E-ISSN: 3063-2498 P-ISSN: 3063-2498
*Advances in Educational Innovation*, Vol. 1, No. 3, February 2025, pp. 143-158
https://doi.org/10.69725/aei.v1i3.344

Contents lists available at Inovasi Analisis Data
**Advances in Educational Innovation**
journal homepage: https://analysisdata.co.id/index.php/AEI

# Enhancing Students' Life Skills through Integrated Curriculum, Talent Placement, Enrichment, and Learning Motivation

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**ARTICLEINFO**

**Article history:**
Received: 10 December 2024
Revised: 10 January 2025
Accepted: 25 January 2025

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**Keywords:**
Curriculum Integration; Talent-Based Placement; Extracurricular Enrichment; Institutional Support; Learning Motivation; Life Skills

**Classification:**
EDU10; EDU20; CUR30; LMO40

**ABSTRACT**

**Purpose** - This study examines the influence of curriculum integration, talent-based placement, extracurricular enrichment, and institutional support on students' life skills through learning motivation in a pesantren-based educational context.
**Design/methodology/approach** - The study employed a mixed-method sequential explanatory design. Quantitative data were collected from 180 MA students at Pondok Pesantren Modern Al-Amanah and analyzed using Partial Least Squares Structural Equation Modeling in SmartPLS. Qualitative data were obtained through interviews, observation, and documentation to explain and contextualize the quantitative findings.
**Findings** - The results show that curriculum integration, talent-based placement, institutional support, and learning motivation significantly influenced students' life skills. Talent-based placement was the strongest direct predictor of life skills, while extracurricular enrichment had the strongest effect on learning motivation. Learning motivation significantly mediated the effects of talent-based placement and extracurricular enrichment on students' life skills, but did not significantly mediate the effects of curriculum integration and institutional support.
**Research limitations/implications** - This study was conducted in one pesantren-based institution; therefore, future research should involve multiple Islamic boarding schools and longitudinal designs to improve generalisability and causal interpretation.
**Practical implications** - The findings suggest that modern pesantren should strengthen interest-and-talent-based placement, program-based enrichment, teacher mentoring, facilities, and school–pesantren collaboration to optimize students' personal, social, academic-vocational, and digital life skills.
**Originality/value** - This study contributes an integrated empirical model combining Educational Systems Theory, Self-Determination Theory, and the Life Skills Framework to explain how pesantren-based education develops students' life skills through both structural and motivational pathways.



## 1. Introduction

Twenty-first-century education goes beyond simply transmitting academic knowledge; it calls for the systematic cultivation of life skills that help learners adapt to social, economic, moral, and technological changes. These life skills, seen as psychosocial abilities, support positive and adaptive behavior in daily life, including self-awareness, communication, decision-making, problem-solving, emotional regulation, and social responsibility (World Health Organization, 1997). Recent studies suggest that incorporating twenty-first-century skills into education remains inconsistent, especially since formal schooling often emphasizes academic achievement over genuine competence development (Herlinawati et al., 2024). Therefore, life skills should be viewed as multidimensional competencies covering personal, social, academic-vocational, and digital literacy. Achieving this calls for educational models that integrate curriculum design, learner placement, experiential programs, institutional support, and motivation.

In Indonesia, Islamic boarding schools, or pesantren, are unique educational institutions that blend religious teaching, moral discipline, communal living, and academic subjects. Modern pesantren have expanded their focus beyond traditional religious lessons by incorporating national curricula, character building, bilingual education, entrepreneurship, technology, communication, and practical skills. These schools offer more than classroom learning; students also cultivate discipline, responsibility, teamwork, and independence through daily routines and structured activities. Consequently, pesantren are highly relevant for studying how education systems develop students' life skills. A key trend in contemporary pesantren education is the implementation of interest- and talent-based program placements, which aim to align educational paths with students' abilities, interests, and future goals (Holland, 1997; McIlveen and McDonald, 2019; Super, 1980; Tokar et al., 2007).

(a) Stage preparation

(b) Main theatrical performance

**Figure 1.** Life Skills Activity in the Pesantren Context

Educational Systems Theory offers a solid foundation for understanding this phenomenon because it sees education as an interconnected system made up of curriculum, learners, teachers, leadership, facilities, learning culture, and evaluation (Banathy, 2013; Khan and Reigeluth, 1993; Senge, 2000). From this viewpoint, elements like curriculum integration, talent-based placement, extracurricular activities, and institutional support are not isolated but are interconnected parts of an educational ecosystem. Self-Determination Theory explains the motivational processes behind how such systems can shape student growth, suggesting that students are more likely to internalise learning when their needs for autonomy, competence, and relatedness are met (Deci and Ryan, 1985; Miller et al., 1988; Wickert, 2001). Recent research confirms that autonomous motivation is linked to better educational outcomes, engagement, and persistence (Bureau et al., 2022; Gan et al., 2021; Howard et al., 2021). Additionally, the Life Skills Framework highlights that education should equip learners to handle personal, social, academic, vocational, and technological challenges in everyday life (Irianto and Trisutaiaksana, 2003; World Health Organization, 1997).

Despite increased focus on life-skills-oriented education, several research gaps remain. Firstly, previous studies often looked at curriculum integration, student motivation, extracurricular activities, or institutional support separately, rather than analyzing how they function together within an integrated model. Secondly, empirical research on modern pesantren is limited, especially studies that explore how formal curriculum, religious learning, program-based enrichment, and institutional support collectively influence measurable student outcomes. Third, the role of student motivation as a link between educational system design and life-skill development has not been thoroughly examined in Islamic boarding schools. Existing research indicates that institutional leadership and school support impact student outcomes through learning climate and teacher performance (Dutta and Sahney, 2022; Hallinger, 2005; Mulford, 2003), while enrichment and skill-oriented learning activities contribute to student development through engagement, practical participation, and authentic skill practice (Kuratko, 2005; Koltay, 2011; Gan et al., 2021). However, the motivational mechanisms underlying improvements in students' life skills through pesantren-based educational practices remain underexplored.

This study advances the literature by developing and testing an integrated model that links curriculum integration, talent-based placement, extracurricular activities, and institutional support to students' life skills through their motivation to learn. Theoretically, it merges Educational Systems Theory, Self-Determination Theory, and the Life Skills Framework to illustrate how educational structures can serve as meaningful developmental experiences. In practice, it offers insights for contemporary Islamic boarding schools seeking to design learning systems that effectively address academic success, religious education, vocational skills, and digital literacy. In this context, the research provides empirical evidence from an Indonesian pesantren where formal education, religious values, communal living, and practical skill development converge. The rest of the article details the methodology, findings, discussion, and conclusions.

## 2. Method

### *2.1 Research Design*

This study used a mixed-methods, sequential, explanatory approach, collecting and analyzing quantitative data first, then gathering qualitative data to interpret and expand on the quantitative results. The quantitative phase aimed to assess the direct effects of curriculum integration, talent-based placement, extracurricular activities, and institutional support on students' life skills, and the mediating role of student motivation. The qualitative phase involved interviews, observations, and document analysis to provide context on how these educational elements function within the pesantren-based learning setting. This approach is suitable because sequential explanatory research allows for statistical testing of structural relationships, followed by interpretation through participants' experiences and institutional practices (Creswell and Plano Clark, 2018). Additionally, mixed-methods research is ideal for educational studies that require both generalizable quantitative data and rich contextual insights, especially when exploring complex school systems and student development (Birgili et al., 2021; Ivankova et al., 2006). Overall, this design offers a solid methodological foundation for understanding how the integrated education system enhances students' life skills via learning motivation.

### *2.2 Research Site, Population, and Sample*

The study was conducted at MA Bilingual Pondok Pesantren Modern Al-Amanah, Junwangi, Krian, Sidoarjo, Indonesia. The institution was selected because it implements an integrated pesantren-based education system that combines formal madrasah learning, Islamic boarding school traditions, bilingual education, talent-based programme placement, and life-skill-oriented enrichment activities. As presented in Table 1, the target population consisted of students from six programme streams, namely STE, SKT, SBI, SSR, SSK, and the Regular Programme, as well as teachers, mentors, school management, and pesantren management. The main quantitative sample comprised 180 students, with 30 students selected from each programme using stratified random sampling. This sampling strategy was used to ensure proportional representation across all programme streams and to reduce potential sampling bias in the quantitative analysis.

In addition to student respondents, 24 teachers and mentors were included using total sampling to obtain supporting data related to teaching

**Table 1.** Research Target, Population, and Sampling Criteria

| Target Group | Category | Population | Sample | Technique / Function |
|---|---|---|---|---|
| MA Bilingual Al-Amanah students | STE students | 45 | 30 | Stratified random sampling / Quantitative data |
| MA Bilingual Al-Amanah students | SKT students | 42 | 30 | Stratified random sampling / Quantitative data |
| MA Bilingual Al-Amanah students | SBI students | 48 | 30 | Stratified random sampling / Quantitative data |
| MA Bilingual Al-Amanah students | SSR students | 40 | 30 | Stratified random sampling / Quantitative data |
| MA Bilingual Al-Amanah students | SSK students | 43 | 30 | Stratified random sampling / Quantitative data |
| MA Bilingual Al-Amanah students | Regular students | 60 | 30 | Stratified random sampling / Quantitative data |
| Teachers and mentors | Academic and programme teachers | 24 | 24 | Total sampling / Supporting data |
| School management | Institutional management | 10 | 8 | Purposive sampling / Qualitative validation |
| Pesantren management | Pesantren authority | 5 | 3 | Purposive sampling / Contextual validation |

and programme supervision. Furthermore, 8 school management members and 3 pesantren management representatives were purposively selected for qualitative validation and contextual interpretation. This sampling structure is consistent with mixed-method sequential explanatory research, in which the quantitative phase requires adequate representation of the target population. In contrast, the qualitative phase requires information-rich participants who can explain institutional processes and contextual meanings (Creswell and Plano Clark, 2018; Patton, 2015). The total number of research participants was 215, consisting of 215 respondents and informants, with students serving as the primary unit of quantitative analysis and teachers and management serving as supporting sources for qualitative explanation.

### *2.3 Research Variables and Instrument Development*

The research instrument was designed around six latent variables: Curriculum Integration (CI), Talent-Based Placement (TBP), Extracurricular Enrichment (EE), Institutional Support (IS), Students' Life Skills (LS), and Student Learning Motivation (SLM). The variables of Curriculum Integration, Talent-Based Placement, Extracurricular Enrichment, and Institutional Support were considered independent; Students' Life Skills as the dependent variable; and Student Learning Motivation served as the mediator. These constructs were conceptualized based on Educational Systems Theory, which sees educational outcomes as the interplay of curriculum, learner, teacher, leadership, program, and institutional factors (Banathy, 2013; Senge, 2000). The dependent variable was derived from the Life Skills Framework, highlighting students' personal, social, academic-vocational, and adaptive skills (Irianto and Trisutaiaksana, 2003; World Health Organization, 1997), while the mediator was based on Self-Determination Theory, which accounts for student motivation through autonomy, competence, and relatedness (Deci and Ryan, 1985, 2020).

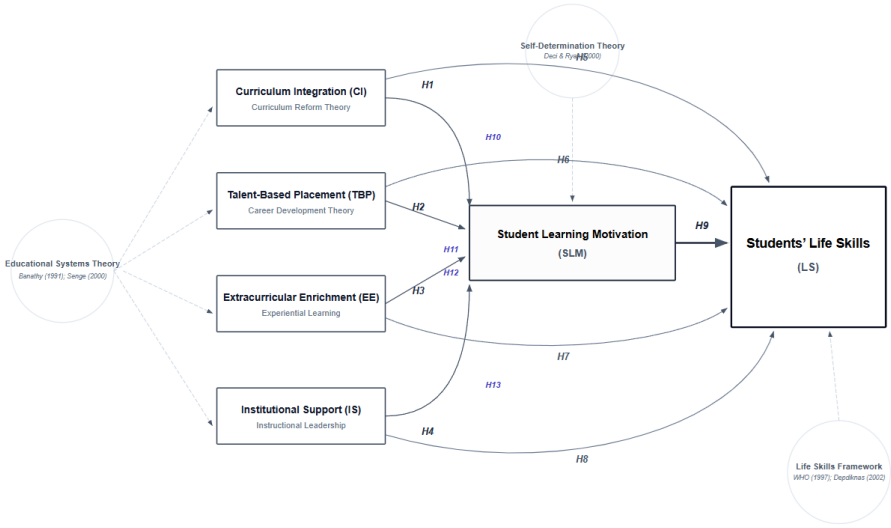


**Figure 2.** Conceptual Framework of the Research Model

Each construct was evaluated using four reflective indicators adapted from established theoretical and empirical sources. Reflective measurement was deemed suitable because these indicators were intended to capture manifestations of the underlying latent constructs, rather than to form the constructs independently. The questionnaire used a five-point Likert scale, from 1 = strongly disagree to 5 = strongly agree, enabling respondents to express how each statement reflected their educational experience in the pesantren setting. The development of indicators was also supported by curriculum change theory (Fullan, 2019, 2025), career development theory for talent placement (Holland, 1997; Super, 1980; Savickas, 2005), experiential learning and program-based skill development, and instructional leadership literature on institutional support (Darling-Hammond et al., 2017; Hallinger, 2005). Before examining the structural relationships, the instrument was prepared for PLS-SEM analysis by assessing indicator reliability, internal consistency reliability, convergent validity, and discriminant validity, following current best practices in variance-based structural equation modeling (Henseler et al., 2015).

### *2.4 Data Collection Techniques*

Data collection involved four complementary methods: questionnaire, semi-structured interviews, observation, and document analysis. The questionnaire gathered quantitative data from students on topics like Curriculum Integration, Talent-Based Placement, Extracurricular

**Table 2.** Research Instrument Grid

| No. | Variable | Code | Dimension | Indicator | Source |
|---|---|---|---|---|---|
| 1 | Curriculum Integration | CI1 | Curriculum Integration | The school integrates the Ministry of Religious Affairs curriculum with the pesantren curriculum. | (Banathy, 2013; Fullan, 2025) |
| | | CI2 | Curriculum Integration | The integrated curriculum includes intellectual, spiritual, emotional, and practical skill development. | (Irianto and Trisutaiaksana, 2003; Senge, 2000) |
| | | CI3 | Curriculum Integration | The curriculum is evaluated periodically to ensure integration between school and pesantren learning. | (Stufflebeam and Coryn, 2025) |
| | | CI4 | Curriculum Integration | The curriculum supports the development of students' life skills. | (Irianto and Trisutaiaksana, 2003; Wickert, 2001) |
| 2 | Talent-Based Placement | TBP1 | Talent-Based Placement | The school conducts an interest-and-talent interview during the new student admission process. | (Holland, 1997) |
| | | TBP2 | Talent-Based Placement | Students can choose programs according to their talents and interests. | (Super, 1980) |
| | | TBP3 | Talent-Based Placement | The chosen program is relevant to students' future aspirations. | (Savickas, 2005) |
| | | TBP4 | Talent-Based Placement | The school periodically reviews the suitability of students' program placement. | (Lent et al., 1994) |
| 3 | Extracurricular Enrichment | EE1 | Extracurricular Enrichment | The STE program develops Qur'anic memorization, science orientation, and entrepreneurship. | (Kuratko, 2005) |
| | | EE2 | Extracurricular Enrichment | The SKT program develops mastery of kitab kuning and offline/online da'wah skills. | (Makdisi, 2019; World Health Organization, 1997) |
| | | EE3 | Extracurricular Enrichment | The SBI program develops Arabic, English, Japanese, and international communication skills. | (Canale and Swain, 1980) |
| | | EE4 | Extracurricular Enrichment | The SSR and SSK programs develop robotics, design, media, radio, and communication skills. | (Koltay, 2011) |
| 4 | Institutional Support | IS1 | Institutional Support | The principal supports the implementation of life-skill-based programs. | (Hallinger, 2005) |
| | | IS2 | Institutional Support | Teachers have competence relevant to the programs they supervise. | (Darling-Hammond et al., 2017) |
| | | IS3 | Institutional Support | School facilities support the development of students' practical skills. | (Schneider, 2002) |
| | | IS4 | Institutional Support | Collaboration among the school, pesantren, teachers, and program units supports program implementation. | (Mulford, 2003) |
| 5 | Students' Life Skills | LS1 | Life Skills | Students demonstrate personal skills such as self-awareness, discipline, confidence, and emotional management. | (World Health Organization, 1997) |
| | | LS2 | Life Skills | Students demonstrate social skills such as empathy, communication, teamwork, and interpersonal relationships. | (World Health Organization, 1997) |
| | | LS3 | Life Skills | Students demonstrate academic and vocational skills such as critical thinking, problem solving, entrepreneurship, da'wah, language, design, and robotics. | (World Health Organization, 1997) |
| | | LS4 | Life Skills | Students demonstrate digital literacy through online communication, information searching, digital media, and content creation. | (Koltay, 2011) |
| 6 | Student Learning Motivation | SLM1 | Student Learning Motivation | Students feel they have autonomy in selecting and participating in their program. | (Deci and Ryan, 2020) |
| | | SLM2 | Student Learning Motivation | Students feel competent to complete learning tasks in their program. | (Deci and Ryan, 2020) |
| | | SLM3 | Student Learning Motivation | Students feel supported by teachers, mentors, and peers during program activities. | (Deci and Ryan, 2020; Ryan and Deci, 2020) |
| | | SLM4 | Student Learning Motivation | Students are motivated to continue improving the skills gained from school and pesantren programs. | (Ryan and Deci, 2020) |

Enrichment, Institutional Support, Student Learning Motivation, and Students' Life Skills. Semi-structured interviews were held with selected teachers, programme mentors, school management, and pesantren administrators to clarify and contextualize the quantitative results. Observation focused on the implementation of programme-based activities such as STE, SKT, SBI, SSR, SSK, and regular programs, especially regarding student participation, collaboration, and practical skills. Document analysis reviewed curriculum materials, programme schedules, student placement records, school vision and mission statements, and activity records. Using multiple techniques aimed to support methodological triangulation and enhance the credibility of findings in this mixed-method educational research (Creswell and Poth, 2018; Desky et al., 2025; Creswell and Plano Clark, 2018; Patton, 2015).

### *2.5 Data Analysis Procedures*

The quantitative data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. The analysis involved two phases: measurement model evaluation and structural model evaluation. The measurement model assessment included indicator reliability via outer loadings, internal consistency reliability through Cronbach's alpha and composite reliability, convergent validity via average variance extracted, and discriminant validity using the Fornell–Larcker criterion and heterotrait–monotrait ratio. The structural model was then examined by assessing collinearity, path coefficients, $R^2$, predictive relevance, effect size, and the mediating effect of Student Learning Motivation through bootstrapping with 5,000 samples. PLS-SEM was chosen because it suits predictive modeling, complex relationships among latent variables, and mediation analysis in educational and social sciences (Dirsehan and Henseler, 2023; Henseler et al., 2015; Shmueli et al., 2019). The qualitative data from interviews, observations, and documents were thematically analyzed to identify recurring patterns related to curriculum integration, talent-based placement, program enrichment, institutional support, student motivation, and life-skills development. These qualitative insights were used to interpret and contextualize the quantitative findings, aligning with the sequential explanatory mixed-method design.

**Table 3.** Demographic Profile of Student Respondents

| Characteristic | Category | Frequency (n) | Percentage (%) |
|---|---|---|---|
| Gender | Male | 84 | 46.7 |
| Gender | Female | 96 | 53.3 |
| Age | 15–16 years | 72 | 40.0 |
| Age | 17–18 years | 90 | 50.0 |
| Age | More than 18 years | 18 | 10.0 |
| Grade Level | Grade X | 60 | 33.3 |
| Grade Level | Grade XI | 60 | 33.3 |
| Grade Level | Grade XII | 60 | 33.4 |
| Programme | Sanggar Tahfidz Entrepreneur (STE) | 30 | 16.7 |
| Programme | Sanggar Kutub At-Turobb (SKT) | 30 | 16.7 |
| Programme | Sanggar Bahasa Internasional (SBI) | 30 | 16.7 |
| Programme | Sanggar Sains Robotik (SSR) | 30 | 16.7 |
| Programme | Sanggar Sosial dan Komunikasi (SSK) | 30 | 16.7 |
| Programme | Regular Programme | 30 | 16.7 |
| Duration in Pesantren | Less than 1 year | 42 | 23.3 |
| Duration in Pesantren | 1–2 years | 78 | 43.3 |
| Duration in Pesantren | More than 2 years | 60 | 33.4 |
| Residence Status | Boarding student | 180 | 100.0 |
| Residence Status | Non-boarding student | 0 | 0.0 |
| Previous Educational Background | Islamic junior secondary school / MTs | 112 | 62.2 |
| Previous Educational Background | General junior secondary school / SMP | 68 | 37.8 |
| Participation Intensity | Active in program activities every week | 138 | 76.7 |
| Participation Intensity | Active in program activities twice a month | 34 | 18.9 |
| Participation Intensity | Active in program activities once a month | 8 | 4.4 |

### *2.6 Conceptual Framework and Hypothesis Development*

This study's conceptual framework combines Educational Systems Theory, Self-Determination Theory, and the Life Skills Framework. Educational Systems Theory posits that educational outcomes result from interactions among curriculum, learners, teachers, leadership, programs, facilities, and institutional culture (Banathy, 2013; Senge, 2000). Consequently, the study identifies Curriculum Integration (CI), Talent-Based Placement (TBP), Extracurricular Enrichment (EE), and Institutional Support (IS) as core elements of the education system. As shown in Figure 2, these elements are expected to influence students' Life Skills (LS) both directly and indirectly. The indirect influence occurs through Student Learning Motivation (SLM), which is rooted in Self-Determination Theory. This theory suggests students are more likely to engage meaningfully when they experience autonomy, competence, and relatedness (Deci and Ryan, 2020; Martínez Triviño et al., 2025; Ryan and Deci, 2020). Thus, a well-integrated curriculum, suitable program placement, enriching extracurricular activities, and institutional support are anticipated to enhance motivation, ultimately fostering life skills. In this context, life skills encompass students' personal, social, academic-vocational, and digital abilities, as defined in the Life Skills Framework (World Health Organization, 1997).

According to this theoretical framework, the model in Figure 2 suggests that curriculum integration, talent-based placement, extracurricular activities, and institutional support directly impact students' life skills. Additionally, these four components of the educational system are believed to influence student motivation to learn, which, in turn, affects their life skills. The model also proposes that student motivation mediates the relationships between these educational components and life skills. Therefore, Figure 2 illustrates both the direct and indirect pathways through which a pesantren-based education system fosters students' development of life skills.

## 3. Results

### *3.1 Respondent Profile*

Table 3 shows the demographic profile of the student respondents in the quantitative phase of the study. A total of 180 students completed the questionnaire, with 84 males (46.7%) and 96 females (53.3%), indicating a relatively balanced gender distribution. Most respondents were aged 17–18 years (50.0%), followed by those aged 15–16 years (40.0%), and 10.0% were 18 or older. The students were evenly spread across grade levels: 60 from Grade X, 60 from Grade XI, and 60 from Grade XII. The distribution across programs was also balanced, with each of the six educational programs contributing 30 respondents (16.7%). This proportional sampling enables a fair comparison among the STE, SKT, SBI, SSR, SSK, and Regular programs.

The profile indicates that all respondents were boarding students (100.0%), confirming data collection within a fully pesantren-based educational setting. Regarding stay duration, the largest group had been in the pesantren for 1–2 years (43.3%), followed by over 2 years (33.4%) and less than 1 year (23.3%). Most respondents originated from an Islamic junior secondary school or MTs (62.2%), while 37.8% came from a general junior secondary school or SMP. As for program participation, the majority reported engaging in activities weekly (76.7%), indicating adequate exposure to the school's program-based life-skill development activities.

### *3.2 Descriptive Statistics*

Descriptive statistics analyzed students' responses to each research variable. As shown in Table 4, all variables had mean scores above 3.80, indicating a generally positive perception of the education system, learning motivation, and life skills development. Extracurricular Enrichment (EE) recorded the highest mean score ($M = 4.27$, $SD = 0.57$), implying that activities like STE, SKT, SBI, SSR, SSK, and the Regular programme are strongly viewed as enhancing students' skills. Student Learning Motivation (SLM) also scored highly ($M = 4.16$, $SD = 0.59$), reflecting that students felt motivated, supported, and competent in their chosen programmes. Meanwhile, Institutional Support (IS) scored the lowest among the variables ($M = 3.88$, $SD = 0.74$), yet still falls within the high category. This suggests that although institutional

**Table 4.** Descriptive Statistics

| Variable | Dimension | Mean | Std. Dev. | Min | Max | Interpretation |
|---|---|---|---|---|---|---|
| CI | Curriculum Integration | 4.1400 | 0.6100 | 1.0000 | 5.0000 | High |
| TBP | Talent-Based Placement | 4.0200 | 0.6800 | 1.0000 | 5.0000 | High |
| EE | Extracurricular Enrichment | 4.2700 | 0.5700 | 1.0000 | 5.0000 | Very High |
| IS | Institutional Support | 3.8800 | 0.7400 | 1.0000 | 5.0000 | High |
| SLM | Student Learning Motivation | 4.1600 | 0.5900 | 1.0000 | 5.0000 | High |
| LS | Students' Life Skills | 4.0900 | 0.6300 | 1.0000 | 5.0000 | High |

**Table 5.** Measurement Model Results

| Construct | Indicator | Outer Loading | Cronbach's Alpha | rho_A | Composite Reliability | AVE | Decision |
|---|---|---|---|---|---|---|---|
| Curriculum Integration (CI) | CI1 | 0.750 | 0.825 | 0.842 | 0.883 | 0.653 | Valid and reliable |
| | CI2 | 0.835 | | | | | Valid |
| | CI3 | 0.790 | | | | | Valid |
| | CI4 | 0.855 | | | | | Valid |
| Extracurricular Enrichment (EE) | EE1 | 0.829 | 0.836 | 0.838 | 0.891 | 0.671 | Valid and reliable |
| | EE2 | 0.815 | | | | | Valid |
| | EE3 | 0.814 | | | | | Valid |
| | EE4 | 0.819 | | | | | Valid |
| Institutional Support (IS) | IS1 | 0.779 | 0.808 | 0.809 | 0.874 | 0.634 | Valid and reliable |
| | IS2 | 0.811 | | | | | Valid |
| | IS3 | 0.796 | | | | | Valid |
| | IS4 | 0.799 | | | | | Valid |
| Students' Life Skills (LS) | LS1 | 0.824 | 0.842 | 0.843 | 0.894 | 0.679 | Valid and reliable |
| | LS2 | 0.839 | | | | | Valid |
| | LS3 | 0.818 | | | | | Valid |
| | LS4 | 0.814 | | | | | Valid |
| Student Learning Motivation (SLM) | SLM1 | 0.854 | 0.841 | 0.844 | 0.893 | 0.677 | Valid and reliable |
| | SLM2 | 0.814 | | | | | Valid |
| | SLM3 | 0.790 | | | | | Valid |
| | SLM4 | 0.833 | | | | | Valid |
| Talent-Based Placement (TBP) | TBP1 | 0.782 | 0.804 | 0.805 | 0.872 | 0.629 | Valid and reliable |
| | TBP2 | 0.797 | | | | | Valid |
| | TBP3 | 0.807 | | | | | Valid |
| | TBP4 | 0.787 | | | | | Valid |

**Table 6.** Fornell–Larcker Criterion

| Construct | CI | EE | IS | LS | SLM | TBP |
|---|---|---|---|---|---|---|
| CI | 0.808 | | | | | |
| EE | 0.168 | 0.819 | | | | |
| IS | 0.117 | 0.205 | 0.796 | | | |
| LS | 0.411 | 0.405 | 0.303 | 0.824 | | |
| SLM | 0.243 | 0.460 | 0.252 | 0.523 | 0.823 | |
| TBP | 0.247 | 0.346 | 0.190 | 0.545 | 0.396 | 0.793 |

support is positively regarded, areas such as facilities, teacher support, and programme coordination may need further improvement.

### *3.3 Measurement Model Assessment*

The measurement model was evaluated to verify whether the indicators used in this study were valid and reliable for measuring their respective latent constructs. This evaluation included analyzing factor loadings, internal consistency reliability, convergent validity, and discriminant validity. As shown in Table 5, all indicator loadings exceeded the recommended threshold of 0.70, with values ranging from 0.750 to 0.855. The lowest loading was observed in CI1 (0.750), while the highest was in CI4 (0.855). These findings suggest that all indicators provided sufficient explanatory power for their respective constructs, and no items needed to be removed from the model.

Table 5 also shows the results for reliability and convergent validity. Cronbach's alpha values ranged from 0.804 to 0.842, and composite reliability values ranged from 0.872 to 0.894. All these values are above the recommended threshold of 0.70, indicating strong internal consistency for all constructs. Additionally, the Average Variance Extracted (AVE) values ranged from 0.629 to 0.679, surpassing the minimum cutoff of 0.50. This demonstrates that each construct accounts for more than 50% of the variance in its indicators. Overall, the results in Table 5 confirm that the measurement model demonstrates acceptable levels of indicator reliability, construct reliability, and convergent validity.

Discriminant validity was initially assessed using the Fornell–Larcker criterion, as shown in Table 6. The diagonal values, which are the square roots of AVE, ranged from 0.793 to 0.824 and were higher than the correlations between each construct and others in the model. For instance, the square root of AVE for Students' Life Skills (0.824) exceeded its correlations with CI (0.411), EE (0.405), IS (0.303), SLM (0.523), and TBP (0.545). Similarly, the square root of AVE for Student Learning Motivation (0.823) was greater than its correlations with other constructs. Therefore, Table 6 demonstrates that each construct is empirically distinct from the others.

A more thorough assessment of discriminant validity was carried out using the Heterotrait–Monotrait ratio, as shown in Table 7. All HTMT values fell below the recommended threshold of 0.85, with ranges from 0.158 to 0.661. The highest HTMT value was between Talent-Based

**Table 7.** HTMT Ratio

| Construct Pair | HTMT Value | Threshold | Decision |
|---|---|---|---|
| EE ↔ CI | 0.1950 | < 0.85 | Accepted |
| IS ↔ CI | 0.1580 | < 0.85 | Accepted |
| IS ↔ EE | 0.2480 | < 0.85 | Accepted |
| LS ↔ CI | 0.4840 | < 0.85 | Accepted |
| LS ↔ EE | 0.4810 | < 0.85 | Accepted |
| LS ↔ IS | 0.3680 | < 0.85 | Accepted |
| SLM ↔ CI | 0.2740 | < 0.85 | Accepted |
| SLM ↔ EE | 0.5450 | < 0.85 | Accepted |
| SLM ↔ IS | 0.3030 | < 0.85 | Accepted |
| SLM ↔ LS | 0.6190 | < 0.85 | Accepted |
| TBP ↔ CI | 0.2990 | < 0.85 | Accepted |
| TBP ↔ EE | 0.4210 | < 0.85 | Accepted |
| TBP ↔ IS | 0.2350 | < 0.85 | Accepted |
| TBP ↔ LS | 0.6610 | < 0.85 | Accepted |
| TBP ↔ SLM | 0.4830 | < 0.85 | Accepted |

Placement and Students' Life Skills at 0.661, but it still remained well under the threshold. This suggests that, although the constructs are conceptually related, they do not significantly overlap. Consequently, the data in Table 7 further confirms that discriminant validity has been established.

Finally, Figure 3 displays the outer loading model created with SmartPLS. It visualizes the connections between each latent variable and its reflective indicators. As seen in Figure 3, all indicators loaded heavily onto their respective constructs, confirming the statistical results in Table 5. Overall, the measurement model meets the necessary standards for reliability and validity, enabling the analysis to advance to the evaluation of the structural model.

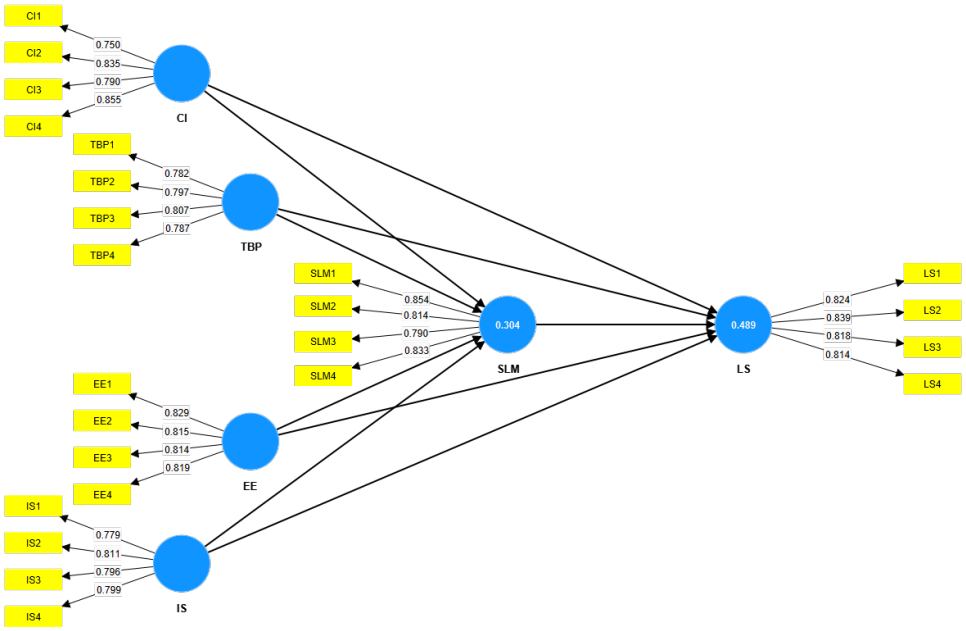


**Figure 3.** Outer Loading Model

### *3.4 Structural Model Assessment*

The structural model assessment took place after the measurement model satisfied the criteria for reliability and validity. This phase aimed to explore the predictive relationships among the latent variables, including the direct effects of Curriculum Integration (CI), Talent-Based Placement (TBP), Extracurricular Enrichment (EE), Institutional Support (IS), and Student Learning Motivation (SLM) on Students' Life Skills (LS). The evaluation involved collinearity diagnostics, path coefficient analysis, coefficient of determination, predictive relevance, and effect size assessment.

As demonstrated in Table 8, the collinearity analysis showed that all inner Variance Inflation Factor (VIF) values were under the recommended limit of 3.30. The VIF values ranged from 1.066 to 1.438, with the highest observed between SLM and LS. These findings suggest there is no significant multicollinearity issue among the predictor variables. Consequently, all structural paths are deemed suitable for the next phase of hypothesis testing.

Table 9 displays the results of the path coefficient analysis. Curriculum Integration positively and significantly influenced Students' Life Skills ($\beta = 0.236$, $t = 4.591$, $p < 0.001$), suggesting that a stronger connection between the Ministry of Religious Affairs curriculum and the pesantren curriculum correlates with higher student life skills. Additionally, Talent-Based Placement also had a positive and significant impact on Students' Life Skills ($\beta = 0.323$, $t = 5.217$, $p < 0.001$). This effect was the most substantial direct influence on LS, indicating that placing students in programs aligned with their interests, talents, and future goals is crucial for enhancing their personal, social, academic-vocational, and digital skills.

Institutional Support positively and significantly influences Students' Life Skills ($\beta = 0.126$, $t = 2.061$, $p = 0.039$), indicating that elements such as leadership support, teacher competence, facilities, and collaboration between the school and pesantren help foster students' skill

**Table 8.** Collinearity Assessment of the Structural Model

| Path | VIF | Threshold | Decision |
|---|---|---|---|
| CI → LS | 1.0970 | < 3.30 | No collinearity issue |
| CI → SLM | 1.0780 | < 3.30 | No collinearity issue |
| EE → LS | 1.3320 | < 3.30 | No collinearity issue |
| EE → SLM | 1.1700 | < 3.30 | No collinearity issue |
| IS → LS | 1.0890 | < 3.30 | No collinearity issue |
| IS → SLM | 1.0660 | < 3.30 | No collinearity issue |
| SLM → LS | 1.4380 | < 3.30 | No collinearity issue |
| TBP → LS | 1.2760 | < 3.30 | No collinearity issue |
| TBP → SLM | 1.2020 | < 3.30 | No collinearity issue |

**Table 9.** Path Coefficients

| Hypothesis | Path | $\beta$ | STDEV | $t$-value | $p$-value | 95% CI |
|---|---|---|---|---|---|---|
| H1 | CI → LS | 0.2360 | 0.0510 | 4.5910 | 0.0000 | 0.138, 0.341 |
| H2 | TBP → LS | 0.3230 | 0.0620 | 5.2170 | 0.0000 | 0.196, 0.438 |
| H3 | EE → LS | 0.1110 | 0.0600 | 1.8560 | 0.0640 | -0.004, 0.227 |
| H4 | IS → LS | 0.1260 | 0.0610 | 2.0610 | 0.0390 | 0.007, 0.247 |
| H5 | CI → SLM | 0.1160 | 0.0610 | 1.8860 | 0.0590 | -0.011, 0.228 |
| H6 | TBP → SLM | 0.2270 | 0.0680 | 3.3510 | 0.0010 | 0.094, 0.361 |
| H7 | EE → SLM | 0.3360 | 0.0620 | 5.4440 | 0.0000 | 0.218, 0.461 |
| H8 | IS → SLM | 0.1270 | 0.0630 | 2.0180 | 0.0440 | 0.005, 0.253 |
| H9 | SLM → LS | 0.2550 | 0.0580 | 4.4270 | 0.0000 | 0.141, 0.363 |

**Table 10.** Coefficient of Determination, Predictive Relevance, and Effect Size

| Endogenous Construct / Path | $R^2$ | Adjusted $R^2$ | $Q^2$ | $f^2$ | Interpretation |
|---|---|---|---|---|---|
| Students' Life Skills (LS) | 0.4890 | 0.4750 | 0.3210 | — | Moderate explanatory and predictive power |
| Student Learning Motivation (SLM) | 0.3040 | 0.2890 | 0.1960 | — | Moderate explanatory and predictive power |
| CI → LS | — | — | — | 0.0990 | Small effect |
| CI → SLM | — | — | — | 0.0180 | Small effect |
| EE → LS | — | — | — | 0.0180 | Small effect |
| EE → SLM | — | — | — | 0.1380 | Small-to-moderate effect |
| IS → LS | — | — | — | 0.0290 | Small effect |
| IS → SLM | — | — | — | 0.0220 | Small effect |
| SLM → LS | — | — | — | 0.0890 | Small effect |
| TBP → LS | — | — | — | 0.1600 | Moderate effect |
| TBP → SLM | — | — | — | 0.0620 | Small effect |

development. In contrast, Extracurricular Enrichment shows a positive but non-significant direct impact on Students' Life Skills ($\beta = 0.111$, $t = 1.856$, $p = 0.064$). Although this effect does not reach the 0.05 significance threshold, the positive coefficient implies that extracurricular activities might enhance life skills indirectly through motivational pathways rather than through direct influence.

Regarding predictors of Student Learning Motivation, Table 9 indicates that Talent-Based Placement significantly influences SLM ($\beta = 0.227$, $t = 3.351$, $p = 0.001$), implying that students assigned to programs matching their interests and abilities tend to be more motivated. Extracurricular Enrichment shows the strongest impact on SLM ($\beta = 0.336$, $t = 5.444$, $p < 0.001$), highlighting the importance of program-based activities as motivational drivers. Institutional Support also positively and significantly affects SLM ($\beta = 0.127$, $t = 2.018$, $p = 0.044$), suggesting that institutional conditions help maintain student motivation. Conversely, Curriculum Integration has a positive but non-significant impact on SLM ($\beta = 0.116$, $t = 1.886$, $p = 0.059$). This suggests that, while curriculum integration is vital for developing life skills, it may not automatically boost motivation unless it involves meaningful pedagogical practices, program choices, or direct engagement. Finally, Student Learning Motivation significantly impacts Students' Life Skills ($\beta = 0.255$, $t = 4.427$, $p < 0.001$), reinforcing that motivated students are more likely to develop life skills through active participation, persistence, and internalization of learning experiences within the pesantren-based education system.

Table 10 presents the model's explanatory and predictive capabilities. It accounts for 48.9% of the variance in Students' Life Skills ($R^2 = 0.489$; adjusted $R^2 = 0.475$), reflecting moderate explanatory strength. This suggests that Curriculum Integration, Talent-Based Placement, Extracurricular Enrichment, Institutional Support, and Student Learning Motivation collectively account for nearly half of the variation in students' life skills. Additionally, the model explains 30.4% of the variance in Student Learning Motivation ($R^2 = 0.304$; adjusted $R^2 = 0.289$), indicating a moderate explanation of students' motivational development by these four education system components. The blindfolding analysis in Table 10 shows $Q^2$ values of 0.321 for Students' Life Skills and 0.196 for Student Learning Motivation, both above zero, demonstrating the model's adequate predictive relevance for these constructs. Regarding effect sizes, the strongest effect was TBP → LS ($f^2 = 0.160$), interpreted as moderate, highlighting the importance of aligning students with appropriate programs. The effect of EE → SLM ($f^2 = 0.138$) was small to moderate, emphasizing the significant role of enrichment activities in motivating students. Other effects, classified as small, include CI → LS ($f^2 = 0.099$), SLM → LS ($f^2 = 0.089$), TBP → SLM ($f^2 = 0.062$), IS → LS ($f^2 = 0.029$), IS → SLM ($f^2 = 0.022$), CI → SLM ($f^2 = 0.018$), and EE → LS ($f^2 = 0.018$).

The overall findings from the structural model show that students' life skills are directly enhanced through curriculum integration, talent-based placement, institutional backing, and their motivation to learn. Talent-Based Placement is identified as the most significant direct predictor of Students' Life Skills, while Extracurricular Enrichment is the key predictor of Student Learning Motivation. These findings imply that in a pesantren-based education system, the development of students' life skills relies not only on curriculum design and institutional support but also on whether students are engaged in meaningful programs and motivated to participate actively in their learning activities.

**Table 11.** Specific Indirect Effects of Student Learning Motivation

| Hypothesis | Indirect Path | $\beta$ | STDEV | $t$-value | $p$-value | 95% CI |
|---|---|---|---|---|---|---|
| H10 | CI → SLM → LS | 0.0300 | 0.0170 | 1.7370 | 0.0820 | -0.003, 0.064 |
| H11 | TBP → SLM → LS | 0.0580 | 0.0230 | 2.5100 | 0.0120 | 0.019, 0.109 |
| H12 | EE → SLM → LS | 0.0860 | 0.0250 | 3.4570 | 0.0010 | 0.042, 0.139 |
| H13 | IS → SLM → LS | 0.0320 | 0.0180 | 1.7660 | 0.0770 | 0.001, 0.074 |

*Note.* Mediation is considered significant when $p < 0.05$ and the confidence interval does not include zero.

Figure 4 shows the results of the standardized structural model produced by SmartPLS. It highlights the direct impacts of Curriculum Integration, Talent-Based Placement, Extracurricular Enrichment, Institutional Support, and Student Learning Motivation on Students' Life Skills, along with the influence of these four educational system components on Student Learning Motivation.

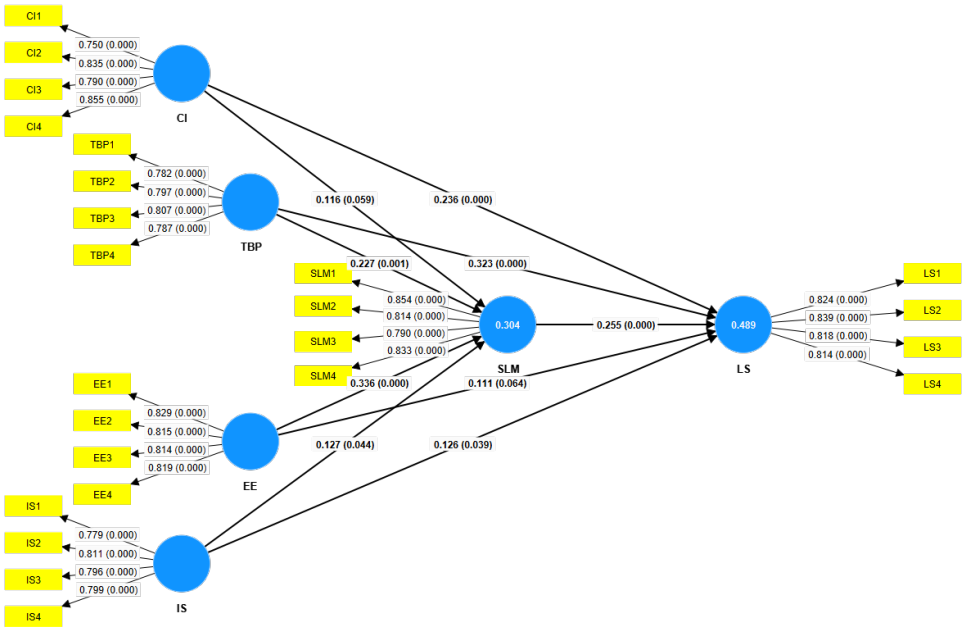


**Figure 4.** Structural Model Results

### *3.5 Mediation Effect Assessment*

The assessment of mediation examined whether Student Learning Motivation (SLM) served as an intermediary between the four education system components and Students' Life Skills (LS). Using a bootstrapping approach with 5,000 samples, the analysis focused on the specific indirect effects, detailed in Table 11. As indicated there, the indirect effect of Extracurricular Enrichment on LS via SLM was positive and statistically significant ($\beta = 0.0860$, $t = 3.4570$, $p = 0.0010$). This suggests that extracurricular activities indirectly enhance students' life skills by boosting their motivation to learn. Essentially, activities like STE, SKT, SBI, SSR, and SSK are more effective in improving life skills when they also increase students' motivation and engagement.

Similarly, Table 11 reveals that the indirect effect of Talent-Based Placement on LS through SLM was positive and significant ($\beta = 0.0580$, $t = 2.5100$, $p = 0.0120$). This implies that students placed in programs matching their interests and talents tend to develop stronger motivation, which then helps develop their life skills. However, the indirect effect of Curriculum Integration on LS via SLM was positive but not statistically significant ($\beta = 0.0300$, $t = 1.7370$, $p = 0.0820$). Likewise, the indirect effect of Institutional Support through SLM was positive but not significant at the 0.05 level ($\beta = 0.0320$, $t = 1.7660$, $p = 0.0770$). These findings suggest that curriculum integration and institutional support impact students' life skills more directly rather than through motivational pathways.

The effects and mediation types are outlined in Table 12. Resulting data reveal that Talent-Based Placement exerted a notable direct influence on Students' Life Skills ($\beta = 0.3230$, $p = 0.0000$), along with a significant indirect impact via Student Learning Motivation ($\beta = 0.0580$, $p = 0.0120$), culminating in a substantial total effect ($\beta = 0.3810$, $p = 0.0000$). This demonstrates partial mediation, where Talent-Based Placement affects Students' Life Skills both directly and indirectly through Student Learning Motivation. Conversely, for Extracurricular Enrichment, a different pattern emerged. As seen in Table 12, its direct effect was positive but not statistically significant ($\beta = 0.1110$, $p = 0.0640$), while the indirect effect through Student Learning Motivation was significant ($\beta = 0.0860$, $p = 0.0010$). The overall effect was also significant ($\beta = 0.1960$, $p = 0.0010$), indicating an indirect-only mediation, meaning Extracurricular Enrichment mainly enhances Students' Life Skills via Student Learning Motivation rather than directly.

For Curriculum Integration, the direct influence on Students' Life Skills was significant ($\beta = 0.2360$, $p = 0.0000$), but its indirect effect through Student Learning Motivation was not ($\beta = 0.0300$, $p = 0.0820$). Therefore, no mediation was supported, and Curriculum Integration mainly contributed directly to Students' Life Skills. Similarly, Institutional Support had a significant direct effect ($\beta = 0.1260$, $p = 0.0390$), but its indirect effect through Student Learning Motivation was not significant ($\beta = 0.0320$, $p = 0.0770$). Thus, mediation was not supported for the Institutional Support pathway.

Tables 11 and 12 overall reveal that Student Learning Motivation does not mediate all relationships equally. It significantly mediates the impacts of Talent-Based Placement and Extracurricular Enrichment on Students' Life Skills. Conversely, it lacks a significant mediator role in the effects of Curriculum Integration and Institutional Support. This indicates that motivation is especially crucial when students encounter programme relevance, interest-based placements, and active enrichment activities. On the other hand, curriculum integration and institutional

**Table 12.** Total Effects and Mediation Type Classification

| Hypothesis | Path | Direct Effect $\beta$ | Direct $p$-value | Indirect Effect $\beta$ | Indirect $p$-value | Total Effect $\beta$ | Total $p$-value |
|---|---|---|---|---|---|---|---|
| H10 | CI → SLM → LS | 0.2360 | 0.0000 | 0.0300 | 0.0820 | 0.2650 | 0.0000 |
| H11 | TBP → SLM → LS | 0.3230 | 0.0000 | 0.0580 | 0.0120 | 0.3810 | 0.0000 |
| H12 | EE → SLM → LS | 0.1110 | 0.0640 | 0.0860 | 0.0010 | 0.1960 | 0.0010 |
| H13 | IS → SLM → LS | 0.1260 | 0.0390 | 0.0320 | 0.0770 | 0.1590 | 0.0100 |

**Table 13.** Summary of Qualitative Findings

| No. | Theme | Key Finding | Data Source | Variable |
|---|---|---|---|---|
| 1 | Curriculum integration | Kemenag and pesantren curricula support holistic learning. | Interview, document | CI |
| 2 | Talent-based placement | Interest-and-talent interviews help students choose suitable programs. | Interview, document | TBP |
| 3 | Enrichment programmes | STE, SKT, SBI, SSR, SSK, and Regular programs provide practical skill experience. | Observation, document | EE |
| 4 | Institutional support | Leadership, teachers, facilities, and collaboration support program implementation. | Interview, observation | IS |
| 5 | Learning motivation | Students are more active when programs match their interests and abilities. | Interview, observation | SLM |
| 6 | Life-skill development | Students develop discipline, teamwork, communication, problem-solving, and digital skills. | Observation, interview | LS |
| 7 | Implementation challenges | Limited facilities and time affect some program activities. | Interview, observation | IS |

support tend to influence students' life skills more directly through structured learning, school-pesantren coordination, teacher guidance, facilities, and institutional routines.

Figure 5 depicts how Student Learning Motivation acts as a mediator between the elements of the education system and Students' Life Skills. The illustration indicates that Student Learning Motivation significantly mediates the relationship between Talent-Based Placement and Extracurricular Enrichment with Students' Life Skills. However, the mediating effects of Curriculum Integration and Institutional Support are not statistically significant.

**Figure 5.** Mediation Model of Student Learning Motivation

### *3.6 Qualitative Findings*

The qualitative data in Table 13 indicate that the pesantren-based education system promotes students' life-skill development through various interconnected mechanisms. Curriculum integration allows students to engage in academic, religious, and practical learning within a cohesive educational environment. Talent-based placement ensures students enroll in programs aligned with their interests and abilities. Enrichment programs offer hands-on opportunities in entrepreneurship, da'wah, language, robotics, media, design, and communication skills. Institutional support—especially leadership, teacher guidance, facilities, and collaboration between schools and pesantren—enhances program implementation. Additionally, the table highlights that learning motivation significantly encourages active student participation. Nonetheless, the data also point to challenges such as limited facilities and time constraints, which may impact the consistency and depth of some activities.

Table 14 combines qualitative insights with quantitative data. It shows that the strong impact of Curriculum Integration on Students' Life Skills is backed by qualitative evidence indicating that integrated curriculum practices enhance academic, religious, and practical skills. However, Curriculum Integration did not significantly affect Student Learning Motivation, implying that students may see curriculum integration more as an institutional framework than a direct motivational factor. The notable effects of Talent-Based Placement on both Student Learning Motivation and Students' Life Skills are supported by interview and observation data, which reveal that students become more engaged when their programs align with their interests and talents. Likewise, although Extracurricular Enrichment did not directly influence Students' Life

**Table 14.** Integration of Quantitative and Qualitative Findings

| Quantitative Result | Qualitative Evidence | Interpretation |
|---|---|---|
| CI → LS significant | Integrated curriculum supports academic, religious, and practical learning. | Curriculum integration directly strengthens life skills. |
| CI → SLM not significant | Students see curriculum as school structure, not direct motivation. | CI affects life skills more directly than through motivation. |
| TBP → LS significant | Programme placement matches students' interests and talents. | TBP is a strong direct predictor of life skills. |
| TBP → SLM significant | Students are more motivated in suitable programmes. | Programme fit increases learning motivation. |
| EE → LS not significant | Practical activities require active student engagement. | EE needs motivation to affect life skills. |
| EE → SLM significant | Enrichment programmes encourage participation and enthusiasm. | EE strongly improves student motivation. |
| IS → LS significant | Leadership, teachers, and facilities support practice. | Institutional support directly supports life skills. |
| IS → SLM significant | Teacher guidance helps students stay engaged. | Institutional support contributes to motivation. |
| SLM → LS significant | Motivated students participate more actively. | Motivation supports life-skill development. |
| TBP → SLM → LS significant | Suitable programmes increase motivation and participation. | SLM partially mediates TBP and LS. |
| EE → SLM → LS significant | Practical activities become meaningful through motivation. | SLM mediates EE and LS. |
| CI → SLM → LS not significant | Curriculum works mainly as institutional structure. | No mediation for CI. |
| IS → SLM → LS not significant | Support helps implementation but is not mainly motivational. | No mediation for IS. |

Skills, it significantly boosted Student Learning Motivation, suggesting that enrichment programs mainly improve life skills when they actively engage students. Institutional Support directly contributed to Students' Life Skills and also fostered motivation, although its mediation pathway was not significant. Overall, the findings in Table 14 confirm that life-skill development in the pesantren setting occurs through both structural mechanisms, such as curriculum and institutional support, and motivational mechanisms, particularly program relevance and active participation.

### *3.7 Program-Based Qualitative Evidence*

Program-based documentation supported the qualitative findings and demonstrated how students' life skills were cultivated through practical learning activities. Since the SSK program was previously introduced as contextual evidence, this section explores four additional program streams: STE, SKT, SBI, and SSR. As illustrated in Figures 6–9, each program highlights a different aspect of life-skill development, such as vocational creativity, religious communication, multilingual skills, technological literacy, problem-solving, and innovation. These visual data reinforce the qualitative conclusion that life skills were cultivated not only through classroom lessons but also via authentic program-based experiences.

**Figure 6.** Student Fashion Work in the STE Program

The figure shows students' practical work in the Sanggar Tahfidz Entrepreneur program, representing vocational skills, creativity, entrepreneurship, discipline, and self-confidence.

The figure illustrates students' online da'wah activity in the Sanggar Kutub At-Turobb program, representing religious literacy, communication skills, digital communication, and social responsibility.

The figure presents students' language learning activity in the Sanggar Bahasa Internasional program, representing multilingual communication, academic-vocational skills, and global awareness.

The figure shows students' robotics activity in the Sanggar Sains Robotik program, representing critical thinking, problem-solving, technological literacy, and innovation skills.

## 4. Discussion

This study reveals that students' life skills in a pesantren-based education are shaped by both structural and motivational factors. The structural model indicates that Curriculum Integration, Talent-Based Placement, Institutional Support, and Student Learning Motivation directly impact Life Skills. Meanwhile, Extracurricular Enrichment influences Life Skills indirectly through Student Motivation. This suggests that developing life skills depends not just on program availability but on the interaction of curriculum, student placement, institutional resources, and motivation within the educational system. This aligns with Educational Systems Theory, which sees educational outcomes as the result of interconnected components rather than isolated efforts (Banathy, 2013; Senge, 2000).

Curriculum Integration significantly enhanced Students' Life Skills, indicating that combining the Ministry of Religious Affairs curriculum with the pesantren curriculum offers students a comprehensive learning experience. This approach blends academic, religious, moral, and practical skills, fostering a unified learning journey rather than separate academic and religious activities in modern Islamic boarding schools. It supports the view of Fullan (2019, 2025) that meaningful educational reforms require alignment between curriculum design, institutional goals, and learning practices. The findings also align with the Life Skills Framework, which states that education should cultivate personal, social, academic, and vocational skills essential for real-world adaptation (World Health Organization, 1997; Irianto and Trisutaiaksana, 2003).

**Figure 7.** Online Da'wah Activity in the SKT Program

**Figure 8.** Language Laboratory Activity in the SBI Program

**Figure 9.** Robotics Activity in the SSR Program

However, Curriculum Integration did not significantly affect Student Learning Motivation, suggesting that students may view the curriculum as an institutional structure rather than a source of personal motivation. To boost motivation, integrated curricula should be paired with engaging teaching methods that inspire students.

Talent-Based Placement is identified as the most reliable predictor of Students' Life Skills. This underscores the value of aligning students with programs that match their interests, talents, and future goals. In the pesantren setting, an interest-and-talent interview during admission helps students choose personally meaningful program streams. This aligns with career development theories that emphasize the importance of matching individual traits to educational or vocational environments (Holland, 1997; Super, 1980; Savickas, 2005). Additionally, the notable impact of Talent-Based Placement on Student Learning Motivation shows that students are more driven when their educational path aligns with their abilities and aspirations. According to Self-Determination Theory, such placement fosters autonomy and competence, as students feel engaged in activities suited to their potential and plans (Deci and Ryan, 1985; Ryan and Deci, 2020).

Extracurricular Enrichment did not have a notable direct impact on Students' Life Skills but did show the strongest influence on Student Learning Motivation and an important indirect impact on Life Skills through that motivation. This is a key insight. It indicates that programs like STE, SKT, SBI, SSR, SSK, and the Regular program do not automatically enhance life skills just by existing. Their effectiveness depends on whether students are motivated to participate actively, practice regularly, and internalize the learning. This aligns with experiential learning theory, which states that meaningful learning occurs when students actively engage in experience, reflection, conceptualization, and practice (Kolb, 1984a,b). It also supports Papert (1980) constructionist perspective, that students gain greater skills when they create, design, and solve problems through authentic activities. Therefore, enrichment programs are effective when they are seen not just as supplementary activities but as structured spaces that foster skill development.

Institutional Support had a notably positive impact on Students' Life Skills and a smaller yet significant influence on Student Learning Motivation. This suggests that aspects such as leadership support, teacher competence, facilities, and collaboration between school and pesantren actors play a role in students' development. The findings align with instructional leadership literature, which states that school leaders affect student outcomes by shaping school climate, instructional quality, teacher collaboration, and institutional direction (Dutta and Sahney, 2022; Hallinger, 2005). Teacher competence is crucial because students need guidance, feedback, and mentoring to turn program participation into skill development (Darling-Hammond et al., 2017). However, the mediation analysis revealed that Student Learning Motivation did not significantly mediate the relationship between Institutional Support and Life Skills. This indicates that institutional support may impact life skills more directly—through facilities, program coordination, teacher supervision, and routine discipline—rather than mainly through students' psychological motivation.

Student learning motivation significantly influenced students' life skills and served as a mediator between Talent-Based Placement and Extracurricular Enrichment. This highlights the vital role of motivation in turning educational opportunities into developmental outcomes. Students who feel autonomous, competent, and supported are more likely to engage actively, complete tasks, collaborate with peers, and continue skill-based activities. This aligns with Self-Determination Theory, which emphasizes autonomy, competence, and relatedness as essential psychological needs for fostering high-quality motivation (Deci and Ryan, 1985, 2020; Ryan and Deci, 2020). Recent meta-analyses also find that autonomous motivation correlates with engagement, achievement, persistence, and positive learning outcomes (Bureau et al., 2022; Howard et al., 2021). In this research, motivation played a particularly important role in program-based experiences. Talent-Based Placement enhanced life skills both directly and indirectly through motivation, whereas Extracurricular Enrichment affected life skills mainly via motivation. This underscores the importance of programme relevance and active engagement in pesantren-based skill development.

The combination of quantitative and qualitative findings enhances the understanding of the model. Quantitative results show that Talent-Based Placement has the greatest direct impact on Life Skills, while Extracurricular Enrichment has the greatest direct impact on Student Learning Motivation. Qualitative insights from interviews and observations reveal that students become more engaged when programs align with their interests and include practical activities such as entrepreneurship, da'wah, language use, robotics, media production, and communication. Additionally, qualitative data explain why Curriculum Integration and Institutional Support have stronger direct effects compared to mediated effects: students perceive these as structural factors shaping their learning environment, whereas motivation is more directly boosted by program choice and hands-on activities. Overall, the findings suggest that life-skill development in modern pesantren occurs via two complementary pathways: a structural one involving curriculum and institutional support, and a motivational one driven by program relevance and enrichment activities.

This study theoretically advances by combining Educational Systems Theory, Self-Determination Theory, and the Life Skills Framework into an empirical model. It demonstrates that educational systems promote life skills not just through formal structures but also via motivational engagement. In practice, the results indicate that modern pesantren should enhance interest- and talent-based placement, ensure that enrichment programs are effectively facilitated, and boost institutional resources for hands-on learning. Institutionally, pesantren leaders must do more than offer programs and facilities; they should also foster conditions that support student autonomy, competence, and relatedness. This is particularly vital for sustaining the development of life skills in areas such as entrepreneurship, language, da'wah, media, design, and robotics. Overall, the findings suggest that an integrated pesantren education system can serve as a strategic model for cultivating students who are intellectually capable, spiritually grounded, socially responsible, vocationally prepared, and digitally literate.

## Ethical Statement

This study was conducted in accordance with ethical principles for educational research involving student participants. Permission to conduct the study was obtained from MA Bilingual Pondok Pesantren Modern Al-Amanah, Junwangi, Krian, Sidoarjo, Indonesia. All respondents and informants were informed of the research's purpose, the voluntary nature of their participation, and the confidentiality of the data collected. Student responses, interview results, observations, and institutional documents were used solely for academic purposes. No personal identity of participants is disclosed in this article.

## Informed Consent Statement

Informed consent was obtained from all participants involved in this study. Participants were informed about the purpose of the research, the voluntary nature of participation, confidentiality protection, and the academic use of the collected data.

## Author Contributions

Nur Azizatul Musyarofah contributed to conceptualization, data collection, methodology, formal analysis, interpretation of findings, and original manuscript drafting. Kurnia Akbar contributed to supervision, research design refinement, validation, critical review, and manuscript editing. All authors have read and approved the final version of the manuscript.

## Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors. All research activities, including data collection, analysis, and manuscript preparation, were conducted independently by the authors.

## Data Availability Statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request. Due to ethical and institutional considerations, raw student-level data are not publicly shared to protect participant confidentiality.

## Acknowledgements

The authors would like to express their sincere gratitude to MA Bilingual Pondok Pesantren Modern Al-Amanah, Junwangi, Krian, Sidoarjo, Indonesia, for granting permission and support during the research process. The authors also thank the school management, pesantren management, teachers, mentors, and students who participated in the questionnaire, interviews, observations, and documentation activities. Their cooperation, openness, and valuable insights enabled this study to examine curriculum integration, talent-based placement, extracurricular enrichment, institutional support, learning motivation, and students' life skills in a pesantren-based educational context.

## Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this article. The research was conducted independently, and all interpretations, analyses, and conclusions are the sole responsibility of the authors.

## Declaration of Generative AI and AI-Assisted Technologies

The authors declare that no generative artificial intelligence tool was used to produce the research data, analysis, or findings of this study. Any language refinement support, if used, was limited to improving readability and did not replace the authors' intellectual contribution, interpretation, or responsibility for the content.

## References

Banathy, B.H., 2013. Systems design of education. Educational Technology 53.

Birgili, B., Seggie, F.N., Oguz, E., 2021. The trends and outcomes of flipped learning research between 2012 and 2018: A descriptive content analysis. Journal of Computers in Education 8. URL: https://doi.org/10.1007/s40692-021-00183-y.

Bureau, J.S., Howard, J.L., Chong, J.X.Y., Guay, F., 2022. Pathways to student motivation: A meta-analysis of antecedents of autonomous and controlled motivations. Review of Educational Research 92. URL: https://doi.org/10.3102/00346543211042426.

Canale, M., Swain, M., 1980. Theoretical bases of communicative approaches to second language teaching and testing. Applied Linguistics 1. URL: https://doi.org/10.1093/applin/I.1.1.

Creswell, J.W., Plano Clark, V.L., 2018. Designing and Conducting Mixed Methods Research. 3 ed., SAGE Publications.

Creswell, J.W., Poth, C.N., 2018. Qualitative Inquiry and Research Design: Choosing Among Five Approaches. SAGE Publications.

Darling-Hammond, L., Hyler, M.E., Gardner, M., 2017. Effective Teacher Professional Development. Technical Report. Learning Policy Institute.

Deci, E.L., Ryan, R.M., 1985. Intrinsic Motivation and Self-Determination in Human Behavior. Springer. URL: https://doi.org/10.1007/978-1-4899-2271-7.

Deci, E.L., Ryan, R.M., 2020. Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. Contemporary Educational Psychology 61.

Desky, H., Asiah, N., Savitri, A., 2025. A model of sharia educational management: Advancing sustainable islamic financial inclusion. International Journal of Scientific Research and Management 13. URL: https://doi.org/10.18535/ijsrm/v13i05.em08.

Dirsehan, T., Henseler, J., 2023. Modeling indices using partial least squares: How to determine the optimum weights? Quality and Quantity 57. URL: https://doi.org/10.1007/s11135-022-01515-5.

Dutta, V., Sahney, S., 2022. Relation of principal instructional leadership, school climate, teacher job performance and student achievement. Journal of Educational Administration 60. URL: https://doi.org/10.1108/JEA-01-2021-0010.

Fullan, M., 2019. Book review title of book: The new meaning of educational change. PJERE 6.

Fullan, M., 2025. The New Meaning of Educational Change. 6 ed., Teachers College Press.

Gan, Z., An, Z., Liu, F., 2021. Teacher feedback practices, student feedback motivation, and feedback behavior: How are they associated with learning outcomes? Frontiers in Psychology 12. URL: https://doi.org/10.3389/fpsyg.2021.697045.

Hallinger, P., 2005. Instructional leadership and the school principal: A passing fancy that refuses to fade away. Leadership and Policy in Schools 4. URL: https://doi.org/10.1080/15700760500244793.

Henseler, J., Ringle, C.M., Sarstedt, M., 2015. A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the Academy of Marketing Science 43. URL: https://doi.org/10.1007/s11747-014-0403-8.

Herlinawati, H., Marwa, M., Ismail, N., Junaidi, J., Liza, L.O., Situmorang, D.D.B., 2024. The integration of 21st century skills in the curriculum of education. Heliyon 10. URL: https://doi.org/10.1016/j.heliyon.2024.e35148.

Holland, J.L., 1997. Making Vocational Choices: A Theory of Vocational Personalities and Work Environments. 3 ed., Psychological Assessment Resources.

Howard, J.L., Bureau, J., Guay, F., Chong, J.X.Y., Ryan, R.M., 2021. Student motivation and associated outcomes: A meta-analysis from self-determination theory. Perspectives on Psychological Science 16. URL: https://doi.org/10.1177/1745691620966789.

Irianto, Y.B., Trisutaiaksana, D.S., 2003. Manajemen pendidikan berorientasi ketrampilan hidup: Konsep dan penerapannya pada jalur pendidikan luar sekolah. Jurnal Administrasi Pendidikan 1. URL: https://doi.org/10.17509/jap.v1i1.6057.

Ivankova, N.V., Creswell, J.W., Stick, S.L., 2006. Using mixed-methods sequential explanatory design: From theory to practice. Field Methods 18. URL: https://doi.org/10.1177/1525822X05282260.

Khan, B.H., Reigeluth, C.M., 1993. Systems design of education: A journey to create the future by bela h. banathy. Performance + Instruction 32. URL: https://doi.org/10.1002/pfi.4170320916.

Kolb, D.A., 1984a. Experiential Learning: Experience as the Source of Learning and Development. Prentice Hall, Englewood Cliffs, NJ. URL: https://doi.org/10.1016/B978-0-7506-7223-8.50017-4.

Kolb, D.A., 1984b. Experiential learning: Experience as the source of learning and development, david a. kolb, prentice-hall international, hemel hempstead, herts., 1984. no. of pages: xiii + 256. Journal of Organizational Behavior 8.

Koltay, T., 2011. The media and the literacies: Media literacy, information literacy, digital literacy. Media, Culture and Society 33. URL: https://doi.org/10.1177/0163443710393382.

Kuratko, D.F., 2005. The emergence of entrepreneurship education: Development, trends, and challenges. Entrepreneurship Theory and Practice 29. URL: https://doi.org/10.1111/j.1540-6520.2005.00099.x.

Lent, R.W., Brown, S.D., Hackett, G., 1994. Toward a unifying social cognitive theory of career and academic interest, choice, and performance. Journal of Vocational Behavior 45. URL: https://doi.org/10.1006/jvbe.1994.1027.

Makdisi, G., 2019. The Rise of Colleges: Institutions of Learning in Islam and the West. Edinburgh University Press. URL: https://doi.org/10.2307/601679.

Martínez Triviño, C., Saldivia Vera, V., Ferrada, C., 2025. Proyecto de intervención de programación y robótica en educación secundaria de la insularidad de chile. El Faro. Revista Digital de Docencia Universitaria 2. URL: https://doi.org/10.63790/me0k9f53.

McIlveen, P., McDonald, N., 2019. The vocational psychology of agriculture: Fiat panis. International Handbook of Career Guidance.

Miller, K.A., Deci, E.L., Ryan, R.M., 1988. Intrinsic motivation and self-determination in human behavior. Contemporary Sociology 17. URL: https://doi.org/10.2307/2070638.

Mulford, B., 2003. School leaders: Challenging roles and impact on teacher and school effectiveness. Technical Report. OECD.

Papert, S., 1980. Mindstorms: Children, Computers, and Powerful Ideas. 2 ed., Basic Books.

Patton, M.Q., 2015. Qualitative Research and Evaluation Methods. SAGE Publications.

Ryan, R.M., Deci, E.L., 2020. Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. Contemporary Educational Psychology 61. URL: https://doi.org/10.1016/j.cedpsych.2020.101860.

Savickas, M.L., 2005. The theory and practice of career construction. Career Development and Counseling: Putting Theory and Research to Work.

Schneider, M., 2002. Do school facilities affect academic outcomes? Technical Report. National Clearinghouse for Educational Facilities.

Senge, P.M., 2000. Schools that Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares About Education. Doubleday.

Shmueli, G., Sarstedt, M., Hair, J.F., Cheah, J.H., Ting, H., Vaithilingam, S., Ringle, C.M., 2019. Predictive model assessment in pls-sem: Guidelines for using plspredict. European Journal of Marketing 53. URL: https://doi.org/10.1108/EJM-02-2019-0189.

Stufflebeam, D.L., Coryn, C.L.S., 2025. Stufflebeam's cipp model of evaluation. Irish International Journal of Engineering and Scientific Studies .

Super, D.E., 1980. A life-span, life-space approach to career development. Journal of Vocational Behavior 16. URL: https://doi.org/10.1016/0001-8791(80)90056-1.

Tokar, D.M., Thompson, M.N., Plaufcan, M.R., Williams, C.M., 2007. Precursors of learning experiences in social cognitive career theory. Journal of Vocational Behavior 71. URL: https://doi.org/10.1016/j.jvb.2007.08.002.

Wickert, R., 2001. Review: Schools that learn: A fifth discipline fieldbook for educators, parents and everyone who cares about education. Australian Journal of Career Development 10. URL: https://doi.org/10.1177/103841620101000313.

World Health Organization, 1997. Life Skills Education for Children and Adolescents in Schools. Technical Report. World Health Organization, Division of Mental Health.

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