**ABSTRACT**

The research explores how the eKatolik app is adopted and utilized within the Indonesian Catholic community, employing a modified Technology Acceptance Model (TAM) that incorporates additional variables such as information credibility, application content quality, computer experience, religious experience, and user satisfaction. Conducted in the Archdiocese of Jakarta with a sample of 400 participants, the research employed quantitative methods, with data analyzed using Smart PLS software. The findings indicate that application content quality and information credibility significantly enhance the app's perceived usefulness, promoting user adoption. Additionally, computer experience positively influences ease of use, improving user satisfaction and attitudes toward the app. Religious experience plays a pivotal role in integrating the app into spiritual practices. However, ease of use does not necessarily lead to perceived usefulness, and while information credibility does not directly affect user attitude, it indirectly increases user satisfaction. The study concludes that content quality, credibility, and tailored religious features are essential for fostering positive user acceptance and long-term engagement with spiritual applications. These findings offer practical insights for developers aiming to enhance the effectiveness and relevance of religious mobile applications.

## 1. INTRODUCTION

The rapid advancements in information technology in recent years have significantly impacted various sectors, including religious practices. One notable development is the rise of mobile applications designed to support religious and spiritual activities [1]. These applications enable believers to easily access scriptures, liturgical texts, prayers, and other theological resources wherever they are, facilitating more active engagement in daily religious practices and a deeper understanding of Church doctrines [2].

This trend coincides with the significant increase in smartphone and internet usage. As of early 2022, approximately 167 million people, or 89% of Indonesia's population, were smartphone users, and around 204.7 million people had internet access [3].

Within the framework of the Catholic Church in Indonesia, the eKatolik app is a notable example of successful technological adoption. According to recent data, the app has achieved one million downloads [4], which is essential given that Indonesia's Catholic community numbers about 8.43 million people, accounting for 3.08% of the country's total religious demographic [5]. The data suggests that approximately 12% of Indonesian Catholics have used the eKatolik app, reflecting a strong interest in incorporating technology into their religious routines. The widespread adoption of the app signifies an essential advancement in integrating technology into spiritual practices.

However, despite its popularity, developers of the eKatolik app must address several challenges to maintain and enhance its usage. One critical issue is that eKatolik was not developed by an official Church authority, raising concerns about its content's perceived credibility. In the context of the Catholic Church, where the credibility of information is paramount, particularly regarding teachings and practices, this poses a significant challenge [2]. Furthermore, users have not fully utilized the eKatolik app as a daily spiritual support tool. Reports from the Litteras Nostri community indicate that many of its members have yet to use the eKatolik app on their smartphones, even though it could significantly aid their scriptural study and spiritual growth [6].

This research applies TAM. This technique is frequently employed to investigate how individuals adopt and utilize technology and develop a more comprehensive perception of the challenges associated with adopting eKatolik. Previous TAM studies have identified several key variables, such as credibility of information, content quality, computer experience, religious experience, and user satisfaction, that influence technology acceptance in religious contexts [7-11]. In the Catholic Church, these variables appear particularly relevant due to the central role of the Magisterium in controlling information. Information without the Magisterium's authority may be considered untrustworthy [2].

Additionally, content quality is crucial in determining user

satisfaction and technology acceptance. Research on the use of digital platforms within the Catholic Church in Indonesia has shown that compelling and relevant content boosts user satisfaction, promoting technology acceptance. However, the challenge lies in providing content that resonates with users' needs. Effective content presentation contributes to the growth of social media followers, which is a significant measure in today's digital landscape. Moreover, users' prior experience with technology, including their digital literacy, is another critical factor. A lack of digital skills can hinder technology adoption, particularly among church members and leaders who are less familiar with digital media. Users' religious experiences, including how they incorporate technology into their faith practices, such as virtual worship and online meetings, also play a significant role [12].

By building on this background, the research intends to determine whether the variables mentioned above influence the adoption and utilization of the eKatolik app and how they contribute to the spiritual practices of Catholics. The study, which modifies the Technology Acceptance Model, aims to uncover how various aspects of the eKatolik app, from content to user experience, impact its acceptance and integration into religious practices.

The researchers conducted this study in the Archdiocese of Jakarta to gain a comprehensive understanding of the factors that influence the use and adoption of religious digital applications, particularly within the Catholic community. By gaining this understanding, the researchers aim to offer relevant recommendations for developing and implementing technology in the Catholic Church, ensuring that religious mobile applications more closely align with the needs of Catholic believers.

## 2. REVIEW OF LITERATURE

### 2.1 Model of technology acceptance

User acceptance is how potential users will likely utilize the system. As a theoretical model, the Technology Acceptance Approach, also called the TAM, was introduced by Deris and Nazir [8] and posits that what the user wants to interact with an information system remains a critical factor in determining the system's ultimate acceptance (see Figure 1). Computer technology's Perceived Ease of Use is a reflection of how easy it is to use and understand. Meanwhile, Perceived Usefulness refers to a person's conviction that a specific technology will help them do their work better. When faced with the need to use technology, a person's attitude toward it displays a positive or negative reaction. The desire or willingness of an individual to do or use technology is referred to as behavioral intention. This readiness to act is not the action itself but rather the reason why someone decides to act. A person's confidence in the technology's ability to increase productivity at work is correlated with their belief in its usefulness, and their perception of its simplicity of use is correlated with how simple it is to use. Both of these are elements that influence how a person feels about utilizing technology, and it is ultimately these feelings that determine whether or not they will utilize the technology [7].

However, in the context of religious applications, the potential of TAM is just beginning to be realized. Recent research, such as that conducted by Opoku et al. [9] and Shuai [10], has effectively implemented the technology acceptance framework to discover how the asserted advantages and ease of use influence the acceptance of religious mobile applications. These studies demonstrated that, although perceived utility and simplicity of use are crucial factors in people's acceptance of technology, additional factors that are specific to religious settings—including the quality of app content, trust in religious authorities, and spiritual experiences—are equally important.

Despite its widespread use, TAM has faced criticism for oversimplifying the factors influencing technology adoption, particularly in complex environments like religious practices. Some critics suggest that TAM's emphasis on perceived benefit and its simplicity of use may only partially encompass the complexities of technology adoption within religious environments. Trust, authority, and spiritual relevance, unique to religious settings, are highly influential in technology adoption. Deris and Nazir [8] and Natakusumah et al. [13] have strongly suggested that these factors should be incorporated into TAM to better reflect the dynamics at play in the adoption of religious technologies.

### 2.2 The eKatolik app

The swift advancement of communication and information technologies, particularly the internet and social media, has profoundly transformed the interaction between technology and religion. This shift has allowed the Catholic Church to pioneer new social and pastoral communication technologies, expanding its reach and influence. The Church aims to leverage these digital tools to enhance communication and distribute spiritual truths. Since Pius XII's 1957 Miranda Prorsus, which encouraged the use of technology as a divine gift, and Pius VI's 1964 praise of sciences and technologies serving the Spirit, the Church has acknowledged the potential of technology in its mission. Campbell and Vitullo cites Babin and Zukowski, noting that Communio et Progressio highlights the Internet's growing potential and its theological significance for outreach and institutional adoption [14].

As a result, the use of religious mobile applications has become an essential part of the Catholic Church's technological adaptation, allowing Catholics to access prayers, sacred texts, meditations, and other religious content via their mobile devices, embracing the opportunities provided by the digital era for spiritual growth and community engagement.

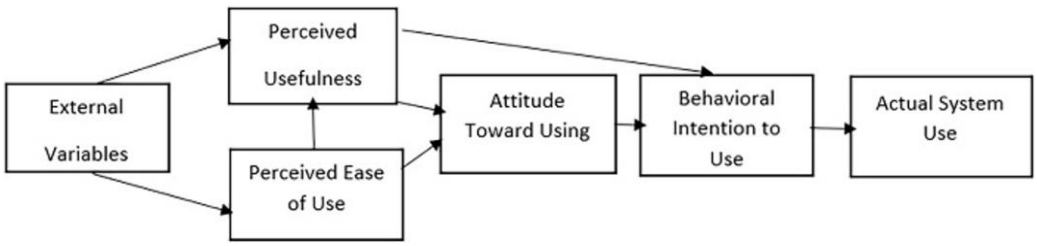


**Figure 1.** Original TAM

2.2.1 Background of eKatolik

Dominicus Bernardus, a Catholic IT consultant, created the eKatolik app in response to the increasing popularity of mobile devices and the rising need for digital Bible applications within the Catholic community. Since its launch in late 2013, the app has become a vital tool for many Indonesian Catholics in their spiritual lives. However, its development outside official Church authority raises concerns about its doctrinal reliability and alignment with Magisterium teachings. This credibility issue is critical in the context of Catholic doctrine, where the authority of the Magisterium is central to the acceptance of religious teachings and practices [15].

2.2.2 The interface of eKatolik

The left side displays the main menu of eKatolik, featuring options such as the Bible, liturgical calendar, prayer collection, reflections, and daily Fresh Juice content. On the right, the screen showcases the "Daily Fresh Juice" feature, presenting daily spiritual reflections and announcements [4]. This user-friendly interface provides easy navigation for users seeking spiritual resources and liturgical information (Figure 2).

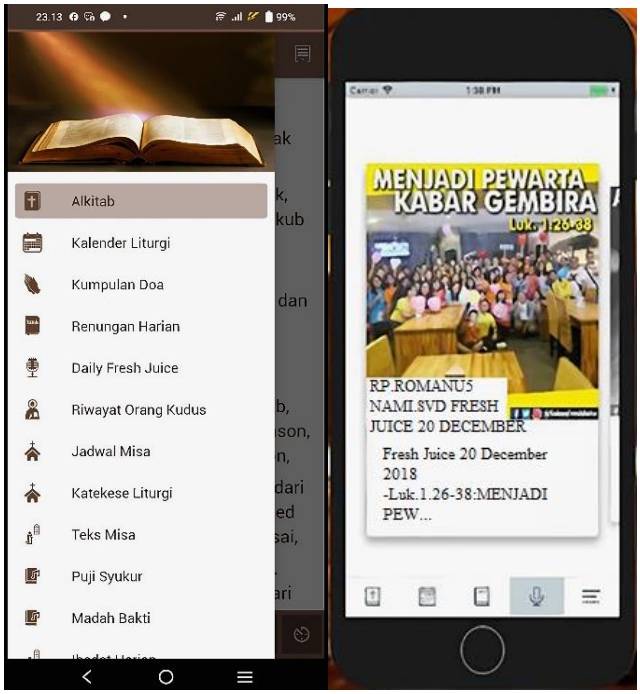


**Figure 2.** The interface of eKatolik

**Table 1.** Features of eKatolik

| | |
|---|---|
| Bible | Alkitab offline, Alkitab Perjanjian Lama, Perjanjian Baru, dan Deuterokanonika, Salin Ayat, Stabilo Ayat |
| Prayer | Kumpulan Doa, Ibadat Harian, Doa Rosario |
| Song | Puji Syukur, Madah Bakti |
| Liturgical Text | Teks Misa |
| Reflection | Renungan harian audio, teks renungan harian,Riwayat Orang Kudus, Inspirasi Hidup |
| Timetable | Kalender Liturgi, Jadwal Misa, Informasi acara-acara rohani |
| Notification | Notifikasi untuk doa kerahiman Ilahi dan doa Malaikat Tuhan |

2.2.3 Features of eKatolik

Table 1 illustrates the array of features offered by the eKatolik app in an effort to explore how technology aids the spiritual lives of the Catholic faithful [6]. These features encompass offline Bible access, a collection of daily prayers, and daily reflections that enhance the user's spiritual activities. Additionally, the app provides a liturgical schedule and notifications for religious events, assisting users in more effectively organizing their worship activities.

2.2.4 Metadata

According to the published metadata (Figure 3), the eKatolik app has a rating of 4.8 stars, signifying high user satisfaction and favourable feedback. Furthermore, the metadata indicates that the app has over one million downloads, underscoring its widespread use [4]. However, while the app is rated suitable for all audiences, including young children, the lack of official Church endorsement may limit its perceived authority and impact on users who prioritize doctrinal fidelity.

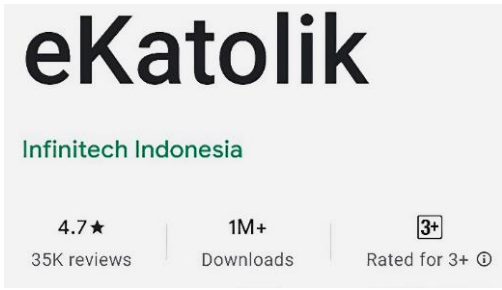


**Figure 3.** Metadata of eKatolik

2.2.5 Opportunities and challenges

a. Opportunities

Smartphone adoption has significantly transformed interactions with technology (see Figure 4) [3], notably in how the Catholic Church engages its followers via mobile apps. As digital technology progresses, human interactions have shifted from passive consumption in Web 1.0 to active content creation and collaboration in Web 2.0 [16]. The Church has embraced this shift, using the internet to further its mission rather than avoiding technology out of fear [14]. As internet access and smartphone use continue to rise, there has been a surge in technological innovations and religious apps [12]. These developments offer the Catholic Church a valuable opportunity to enhance its digital presence and integrate spirituality into daily life through mobile platforms.

Technology supports the integration of spirituality into daily activities. In brief, the use of mobile app technology in a religious context involves various activities [16], such as:

- ✓ Reading the Bible through an app.
- ✓ Praying or meditating through a guide app.
- ✓ Carrying out online research on spiritual subjects.
- ✓ Reading online devotions.
- ✓ Viewing sermons through online streaming platforms.
- ✓ Following church events through websites or email.
- ✓ Subscribing to religious emails.
- ✓ Checking on church friends via Facebook or phone.
- ✓ Joining religious communities on Facebook
- ✓ Engaging with Bible trivia applications.
- ✓ Participating in virtual religious courses.
- ✓ Conducting conference call prayers.
- ✓ Podcasts on religion.
- ✓ Using a streaming service to listen to religious music.
- ✓ Using a Bible app to listen to the Bible.

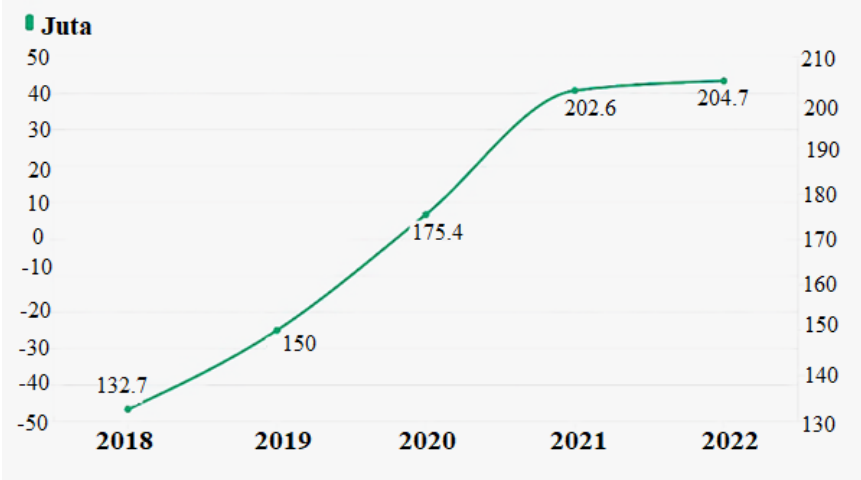


**Figure 4.** A chart illustrating the overall count of internet users in Indonesia between 2018 and 2023

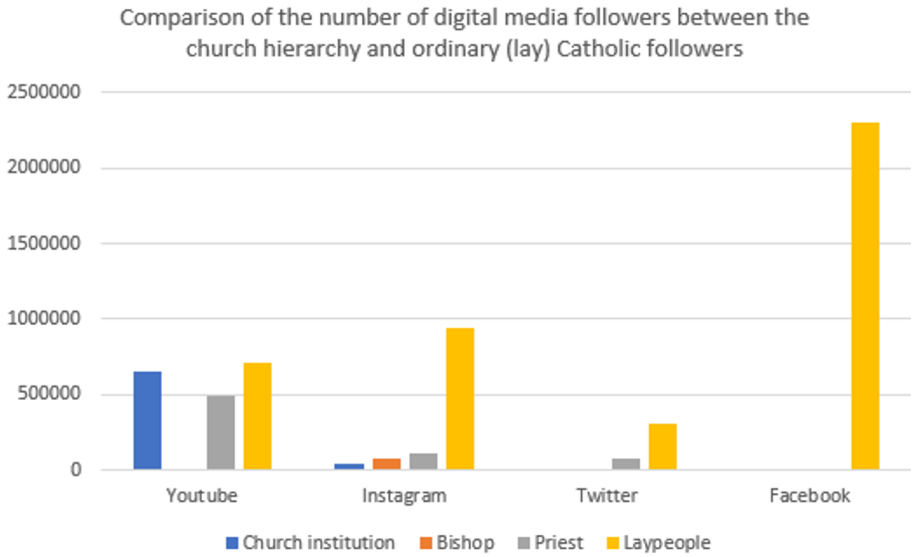


**Figure 5.** Comparison of the number of digital media followers between the church hierarchy and ordinary (lay) Catholic followers

b. Challenges

An individual, rather than church authorities, created the eKatolik app. The development of such applications outside the official Church authority raises concerns about the authenticity of the information they provide [2]. The power of Catholic teaching is central to the Magisterium, which interprets God's Word and protects the faith's validity against heresy. The Pope and bishops, endowed with the charisma of infallibility in teaching faith and morals, exercise this authority in the name of Jesus Christ and must teach without error to deliver final teaching following Church doctrine [15]. The lack of endorsement from Church authorities may lead to doubts about the app's credibility, particularly among users who prioritize doctrinal accuracy in their spiritual practices.

Empirical evidence indicates that eKatolik needs to be effectively employed to fulfil the everyday spiritual requirements of believers. Meetings of the Litteras Nosti Community (KLN) reveal that a significant portion of its members have yet to make use of or are entirely unaware of the existence of the eKatolik application. However, this technology holds considerable promise for facilitating their spiritual endeavours [12]. This gap between the app's potential and its actual use underscores the need for greater awareness and trust-building initiatives.

**Table 2.** Official social media accounts of church hierarchy vs. social media accounts of lay catholic groups

| Types | Catholic Church Hierarchy of Social Media Accounts (Official) | Catholic Lay Group Social Media Accounts (Un-official) |
|---|---|---|
| Characteristics or Approaches | Formal, rigid, serious, teaching, like sermon in the pulpit, minimal interaction | Informal, Interactive, like chatting in the market, comment or reply more, creative |
| Contents | Catechetical Content, Devotionals, Scriptures, Catechism, Birthday Greetings | Catechism, social issues, current issues |
| Followers | Fewer | More |

As presented in previous research (see Table 2), content quality issues are related to internet use in the Catholic Church's evangelization work in Indonesia. Research findings indicate that content produced by Catholic laity is more relevant and interactive, while Church hierarchy content tends to be formal and inflexible [12]. This finding suggests a

problem with content quality in transmitting religious teachings digitally, which may hinder the effectiveness of the eKatolik app in engaging users. Addressing this issue requires maintaining doctrinal accuracy and providing engaging user-centred content.

Minimal use of technology for evangelization. Many institutions and Church figures have not fully utilized technology, as seen from their few social media accounts. Surprisingly, ordinary laypeople's accounts have more followers than the official Church accounts (Figure 5). It contradicts expectations that followers should refer to the Church's official information sources [12]. The minimal use of technology is also related to digital literacy issues. Limited digital literacy within the Church may result in a more traditional approach to evangelization, which may not resonate with modern followers accustomed to digital engagement.

## 3. RESEARCH MODEL AND HYPOTHESES

This study developed a modified version of the TAM based on previous findings that included relevant external variables within their research framework. This development emerged from the understanding that variables such as Perceived Ease of Use and perceived usefulness measured in the original TAM model were not entirely adequate for assessing certain aspects [8].

The eKatolik app is a digital platform designed to provide religious content, facilitate prayer and meditation, and connect users with the Catholic community. The researchers enhanced the model with additional variables such as information credibility, content quality, computer experience, religious experience, and user satisfaction to better understand the factors affecting the adoption and utilization of the eKatolik app.

### 3.1 Proposed model

The proposed model diagram is as Figure 6.

### 3.2 Operational definitions

Operational definitions are shown in Table 3.

**Table 3.** Operational definitions

| Variables | Indicator | Definition | Citation |
|---|---|---|---|
| Religious experience | | Religion serves as a personal and social driver, shaping individuals' views and attitudes toward emerging technologies. | [13] |
| | Technology adoption for religious purposes | The internet is now a vital component of both religious and practical life. People and religious communities of various faiths increasingly utilise new media for religious activities, including social platforms, websites, and applications. | [10] |
| | Interaction with religious application | Technology enhances our capacity to incorporate spirituality into our daily routines through innovative methods. | [1] |
| | | Religious practice apps provide guidance on rituals and facilitate religious experiences. | [17, 18] |
| Computer experience | Level of expertise with computer | refers to the ability to use applications | [11] |
| | Familiar with computer | the familiarity someone has with computers | [10, 11] |
| Perceived Usefulness | Enhance capability | A level to which individuals believe that their efficiency at work will be enhanced by the use of a particular technology. | [8-10] |
| | Save the time | Using this system enhances the work quality and helps save time. | [19] |
| | Useful | The service mentioned proves to be beneficial. | [19] |
| | Helpful | PU is the belief that technology will help accomplish necessary job tasks. | [20] |
| Perceived Ease of Use | Free from effort | The level of how someone claims that implementing a specific system needs minimal effort. | [8-10, 13, 21] |
| | Easy to use | The idea that a particular technology will be uncomplicated is known as believed ease of use. | [1, 9, 20] |
| Credibility of Information | Credible source | A source's credibility can be described as a favourable attribute that encourages recipients to accept the messages conveyed. | [7] |
| | Institutional Support | For Christian respondents, local vicars are the most credible source due to their theological knowledge and understanding of their congregations. Products endorsed by vicars, the church, or Christian authorities receive strong support. | [22] |
| Application content quality | Content richness | Content richness refers to educational materials that users can access to deepen their understanding of topics of interest. It is measured through three dimensions: relevance, timeliness, and adequacy. | [7, 9] |
| | | Content richness is defined as the availability of a wide range of educational resources that users can utilize to enhance their learning experience. | [21] |
| | Regular content update, Unbiased and analytical, addressing real-world questions. | Content quality is also a key factor in performance expectations. Respondents identified the components of high-quality content as being: (1) current and up-to-date, (2) objective and analytical, and (3) addressing practical concerns. | [9, 22] |
| | Content Clarity | Application content refers to users' capacity to access and comprehend the information on their mobile devices. Selecting content that offers sufficient and relevant information is essential. | [9] |
| User satisfaction | Satisfied and pleased | User satisfaction can be viewed as a key element that impacts the effectiveness of a learning system's success. | [7, 21] |
| | Achieve outcomes | The extent to which users felt satisfied and pleased with their experience using earlier information systems. | [7] |

| Variables | Indicator | Definition | Citation |
|---|---|---|---|
| | | Satisfaction involves assessing one's emotions based on the results produced by the system. | [21] |
| | Personal evaluation | In much of the literature, users' attitudes toward adopting technology are recognized as having an impact on their intention to use it. | [9, 21] |
| User attitude | Trust in Technology | Alharbi and Drew (2014) found that in Saudi Arabia, faculty members' attitudes significantly influence their intention to use LMS, indicating that positive attitudes increase the likelihood of adopting the technology. | [9] |
| | Interested in using the system | Attitude refers to the degree of user interest in engaging with the system, which ultimately drives their decision to use it. | [7] |
| Actual Usage | the frequency and volume of use | Actual usage refers to the reported frequency and amount of system interaction as stated by users themselves. | [23] |
| | Extend of utilization | The extent to which an individual interacts with an app in particular. | [23] |

### 3.3 Hypotheses

3.3.1 Computer experience

Computer literacy is the ability to use applications, encompassing problem-solving, adaptability, information organization, and effective communication. Further, it is also emphasized that basic computer literacy among church members and leaders is important, especially when using social media responsibly [11].

People with limited computer experience may find technology difficult, while those with more experience are adept at using online religious activities and advanced functions. Shuai [10] notes that higher computer competence increases the likelihood of finding online religious activities valuable and easy to use. By this, we suggest the subsequent hypothesis regarding the eKatolik application:

H1: Computer experience significantly influences the Perceived Ease of Use of the eKatolik religious mobile application.

H2: Religious experience plays a significant role in shaping the perceived utility of the eKatolik religious mobile application.

3.3.2 Religious experience

Abubakari and Priyanto highlight that religious experience significantly influences perceptions and attitudes towards new technology at individual and community levels [24]. Past use of websites, social media, and apps for religious activities shows that technology supports spiritual practices. Studies indicate that religious experience impacts decisions to adopt technologies, such as mobile payments, and shapes user behaviour [10].

Additionally, religious experience fosters community development and emotional connections [25]. Research on Bible apps reveals that devotional attitudes supported by mobile apps help maintain spiritual commitment [26].

Building on this foundation, we suggest the following propositions:

H3: Religious experience significantly influences the perceived utility of the eKatolik religious mobile application.

H4: Religious experience significantly impacts the perceived simplicity of use of the eKatolik religious mobile application.

H5: Religious experience significantly affects users' perceptions of the eKatolik religious mobile application.

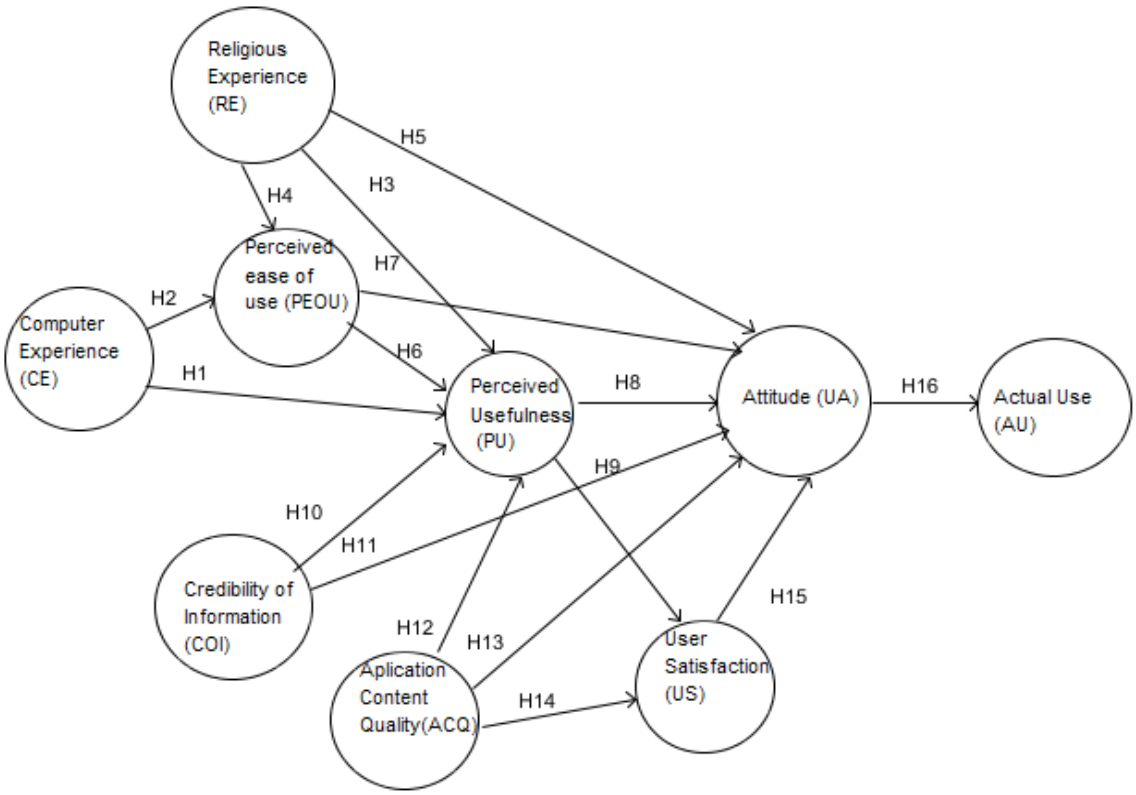


**Figure 6.** Proposed model

3.3.3 User-perceived ease

Perceived Ease of Use (PEOU) and perceived usefulness (PU) are essential factors in the technology adoption paradigm. PEOU is the belief that the operation of a system is simple [16].

PEOU has an enormous effect on consumer objectives and attitudes concerning system usage [17]. The technology's high PEOU represents how easy it is to use [16].

PEOU has been effectively applied in electronic commerce to show that users prefer user-friendly technologies [16].

Interviews conducted for research on religious applications revealed that apps facilitate the rapid adoption of a spiritual lifestyle [18].

We assume the following presumption regarding the acceptance of the e-Katolik application:

H6: Perceived Ease of Use significantly influences the perceived usefulness towards the eKatolik app.

H7: Perceived Ease of Use significantly influences users' attitudes towards the eKatolik app.

3.3.4 Perceived of usefulness

Davis first established the concept of perceived usefulness, which is central to technology adoption models, in 1989. He proposed that the perceived usefulness of technology plays a vital part in its acceptance since it directly influences job performance [16]. This concept has influenced people's attitudes and intentions towards using technology [9].

Perceived usefulness directly enhances performance and efficiency. Questions of usefulness concern how the method enhances job quality and saves time [19]. Perceived usefulness influences how individuals use mobile applications, mobile services, mobile payments, and so on [20]. Furthermore, perceived usefulness predicts learners' satisfaction levels in online learning [9].

According to research findings, perceived usefulness influences users' willingness to adopt technology, particularly religious mobile applications [20]. It represents the concept that technology is beneficial [19] and aids in completing important activities [17].

Thus, in the context of this study, the perceived usefulness of technology will play an essential role in determining why people want to use religious mobile apps. It happens because the perceived usefulness of technology, particularly religious mobile applications, changes users' attitudes and satisfaction levels, increasing their willingness to use them.

H8: Perceived Usefulness significantly influences users' attitudes towards the eKatolik app.

H9: Perceived Usefulness significantly influences user satisfaction with the eKatolik app.

3.3.5 Credibility of information

Credibility represents one of the earliest concepts studied in communication [27]. Credibility is the ability to be accepted or acknowledged as legitimate, accurate, or honest, and it applies to both the information and its source [28]. According to this interpretation, credibility refers to both the source of credibility and the credibility of information. The source's favourable attributes determine the source's credibility and influence the receiver's acceptance of the message [7]. According to Wierzbicki, credibility is a signal that can persuade the listener that the information is correct [29]. Those who believe in the accuracy of the information are more inclined to share it [22].

A study specifically focused on technology use within the Christian Church found that credibility plays a significant role in information-sharing behaviour. Notably, religiosity emerged as a powerful predictor of credibility. This finding underscores the unique context of the study and its relevance to our audience. Despite exposure to both accurate and inaccurate news, individuals tend to share only what they perceive as credible. The assessment of credibility is based on various factors, including the source, receiver, message, medium, and surroundings [28]. Local pastors, revered for their theological knowledge and understanding of their congregations, are viewed as highly credible. Products endorsed by pastors, churches, and Christian authorities are well-received by Christian audiences [22]. Given the use of the eKatolik app, it is assumed that:

H10: Information credibility significantly influences the perceived usefulness towards the eKatolik app.

H11: Information credibility significantly influences users' attitudes towards the eKatolik app.

3.3.6 Application content quality

Previous research has found a strong link between application content quality and content richness. Users can define content quality as a learning resource that they can use to expand their knowledge on subjects that are relevant to themselves. The three factors used to assess content richness are relevance, timeliness, and completeness.

Lee and Lehto define content quality in a way that makes it measurable and operational, as a significant number of learning materials available to users to supplement their learning practices. The three dimensions of content richness are measured: timeliness, relevance, and completeness. The content’s relevance measures how well it aligns with the information consumers need. Shih (2004) argues that people actively seek relevant information to close the divide between their existing knowledge and the necessary knowledge to complete assigned tasks. Timeliness refers to how much an information system provides users with the most current information. Finally, completeness refers to how the information system presents users with an acceptable quantity and variety of information [21].

The quality of content is equally important in terms of technology adoption. Based on participant replies, earlier research found that characteristics that result in high-quality material include (1) being current, (2) being unbiased and critical, and (3) providing answers to practical concerns such as marriage and everyday moral issues [22]. Opoku et al. shared the same perspective, emphasizing the need for content richness and regular content updates [9].

Previous research on user intentions to use Bible applications in Ghana inspired this study. The data indicated a correlation between content quality and the use of Bible applications. The ability of users to read and interpret application content on their mobile devices is the subject of this study's application content. Users must choose which content to read and how that content offers appropriate information [9]. Based on the preceding assumptions, it is assumed that:

H12: The quality of the application content significantly influences the perceived usefulness towards the eKatolik app.

H13: The quality of the app's content significantly influences user satisfaction with the eKatolik app.

H14: The quality of the application content significantly influences users' attitudes towards the eKatolik app.

3.3.7 User satisfaction

Several researchers have modified the original technology adoption framework by integrating user satisfaction as an external factor in their analyses. The inclusion of user satisfaction as an extra variable stems from the understanding that a user's level of satisfaction, be it high or low, significantly influences their intention to use the system [8, 21].

According to Aldenny et al. [7], user satisfaction is the contentment and happiness individuals experience when utilizing an information system. Users feel comfortable when the outcomes meet or exceed their expectations. In other words, satisfaction is an emotional evaluation based on the outcomes provided by the system [21]. Deris and Nazir [8] have identified user satisfaction as a significant external variable in assessing user acceptance of mobile applications. Consequently, this modified technology acceptance model expands the user satisfaction concept with the following hypothesis:

H15: Satisfied users strongly influence attitudes towards the eKatolik app, a mobile application specifically created to offer religious resources and foster community involvement for Catholic users.

3.3.8 Attitude and actual use

As Lee and Lehto [21] define it, attitude is an individual's opinion of using a system. It refers to a tendency or preference developed by an individual's learning processes or experiences. Attitudes are constant perceptions or evaluations of a specific thing, idea, or category of objects. In this context, attitudes might be positive or negative, reflecting whether a person supports or opposes the topic or category under consideration [20].

A novel study in Indonesia found that e-service quality directly influences user attitudes and actual use in online shopping. Using PLS on data from 206 online store users, the study showed that positive user attitudes lead to increased actual use, highlighting the importance of e-service quality. This study improves the understanding of how e-service quality influences consumer behavior within a technology adoption framework, offering a new viewpoint to the field [30].

Referring to these fundamental ideas, this study combines user attitudes and actual use to describe a person's subjective likelihood of utilising the eKatolik app. As a result, we propose the following hypothesis:

H16: Attitudes significantly influence the actual use of the Katolik app.

## 4. RESEARCH METHODOLOGY

This quantitative study examines a sample of the Catholic community in the Archdiocese of Jakarta, Indonesia. The sample size is determined using Slovin's formula.

The researcher chose the Slovin technique due to the need for specific data on which areas of Jakarta most utilise the e-Katolik app. Even if the number of downloads is known, more information regarding the geographic distribution of this app's users in the Archdiocese of Jakarta is required. As a result, researchers implemented the Slovin formula to obtain a random sample representative of the Catholic community in the Archdiocese of Jakarta, ensuring that the research results are accurate and reliable [31].

### 4.1 Population and research sample

The population of the Archdiocese of Jakarta is known to be 562,483 people. The calculation for the sample of Catholics in the Archdiocese of Jakarta with a margin of error of 5% is 400 people.

### 4.2 Technique for the analysis of data

The software Smart PLS will systematically evaluate the validity and reliability of the data collected from respondents via questionnaire using structural equation modelling (SEM) analysis. Validity checks will include convergent and discriminant validity to ensure each indicator accurately specifies its variables. Convergent validity will be evaluated based on factor loadings, where an indicator is considered valid if its factor loading exceeds 0.7. The reliability tests, a crucial part of this process, will be employed to confirm that the constructs are measured accurately and without error, ensuring the data's accuracy. These assessments will be conducted using two primary methods: Cronbach's alpha and composite reliability. For confirmatory research, data will be deemed of high quality if Cronbach's alpha and composite reliability values reach or exceed 0.7, while for exploratory research, values reaching 0.6 are considered acceptable. In addition, Path Analysis will be performed to explore the direct, indirect, and total effects between variables in the structural model. We will assess the importance of these pathways by applying a bootstrapping technique with a large number of resamples, specifically 5,000, considering a p-value below 0.05 as statistically significant. This method ensures a robust evaluation of the hypothesized relationships [7].

## 5. DATA ANALYSIS

### 5.1 Validity analysis

According to the discriminant validity analysis, each construct in the questionnaire is different and well-defined from the others. The construct correlations are less than the square of the roots of the average of the variance extracted (AVE) along the diagonal, fulfilling the requirements specified by Fornell-Larcker (Table 4). The analysis confirms that each set of questions accurately assesses its intended element without significant overlap, validating the research instrument and ensuring a confident interpretation of the results.

### 5.2 Reliability analysis

Table 5 reveals that reliability coefficients such as Cronbach's alpha, rho_A, and composite reliability are above the 0.7 threshold, proving good reliability for all survey variables. Furthermore, the average variance extracted (AVE) numbers more significant than 0.5 show valid convergence, indicating that the variables accurately assess their intended concepts and account for most answer variation. Thus, these variables are valid and reliable for research purposes.

**Table 4.** Discriminant validity

| | ACQ | AU | CE | COI | PEOU | PU | RE | UA | US |
|---|---|---|---|---|---|---|---|---|---|
| **ACQ** | 0,894 | | | | | | | | |
| **AU** | 0,751 | 0,940 | | | | | | | |
| **CE** | 0,537 | 0,586 | 0,812 | | | | | | |
| **COI** | 0,648 | 0,566 | 0,518 | 0,845 | | | | | |
| **PEOU** | 0,520 | 0,550 | 0,669 | 0,520 | 0,947 | | | | |
| **PU** | 0,792 | 0,791 | 0,543 | 0,614 | 0,495 | 0,861 | | | |
| **RE** | 0,788 | 0,774 | 0,487 | 0,536 | 0,489 | 0,786 | 0,857 | | |
| **UA** | 0,789 | 0,781 | 0,647 | 0,604 | 0,578 | 0,752 | 0,803 | 0,831 | |
| **US** | 0,760 | 0,811 | 0,674 | 0,574 | 0,577 | 0,761 | 0,742 | 0,854 | 0,894 |

**Table 5.** Reliability analysis

| | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|---|---|---|---|---|
| **ACQ** | 0,916 | 0,916 | 0,941 | 0,799 |
| **AU** | 0,934 | 0,936 | 0,958 | 0,883 |
| **CE** | 0,869 | 0,876 | 0,906 | 0,660 |
| **COI** | 0,800 | 0,807 | 0,882 | 0,714 |
| **PEOU** | 0,886 | 0,888 | 0,946 | 0,897 |
| **PU** | 0,912 | 0,914 | 0,934 | 0,741 |
| **RE** | 0,910 | 0,916 | 0,932 | 0,734 |
| **UA** | 0,850 | 0,862 | 0,899 | 0,690 |
| **US** | 0,916 | 0,916 | 0,941 | 0,799 |

## 6. DISCUSSION

### 6.1 Direct effect

Table 6 presents the bootstrapping results for path coefficients in a SEM analysis. Path coefficients represent the strength and nature of connections between variables, while p-values measure their importance in statistical terms, with values under 0.05 indicating significance.

6.1.1 Application Content Quality (ACQ)

a. ACQ -> PU. An increase in application content quality significantly improves perceived usefulness, as demonstrated by a coefficient score of 0.343 and a highly significant p-value of not more than 0.001, making an application more beneficial to users.

b. ACQ -> UA. Quality content positively affects user attitudes, as revealed by a statistical value of 0.142 and a significance level of about 0.015, resulting in an improved view of the application.

c. ACQ -> US. High-quality content significantly boosts user satisfaction, demonstrated with a statistical score of 0.420 and a statistically positive probability value of below 0.001, leading to greater total user satisfaction.

6.1.2 Computer Experience (CE)

a. CE -> PEOU. Greater familiarity with computers leads to a marked improvement in how easy the application is perceived to be, with a statistical measure of 0.566 and a significance level below 0.001, indicating that users find the app simpler when they have more computer experience.

b. CE -> PU. Computer experience positively affects perceived usefulness, as shown via a correlation value of 0.108 with a statistical significance level of 0.026, meaning that better experience increases the perceived value of the application.

6.1.3 Credibility of Information (COI)

a. COI -> PU. Credible information significantly enhances perceived usefulness, particularly demonstrated by a correlation value of 0.130 and a degree of significance = 0.004, showing increased credibility improves the application's usefulness.

**Table 6.** Direct effect

| | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (\|O/STDEV\|) | P Values |
|---|---|---|---|---|---|
| ACQ -> PU | 0,343 | 0,340 | 0,062 | 5,519 | 0,000 |
| ACQ -> UA | 0,142 | 0,136 | 0,058 | 2,436 | 0,015 |
| ACQ -> US | 0,420 | 0,425 | 0,072 | 5,864 | 0,000 |
| CE -> PEOU | 0,566 | 0,573 | 0,094 | 5,988 | 0,000 |
| CE -> PU | 0,108 | 0,103 | 0,048 | 2,232 | 0,026 |
| COI -> PU | 0,130 | 0,131 | 0,045 | 2,862 | 0,004 |
| COI -> UA | 0,062 | 0,063 | 0,036 | 1,728 | 0,085 |
| PEOU -> PU | -0,020 | -0,014 | 0,049 | 0,409 | 0,683 |
| PEOU -> UA | 0,068 | 0,066 | 0,031 | 2,175 | 0,030 |
| PU -> UA | -0,017 | -0,012 | 0,054 | 0,325 | 0,745 |
| PU -> US | 0,429 | 0,426 | 0,073 | 5,898 | 0,000 |
| RE -> PEOU | 0,213 | 0,207 | 0,095 | 2,251 | 0,025 |
| RE -> PU | 0,403 | 0,405 | 0,070 | 5,793 | 0,000 |
| RE -> UA | 0,290 | 0,290 | 0,061 | 4,767 | 0,000 |
| UA -> AU | 0,781 | 0,782 | 0,027 | 29,035 | 0,000 |
| US -> UA | 0,470 | 0,471 | 0,049 | 9,687 | 0,000 |

b. COI -> UA. Information credibility does not notably influence user attitude, as indicated by a coefficient of 0.062 and a p-value of 0.085, suggesting it has little impact on shaping user perspectives.

6.1.4 Perceived Ease of Use (PEOU)

a. PEOU -> PU. How simple the application is to use does not significantly affect its perceived value, as evidenced by a statistical measure of -0.020 and a significance level of 0.683, indicating no meaningful relationship.

b. PEOU -> UA. A coefficient value of 0.068 and a significance level of 0.030 suggest that the ease of the application positively affects user attitudes, underscoring its importance for creating a good user view.

6.1.5 Perceived Usefulness (PU)

a. PU -> UA. The perceived value of the application does not significantly influence user attitude, as demonstrated by a statistical measure of -0.017 and a significance level of 0.745.

b. PU -> US. Perceived usefulness has a strong positive correlation with user satisfaction, as shown by a statistical value of 0.429 and a highly significant p-value of less than 0.001, demonstrating that higher perceived usefulness results in increased user satisfaction.

6.1.6 Religious Experience (RE)

a. RE -> PEOU. The statistical coefficient of 0.213 and a significance level of 0.025 indicate that religious experience positively influences the ease of use of the application. This finding suggests that it enhances the user's perception of the application's general simplicity.

b. RE -> PU. The perceived usefulness of the application is positively influenced by religious experience, as evidenced by a robust coefficient value of 0.403 and a statistically meaningful p-value < 0.001. This output underscores the strong relationship between a more profound spiritual experience and the increased usefulness of the app.

c. RE -> UA. The coefficient of 0.290 and a significance level < 0.001 provide sufficient evidence that religious experience benefits user attitudes. More profound spiritual experiences contribute to more positive views towards the application.

6.1.7 User Satisfaction (US)

A statistical coefficient of 0.470 and a significance level of less than 0.001 demonstrate the vital link between greater user satisfaction and a more positive attitude toward the application.

6.1.8 Actual Use (AU)

As demonstrated by a statistical measure of 0.781 and a highly significant p-value < 0.001, user attitude has a highly significant positive connection with actual usage, suggesting that a more positive attitude increases actual application usage.

**6.2 Indirect effect**

The following tables present the total indirect effects of SEM applied in this research. Indirect effects occur when the method used here impacts an outcome variable through mediating factors. The p-values indicate the level of importance of these effects.

6.2.1 Application Content Quality (ACQ)

Table 7 summarizes the following aspects:

a. The quality of application content shapes user attitudes primarily through satisfaction rather than perceived usefulness.

b. Content quality drives user satisfaction by enhancing perceived usefulness.

c. Content quality plays a crucial role in actual use, mediated by perceived usefulness and satisfaction, though it has no impact when mediated by user attitude.

6.2.2 Computer Experience (CE)

As shown in Table 8, several key findings are illustrated:

a. Computer experience shows no positive link to perceived usefulness through ease of use.

b. It also doesn't impact user satisfaction via ease of use and usefulness.

c. However, computer experience does boost user attitude through ease of use.

6.2.3 Credibility of Information (COI)

As indicated in Table 9, several important insights are presented:

a. Information credibility boosts user satisfaction by increasing perceived usefulness.

b. It also fosters positive attitudes, but only when both usefulness and satisfaction are involved—not usefulness alone.

c. Similarly, credibility drives actual use when supported by usefulness, satisfaction, and attitude but lacks impact when only channelled through usefulness and attitude.

6.2.4 Perceived Ease of Use (PEOU)

Table 10 highlights some aspects:

a. The ease-of-use shapes actual use by influencing user attitude.

b. However, ease doesn’t drive actual use through usefulness or satisfaction.

6.2.5 Perceived Usefulness (PU)

Table 11 presents several important findings, including:

a. Perceived usefulness promotes a positive user attitude through the mediation of user satisfaction.

b. A positive perception of the application’s usefulness is likely to increase actual usage, facilitated by user satisfaction and attitude intermediaries.

6.2.6 Religious Experience (RE)

Table 12 outlines several key insights, including:

a. Religious experience does not substantially correlate with user attitude regarding perceived simplicity of use or utility

b. The indirect relationship between religious experience and user attitude is generally positive when mediated by both perceived usefulness and satisfaction.

c. A significant indirect relationship exists between user attitude and actual use and religious experience, mediated by satisfaction with the application. The implication is that a more profound spiritual experience fosters positive relationships with religious applications.

6.2.7 User Satisfaction (US)

Table 13 highlights several important insights, such as:

a. High user satisfaction strongly drives the actual use of the application.

b. Satisfaction leads to positive attitudes, making users more likely to engage with the app actively.

**Table 7.** ACQ's indirect effect

| Variable | Indirect Effects | Remarks |
|---|---|---|
| ACQ -> UA | Coefficient = 0.261, p-value=0.00 | Significant |
| ACQ -> PU -> UA | Coefficient = 0.005, p-value=0.746 | Not Significant |
| ACQ -> PU -> US -> UA | Coefficient = 0.069, p-value=0.000 | Significant |
| ACQ -> US -> UA | Coefficient = 0.197, p-value=0.000 | Significant |
| ACQ -> US | Coefficient = 0.147, p-value=0.000 | Significant |
| ACQ -> PU -> US | Coefficient = 0.147, p-value=0.000 | Significant |
| ACQ -> AU | Coefficient = 0.315, p-value=0.000 | Significant |
| ACQ -> UA -> AU | Coefficient = 0.111, p-value=0.017 | Significant |
| ACQ -> PU -> UA -> AU | Coefficient = -0.005, p-value=0.746 | Not significant |
| ACQ -> US -> UA -> AU | Coefficient = 0.154, p-value=0.000 | Significant |
| ACQ -> PU -> US -> UA -> AU | Coefficient = 0.054, p-value=0.000 | Significant |

**Table 8**. CE's indirect effect

| Variable | Indirect Effects | Remarks |
|---|---|---|
| CE -> PU | Coefficient = -0.011, p-value= 0.690 | Not significant |
| CE -> PEOU -> PU | Coefficient = -0.011, p-value = 0.690 | Not significant |
| CE -> US | Coefficient = 0.042, p-value= 0.051 | Significant |
| CE -> PEOU -> PU -> US | Coefficient = -0.005, p-value= 0.0696 | Not significant |
| CE -> UA | Coefficient = 0.038, p-value= 0.050 | Significant |
| CE -> PEOU -> UA | Coefficient = 0.038, p-value= 0.050 | Significant |
| CE -> PU -> UA | Coefficient = -0.002, p-value= 0.756 | Not significant |
| CE -> PEOU -> PU -> UA | Coefficient = 0.000, p-value= 0.906 | Not significant |
| CE -> PU -> US -> UA | Coefficient = 0.022, p-value= 0.746 | Not significant |
| CE -> AU | Coefficient = 0.044, p-value= 0.006 | Significant |
| CE -> PEOU -> UA -> AU | Coefficient = 0.030, p-value= 0.050 | Significant |
| CE -> PU -> UA -> AU | Coefficient = -0.001, p-value= 0.757 | Not significant |
| CE -> PU -> US -> UA -> AU | Coefficient = 0.017, p-value= 0.066 | Not significant |
| CE -> PEOU -> PU -> UA -> AU | Coefficient = 0.000, p-value= 0.907 | Not significant |
| CE -> PEOU -> PU -> US -> UA -> AU | Coefficient = -0.002, p-value= 0.700 | Not significant |

**Table 9.** COI's indirect effect

| Variable | Indirect Effects | Remarks |
|---|---|---|
| COI -> US | Coefficient = 0.056, p-value = 0.006 | Significant |
| COI -> PU -> US | Coefficient = 0.056, p-value = 0.006 | Significant |
| COI -> UA | Coefficient = 0.024, p-value = 0.046 | Significant |
| COI -> PU -> UA | Coefficient = 0.002, p-value = 0.756 | Not Significant |
| COI -> PU -> US -> UA | Coefficient = 0.026, p-value = 0.008 | Significant |
| COI -> AU | Coefficient = 0.067, p-value = 0.016 | Significant |
| COI -> UA -> AU | Coefficient = 0.048, p-value = 0.085 | Not Significant |
| COI -> PU -> UA -> AU | Coefficient = 0.002, p-value = 0.765 | Not Significant |
| COI -> PU -> US -> UA -> AU | Coefficient = 0.020, p-value = 0.009 | Significant |

**Table 10.** PEOU's indirect effect

| Variable | Indirect Effects | Remarks |
|---|---|---|
| PEOU -> US | Coefficient = 0.009, p-value = 0.689 | Not Significant |
| PEOU -> PU -> US | Coefficient = 0.009, p-value = 0.689 | Not Significant |
| PEOU -> UA | Coefficient = 0.050, p-value = 0.033 | Significant |
| PEOU -> UA -> AU | Coefficient = 0.053, p-value = 0.031 | Significant |
| PEOU -> PU -> UA -> AU | Coefficient = 0.000, p-value = 0.903 | Not Significant |
| PEOU -> PU -> US -> UA -> AU | Coefficient = -0.003, p-value = 0.694 | Not Significant |

**Table 11.** PU's indirect effect

| Variable | Indirect Effects | Remarks |
|---|---|---|
| PU -> UA | Coefficient = 0.202, p-value = 0.000 | Significant |
| PU -> US -> UA | Coefficient = 0.202, p-value = 0.000 | Significant |
| PU -> AU | Coefficient = 0.144, p-value = 0.003 | Significant |
| PU -> UA -> AU | Coefficient = 0.014, p-value = 0.745 | Not Significant |
| PU -> US -> UA -> AU | Coefficient = 0.157, p-value = 0.000 | Significant |

**Table 12.** RE's indirect effect

| Variable | Indirect Effects | Remarks |
|---|---|---|
| RE -> AU | Coefficient = 0.295, p-value = 0.000 | Significant |
| RE -> PU -> UA -> AU | Coefficient = 0.226, p-value = 0.000 | Significant |
| RE -> PEOU -> PU -> US -> UA -> AU | Coefficient = 0.001 p-value = 0.728 | Not Significant |
| RE -> PU -> US -> UA -> AU | Coefficient = 0.063, p-value = 0.000 | Significant |
| RE -> PU | Coefficient = -0.004, p-value = 0.714 | Not Significant |
| RE -> PEOU -> PU | Coefficient = -0.004, p-value = 0.714 | Not Significant |
| RE -> UA | Coefficient = 0.088, p-value = 0.001 | Significant |
| RE -> PEOU -> UA | Coefficient = -0.07, p-value = 0.754 | Not Significant |
| RE -> PU -> UA | Coefficient = 0.014, p-value = 0.745 | Not Significant |
| RE -> PEOU -> PU -> US -> UA | Coefficient = -0.001, p-value = 0.724 | Not Significant |
| RE -> PU -> US -> UA | Coefficient = 0.081, p-value = 0.000 | Significant |
| RE -> US | Coefficient = 0.171, p-value = 0.000 | Significant |
| RE -> PEOU -> PU -> US | Coefficient = -0.002, p-value = 0.724 | Not Significant |
| RE -> PU -> US | Coefficient = 0.173, p-value = 0.000 | Significant |

**Table 13.** US' indirect effect

| Variable | Indirect Effects | Remarks |
|---|---|---|
| US -> AU | Coefficient = 0.367, p-value = 0.000 | Significant |
| US -> UA -> AU | Coefficient = 0.367, p-value = 0.000 | Significant |

### 6.3 Interpretation

This study leveraged a modified Technology Acceptance Model to explore technology adoption in religious apps, adding variables like information credibility, content quality, religious experience, and user satisfaction to gain deeper insights into the eKatolik app's user acceptance.

6.3.1 Confirmed hypotheses

Several key findings from the study support the hypothesized relationships in the modified TAM, as explained below.

a. ACQ and information COI

The actual usage of the eKatolik application is significantly influenced by its PU, which is influenced by both the content's quality and the information's credibility. This finding supports the hypothesis that users are more likely to approve applications containing reliable information and valuable content.

b. CE contributes to PEOU

The findings confirm that computer experience stimulates eKatolik users, making it easier for them to use the eKatolik application, and enhancing their satisfaction and positive attitude towards the eKatolik app. Thus, the study underscores that familiarity with technology is an important foundation for technology adoption. In other words, users who are more familiar with technology are more likely to adopt the eKatolik application.

c. Religious Experience (RE)

This factor significantly influences the use of the eKatolik application, suggesting that technological advancements enhancing spiritual and religious practices are critical drivers in users adopting the eKatolik app.

d. User Satisfaction (US)

Users' satisfaction is crucial in the technology acceptance framework, particularly in the eKatolik application setting. This satisfaction directly influences user attitude towards the application and significantly determines how frequently and intensively they use it (Actual Use). Furthermore, it is interesting to note that perceived usefulness also affects user attitude through the mediator of user satisfaction. This relationship indicates that when the application's usefulness is perceived as high by users, it enhances their satisfaction, strengthening their positive attitude toward the application.

In other words, when users perceive the eKatolik application as practical—effectively meeting their needs for religious practice—it enhances their satisfaction. This heightened satisfaction fosters a stronger positive attitude towards the application.

Factors that enhance user satisfaction include content quality, ease of use, information credibility, and religious experience. Therefore, the developers of the eKatolik application must optimize these aspects continuously. Doing so strengthens the perception of usefulness and increases user satisfaction, which is a significant driver in forming positive attitudes and long-term adoption of the eKatolik application.

6.3.2 Rejected hypotheses

However, alongside the achievements above, this model also reveals some relationships that do not align with the initial hypotheses. The following non-significant results evidence this:

a. PEOU does not significantly impact PU

The research results indicate that although the application may be easy to use, it only automatically enhances users' perception of its usefulness. Previous research has shown an interesting contradiction to the typical findings in the first version of TAM, namely that PEOU does not significantly affect PU. Deris' study on the Surah Lazim & Hukum Tajwid mobile application, conducted using a TAM, revealed that the PEOU had an essential impact on the PU [8]. In Taiwan, Shuai disclosed that online religious service users tend to evaluate an application's utility based on its user-friendliness [10].

The original TAM frequently regarded simplicity of use as a critical prerequisite for determining perceived usefulness. The rationale is that users are more inclined to perceive a technology as applicable if it is user-friendly. However, in the larger context of the eKatolik application, the mere simplicity of its use does not explicitly guarantee that users will regard the application as helpful. This finding underscores that for religious applications like eKatolik, users may seek more profound attributes than ease of use, such as richer content and interactive features. Currently, text-based information dominates the eKatolik application, and developers still need

to implement interactive features such as feedback and Q&A, indicating room for further development to enhance user engagement.

In the context of today's digital applications, interactivity is a crucial element that enhances user experience. When an application lacks elements that allow users to interact, such as intuitive navigation or responsive feedback, this can diminish its perceived usefulness [32].

In the case of eKatolik, this could mean that while the application may be easy to use, the lack of engaging and interactive features might make users feel that the application needs to adequately meet their needs or add substantial value to their online religious experience.

b. Credibility of Information does not have a significant impact on User Attitude.

Aldenny recently conducted a study to evaluate the influence of information credibility derived from YouTube as an educational tool. The study found that the perceived credibility of content did not significantly impact the intention to use YouTube as a tool for learning. However, it did affect the perceived usefulness and attitudes towards utilizing YouTube [7].

In contrast, this study shows that although the information is credible, it does not directly enhance users' positive attitudes towards the eKatolik application. The potential explanation for this outcome is that eKatolik users may not ask about the content presented, possibly because they believe the application has already received approval or endorsement from the Church. Therefore, they no longer question the credibility or authenticity of the content displayed [18].

Another possible reason is that using the eKatolik application is not mandatory. Data shows that only about 21% of users regularly use eKatolik (Figure 7). This finding indicates that the application has yet to become an essential tool in daily religious practices.

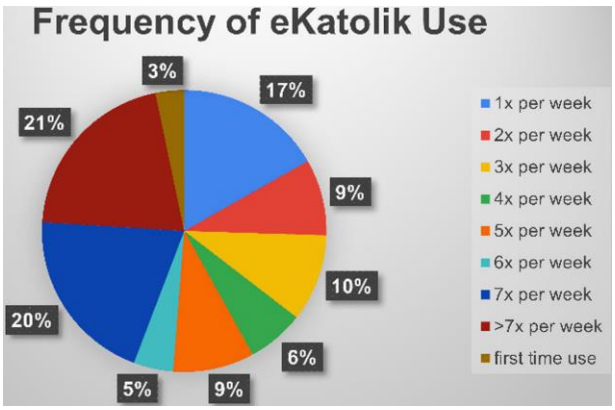


**Figure 7.** Frequency of eKatolik use

A study on technology acceptance previously released results related to the voluntary or mandatory perception of system usage. Researchers observed that social factors or specific pressures do not influence users in voluntary or non-mandatory contexts. Thus, users can choose whether or not to use the application. Because the application is not mandatory or necessary, users may not prioritize using it as they would for mandatory applications [33].

As a non-mandatory tool and more of an alternative option, the use of eKatolik tends to be limited to individuals who have already found value in integrating this application into their faith routines. This tendency may reflect a situation where the eKatolik application is perceived as beneficial by a small subset of users who have made it a part of their spiritual practices. In contrast, other users may still need to see or experience sufficient direct benefits to adopt this application into their daily routines.

c. Perceived Usefulness does not have a direct impact on User Attitude.

The findings indicate that while users may consider an application relevant, this view does not inherently promote a favourable attitude towards the eKatolik application. The present discovery is attractive compared to prior investigations that have demonstrated comparable outcomes. For example, the assessment of a Bible application in Nigeria showed that PU of the application did not have a significant impact on UA [9].

This study, in the context of both direct and indirect influences, shows that Perceived Usefulness affects user attitudes, but the variable of user satisfaction mediates this effect. For example, content quality and information credibility do not directly influence positive user attitudes but do so by mediating user satisfaction. Similarly, other variables like religious experience and computer experience follow the same pattern.

Therefore, when linked to the variable of content quality, researchers can say that even if the content is of high quality, users do not automatically develop a positive attitude towards the content in eKatolik. Since users perceive content positively through the mediation of perceived Usefulness and satisfaction, eKatolik developers aim to provide high-quality content with engaging and interactive elements.

So far, the content in eKatolik is predominantly text-based without attractive visual elements such as images and animations. Research in the context of digital media indicates that text-only content is often less effective in eliciting user engagement compared to more visual or interactive content. Text-based content requires more cognitive effort from users to process, which can reduce the spontaneous impression and emotional engagement that is typically easier to achieve through visual elements [34].

### 6.4 Contributions and strategic recommendations

6.4.1 Theoretical contributions

The research contributes to our comprehension of TAM in the context of religious applications. The study enriches the theoretical framework by modifying TAM and incorporating variables like information credibility, application content quality, spiritual experience, and user satisfaction. It confirms that content quality and information credibility are pivotal in shaping perceived usefulness and user attitudes in religious applications. Furthermore, the study emphasizes the significant impact of computer experience on the Perceived Ease of Use, thereby increasing satisfaction with users and fostering positive attitudes. The discovery that religious experience impacts the use of applications introduces a novel aspect to our comprehension of the function of technology in spiritual activities.

6.4.2 Practical contributions

The findings also offer valuable practical insights, especially for developers of religious apps like eKatolik. The study underscores the importance of content quality and information credibility in driving user satisfaction, suggesting that developers should prioritize these elements. Additionally,

the design of applications should take into account users' varying levels of computer experience to ensure greater ease of use, particularly for those less familiar with technology. The results also highlight the need for content personalization and the development of interactive features, such as a question-and-answer function, to enhance user engagement and align the application more closely with users' spiritual needs.

6.4.3 Strategic recommendations

Generally, the findings indicate that content quality, information credibility, and religious experience influence user acceptance of eKatolik. Interestingly, although perceived usefulness is essential for enhancing user satisfaction and actual app use, it does not directly affect user attitudes. This information could help eKatolik developers focus on improving aspects that enrich user experience.

Furthermore, while perceived simplicity of use is crucial, the research underscores that it cannot ensure high perceived usefulness or satisfaction alone. Content quality, interface design, and engaging interactive features mediate this limitation. The primary demographic of eKatolik users is individuals aged 35 and above (see Figure 8), who may be less familiar with technology than digital natives. These demographic characteristic demands strategies that make eKatolik more accessible and comfortable for all levels of technological expertise.

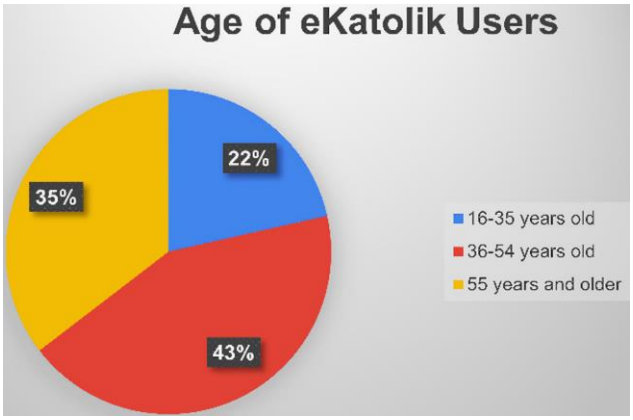


**Figure 8.** Age of eKatolik Users

a. Content Personalization

Al-Dmour et al. [35] demonstrates that personalizing content on online social networking platforms can increase understanding of public health and motivate substantial behavioural changes. These findings suggest that content personalization is more effective in boosting user engagement than relying solely on content quality. Personalization makes content more relevant and appealing, triggering positive reactions and attitude changes through mediation mechanisms, where personally relevant content influences awareness and impacts user behaviour.

In the context of the eKatolik app, one area for improvement is the personalization of prayers, such as the Novena prayers frequently used by Catholics. For instance, eKatolik already features reminders for the daily Angelus prayer. A similar approach could be applied to Novena prayers, typically conducted over nine consecutive days, including daily reminder settings to help users follow the prayer sequence, thus enhancing their engagement and support in their religious practices through the app.

b. Interactive Features

The finding that perceived usefulness does not significantly influence user attitudes highlights the need for interactive features to enhance user acceptance. Studies in education have shown that interactivity through question-and-answer features can significantly affect student learning performance [36]. This evidence underscores the importance of the eKatolik app integrating a Q&A feature that allows deep interaction between the congregation and religious leaders. By developing a Q&A feature, eKatolik can improve content quality and information credibility while providing a crucial means to facilitate effective interaction between the congregation and their leaders.

c. Rating and Review Systems

The finding that information credibility does not significantly influence user attitudes presents an opportunity to enhance the eKatolik app. Cheung and Lee's research [37] on online consumer reviews underscores the importance of ownership and community involvement in driving active user participation. By incorporating a rating and review system into the eKatolik app, users could be more motivated to engage and feel a stronger connection to the community. This feature would also bolster the digital reputation of leaders and other users, fostering a supportive and enriching environment.

These strategic recommendations aim to transform the eKatolik app into more than just a tool for religious practice, making it a dynamic platform for learning, community building, and personal spiritual exploration. The proposals outline ways to make the app more intuitive and accessible, especially for users less familiar with digital technology. The ultimate goal is to guarantee that the eKatolik app remains relevant and valuable in the digital era by meeting its users' current requirements and adapting to evolving technological trends and user expectations.

## 7. CONCLUSION

This study employs a modified TAM, or Technology Acceptance Model, to enhance our comprehension of how technology is used in religious settings, explicitly focusing on the eKatolik app. Critical factors like content quality and information credibility significantly enhance perceived usefulness, highlighting the importance of trustworthy and robust content in religious applications. Additionally, users' computer experience greatly influences ease of use, making navigating and engaging with the app more accessible. The research also emphasizes the role of technology in enriching religious experiences, as demonstrated by the eKatolik app.

Interestingly, the study found no clear correlation between ease of use and perceived usefulness, suggesting that users may prioritize other aspects. Moreover, usefulness alone doesn't shape positive user attitudes; satisfaction is critical. This finding indicates that eKatolik's content must be high-quality but also engaging and interactive to boost satisfaction and foster positive user attitudes.

From these insights, several strategic recommendations emerge:

a. Personalize content to better align with users' spiritual needs.

b. Introduce interactive features like Q&A to enhance user engagement.

c. Enhance content with visual and interactive elements to make it more compelling and accessible.

d. Incorporate evaluation and rating systems to refine the

app according to user feedback and technological trends.

In conclusion, this study outlines essential strategies for developers and decision-makers, ensuring that the eKatolik app remains a vital tool in users' spiritual lives.

## 8. LIMITATIONS AND RECOMMENDATIONS OF RESEARCH

Although the research provides valuable insights into how users regularly engage with the eKatolik religious application, it is essential to acknowledge certain notable limitations:

a. The findings may be restricted to Catholic users in other regions because the study exclusively relates to a sample from the Archdiocese of Jakarta. As a result, the study may not fully capture the unique experiences and perspectives of Catholics in different dioceses across Indonesia. Researchers should consider this limitation when interpreting the results, as they may not reflect the broader Catholic population's interaction with the eKatolik app.

b. Richer qualitative data is required. Although quantitative analysis provides insight into user behaviour and acceptance, qualitative techniques, such as comprehensive interviews, are essential for a more profound comprehension of users' subjective experiences and motivations. These methods can uncover how and why users interact with the eKatolik app within their spiritual practices, insights that quantitative surveys alone might miss. Future research should consider blending in-depth interviews to explore these dimensions further, thereby deepening our understanding of technology acceptance in religious contexts.

To enhance future research:

a. Broaden the scope to include multiple dioceses across Indonesia, particularly those with significant Catholic populations, and better capture Catholic users' diverse experiences and perspectives.

b. Combine qualitative and quantitative approaches to enrich the quantitative analysis with qualitative insights from interviews, focus groups, or ethnographic studies.

c. Conduct long-term impact analyses to explore the lasting effects of eKatolik app usage on religious practices. Longitudinal studies should examine how continuous engagement with the app influences religious behaviour, spiritual engagement, and attitudes. This approach will provide deeper insights into the app's sustained influence, offering valuable recommendations for improving its effectiveness and relevance in supporting users' spiritual lives.

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