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Article

Flexible Learning and Life Skills Development in Arabic Language Students at Iraqi Islamic Colleges

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Abstract

This research explores the influence of flexible learning on the enhancement of life skills among students enrolled in Arabic language departments within Colleges of Islamic Sciences in Iraq. A quasi-experimental methodology was adopted, comprising a sample of 92 students who were randomly allocated into two equal groups: an experimental group (n = 46) exposed to flexible learning approaches, and a control group (n = 46) taught through conventional instructional methods. The evaluation of life skills encompassed four key areas: self-awareness, problem-solving, leadership, and ethical decision-making. Statistical procedures, including the t-test and Eta squared calculations, indicated statistically significant improvements in favour of the experimental group. The effect sizes were notably large, with Eta squared values recorded at 0.19 for self-awareness, 0.52 for problem-solving, 0.22 for leadership, and 0.26 for ethical decision-making. These results demonstrate that flexible learning considerably contributes to the advancement of essential life skills. The study advocates for the broader adoption of flexible learning frameworks to foster holistic student development. It also recommends extending the scope of investigation to encompass additional academic disciplines and incorporating longitudinal and qualitative methodologies to more comprehensively assess the sustained and contextual effects of flexible learning. Future inquiries should further examine the contextual variables that shape learning outcomes and undertake comparative analyses of flexible versus traditional teaching practices to clarify their respective impacts.

Keywords

Flexible Learning, Life Skills, Arabic Language, Development, Students.

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Introduction

Research Overview

The Research Problem

The Arabic language represents a foundational subject that fosters individuals' cultural identity, elevates their social standing, and reinforces their engagement within familial, societal, and personal contexts (Abu-Gweder, 2024; Halabi, 2025). Consequently, it has become imperative to modernise instructional approaches across all educational stages to equip learners with the capacity to address their dynamic needs and aspirations, particularly in response to the multifaceted transformations occurring in contemporary life (Bateson & Casley, 2025). Flexible learning offers a range of adaptable tools that facilitate student engagement through varied pedagogical strategies, integrating technological solutions tailored to learners' specific temporal and spatial conditions (Barua & Lockee, 2024; Valtonen et al., 2021). The acquisition of core life skills is vital for individuals to function effectively within an ever-evolving global environment. As such, educational institutions must prioritise the cultivation of these competencies, enabling learners to apply them across diverse real-world contexts (Hvalby, Guldbrandsen, & Fandrem, 2024; Isaksen et al., 2025). Nevertheless, in many Arab educational contexts, there remains a predominant emphasis on outcome-based achievement at the expense of meaningful student comprehension. This inclination often results in the continued reliance on traditional pedagogical practices, thereby impeding the emergence of a generation adequately prepared to address real-life challenges. This raises a critical question: how can the role of flexible learning in enhancing life skills among Arabic language students within Islamic science colleges in Iraq be effectively evaluated?

The Importance of Research

Education serves as a defining element that characterises the identity of societies and mirrors the progress of nations, representing a cornerstone in the advancement of civilisations (Pietrocola et al., 2021; Therborn, 2021). Life skills are instrumental in enabling students to attain long-term objectives; however, their development should not be viewed as an end in itself. Instead, the purpose lies in empowering learners to apply these competencies within real-life contexts. Skills-based education thus encompasses a variety of aims, including the enhancement of students' social engagement, personal development, and their capacity to respond effectively to diverse life situations. Furthermore, it facilitates the acquisition of knowledge and experiential learning, enabling learners to utilise scientific resources in information exploration and practical application. This, in turn, contributes to the refinement of their creativity, critical reasoning, problem-solving abilities, and their competence in selecting the most appropriate solutions, among other essential capabilities (Daley, Murano, & Walton, 2025; Yu & Zin, 2023).

Research Objectives and Hypotheses

The present study seeks to examine the extent to which flexible learning influences the development of life skills among students specialising in Arabic language within Islamic sciences colleges in Iraq. In light of this objective, the following research questions are posed:

1. Does flexible learning improve self-awareness skills among Arabic language students in the Arabic Language Department at the College of Islamic Studies?
2. Does flexible learning have an impact on developing problem-solving skills among Arabic language students in the Arabic Language Department at the College of Islamic Sciences?
3. Do flexible learning methods affect the leadership skills of Arabic language students in the Arabic Language Department at the College of Islamic Sciences?
4. Does flexible learning have an impact on the moral skills of students in the Arabic Language Department at the College of Islamic Studies?

The research seeks to:

1. Determining the impact of flexible learning on developing self-awareness skills
2. Determining the impact of flexible learning on developing leadership skills.
3. Determining the impact of flexible learning on developing students' ethical skills.

The study examines the following hypotheses:

1. It is predicted that significantly discernible differences in statistical terms exist between the average scores of students in my study groups on the self-awareness skills scale.
2. It is predicted that significantly discernible differences in statistical terms exist between the average scores of students in my study groups in the scale of problem-solving skills.
3. It is predicted that significantly discernible differences in statistical terms exist in the average scores of students in my study groups on the leadership skills scale.
4. It is predicted that significantly discernible differences in statistical terms exist in the average scores of students in study groups in the scale of moral skills

Scope of Research

Temporal Boundaries: The Academic Year 2023-2024.
Spatial Boundaries: College of Islamic Sciences in Iraq.
Human: Students of the Arabic Language Department.

Defining Terms

Flexible Learning

Linguistically: Dictionaries define flexibility as the capacity to modify behaviour in response to environmental changes (Karman, 2020), and the term is often associated with the notion of "softness within rigidity." The verb "to train" connotes the act of making something more pliable, while "to practise" implies a process that renders actions or behaviours more adaptable (Cedergren & Hassel, 2024).

Terminologically: According to Whalley et al. (2021), flexible learning comprises a variety of instructional methods and educational frameworks designed to offer students multiple pathways that cater to their individual needs. It provides spatial and temporal flexibility through a range of pedagogical tools that support learning processes (Müller & Mildenberger, 2021). Furthermore, Jonker, März and Voogt (2020) characterised it as an instructional approach in which educational content is delivered according to a flexible timetable, enabling an interactive dynamic between teacher and student, particularly within traditional curricular structures.

Operationally: A progressive instructional strategy implemented for students enrolled in the Arabic Language Department within the College of Islamic Sciences in Iraq, based on a creatively structured educational programme.

Life Skills

Linguistically: Skill refers to an individual's capacity to carry out particular tasks with a high degree of competence and effectiveness (Schaeffer et al., 2023).

Terminologically: It is described as a set of behavioural responses that an individual must develop to competently and successfully manage the demands of everyday life (Hongsuchon et al., 2022).

Operationally: The set of behavioural traits that students in the Arabic Language Department at the College of Islamic Sciences are expected to demonstrate as a result of engaging with a learning programme structured around flexible learning principles.

Theoretical Background and Previous Studies

Theoretical Background

The Concept of Flexible Learning

The concept of flexible learning is regarded as either a complementary framework or a substitute for conventional educational systems. Its flexibility lies in its ability to incorporate varied instructional strategies, enabling learners or their guardians to influence numerous dimensions of the learning experience, including scheduling, location, curriculum design, and course content. This autonomy contributes to a learning environment that is both more engaging and intellectually fulfilling for students (El Galad, Betts, & Campbell, 2024).

Characteristics of Flexible Learning: Flexible learning encompasses a number of key features (Gunawardena, Bishop, & Aviruppola, 2024):

1. It offers learners a wide array of choices, enriching the educational experience through its multifaceted structure.
2. It adopts a self-directed learning model in which the learner assumes a central role, taking personal responsibility for their educational progress rather than relying exclusively on the teacher.
3. It necessitates that learners manage their own learning process, including setting objectives, monitoring progress, implementing improvements, and participating in active, student-driven learning. This approach enhances both the effectiveness and the enjoyment of the educational experience.

Dimensions of Flexibility

Time and Place of Learning

When does a learner conclude an educational course? When does it commence and terminate? In what ways can the learner engage actively in learning activities? These questions relate to the flexible approaches that allow learners to select options tailored to their individual needs. Learners have the autonomy to determine their study schedules and the times at which they interact with others. Additionally, the location of learning is no longer fixed; students may engage in academic activities using mobile devices from any convenient setting—be it at university, at home, or another suitable environment. Following the outbreak of the COVID-19 pandemic, conventional in-person education was suspended globally. In response, educational institutions adopted alternative instructional methods. In such models, instructors prepare and share digital learning tasks along with relevant resources at designated times, enabling students to access materials, review content, complete assigned tasks, and submit their work within a specified weekly timeframe.

The Nature and Method of the Educational Material that the Student Receives

Flexible learning empowers students to structure the sequence and selection of educational content in accordance with their individual preferences and areas of interest. It also enables them to influence the direction, duration, and breadth of the learning experience by adapting the course materials to suit their personal learning goals.

How to Deliver Information to Students

Flexible learning uses an assortment of teaching techniques to accomplish knowledge acquisition. This encompasses disseminating information through the traditional classroom-style courses, using web-based tools for distance learning, and merging the two models through blended learning interfaces that combine various teaching techniques. Augmented reality is also used as a state-of-the-art approach that connects academic material with practical application. In this, the students deal with information directly related to particular professions and often obtain information from professionals who work in the field.

The Strategy Followed in Organizing Educational Activities

Flexible learning provides students with a variety of learning modes so that the student can select the mode most suitable to the individual's learning style. The modes might be the traditional lecture, guided discussion, formal debate, individual discovery learning alone or through play in ways that engagement is developed through interactive learning.

The Concept of Life Skills

Life skills are broadly understood as essential tools that equip individuals to effectively navigate various real-life situations (Hofer, Nistor, & Scheibenzuber, 2021). These competencies are often associated with personal development, as they contribute significantly to shaping one's character, fostering a sense of responsibility, and enabling individuals to confront life's challenges in a holistic manner. Through meaningful interaction with their social environment, individuals can optimise their potential and engage constructively with societal issues (Gamage, Dehideniya, & Ekanayake, 2021). From an educational standpoint, life skills are conceptualised as a collection of interactive pedagogical strategies designed to cultivate learners' personalities. These approaches aim to foster creativity, innovation, independence, effective problem-solving, self-assurance, and the enhancement of psychological and emotional competencies (Darling-Hammond et al., 2024; Skrbinjek et al., 2024).

Key Determinants of Life Skills

Life skills have three components: (Robison, Mann, & Ingvarsson, 2020; Zaman, Dar, & Arshad, 2023):

1. Affective Components: These encompass learners' attitudes and their preferences regarding patterns of behaviour and task execution.
2. Cognitive Components: These refer to the theoretical understanding and knowledge associated with methods of carrying out tasks effectively.
3. Skill Components: These are reflected in the practical capacity to perform and apply the skill in real-world contexts.

Life Skills Classification

Life skills classified to (Wang et al., 2024):

1. Cognitive Skills: These encompass a range of higher-order abilities such as self-regulation, crisis and disaster management, conflict resolution, effective problem-solving, financial literacy at both personal and familial levels, business planning, sound decision-making, as well as the development of creative and critical thinking capabilities.
2. Practical Skills: This category includes competencies related to personal grooming, care for clothing and personal belongings, effective handling of household items, basic first aid knowledge, sustainable use and preservation of environmental resources, informed housing decisions, maintenance of home furnishings, and proper food storage techniques.

Additionally, life skills may be grouped into areas such as decision-making, problem-solving, creative and critical thinking, interpersonal communication, self-awareness, self-assertiveness, self-esteem, confidence-building, and the ability to empathise with others. Mahajan, Gupta and Misra (2022) define life skills as enduring competencies that empower individuals to confront and manage the diverse challenges encountered throughout their lives.

Previous Studies

Susilawati, Nurkholis and Anwar (2024) investigated the incorporation of religious and moral frameworks into Arabic language education by designing instructional materials based on the concept of al-Wasatiyyah ad-Diniyyah, which emphasises religious moderation. Employing Borg and Gall's descriptive procedural model, their research revealed that embedding such values within the language curriculum not only reinforces students' command of Arabic but also contributes meaningfully to their overall character formation. This integrative approach discourages extremist ideologies and cultivates a disposition of tolerance, suggesting that the fusion of ethical-religious principles with language instruction serves as a vital strategy for nurturing civic responsibility and fostering balanced personal development among university learners.

In a related vein, Aisyah, Mabnunah and Nafilah (2024) explored the impact of life skills-oriented education on the development of student character and autonomy. Adopting a qualitative ethnographic methodology that included interviews, observational techniques, and document review, their study demonstrated that these programmes play a crucial role in instilling discipline, accountability, and self-assurance. Beyond the acquisition of functional capabilities, learners also developed psychological adaptability and emotional strength, equipping them to meet the complexities of future societal and personal demands. These findings underscore the effectiveness of experiential, life-based learning in supporting both educational success and character growth, resonating strongly with the transformative aims of 21st-century pedagogy.

Comparison Between Previous and Current Studies

A review of existing literature reveals that previous studies can generally be categorised into two primary thematic areas. The first group centres on flexible learning, examining its significance, methodologies, and educational outcomes. The second group focuses on life skills, exploring their relevance and strategies for their enhancement among students. However, research that explicitly investigates the intersection between these two domains remains relatively scarce. In response to this gap, the present study is specifically designed to assess the influence of flexible learning on the development of life skills. From a demographic perspective, earlier studies have drawn upon varied populations that differ notably from the cohort examined in the current research. This study targets students enrolled in the Faculty of Islamic Sciences, Department of Arabic Language, a context that

has received limited scholarly attention. Therefore, it is essential to explore how flexible learning modalities contribute to the cultivation of life skills within this specific educational environment.

Research Methodology and Procedures

Research Methodology

The researcher employed an experimental methodology, implementing a flexible learning programme targeting second-year students within the Department of Arabic Language at the College of Islamic Sciences. The department comprises three distinct sections (A, B, and C), and through a process of random selection, two sections—B and C—were chosen to participate in the study.

Research Procedures

Research Community

The target population for this study consists of students enrolled in Arabic language departments within Colleges of Islamic Sciences across Iraq.

Research Sample

Sections B and C were chosen from the three available sections (A, B, and C) comprising second-year students in the Department of Arabic Language at the College of Islamic Sciences. The combined number of students in the selected sections was 92, with each section comprising 46 students, as illustrated in Figure 1.

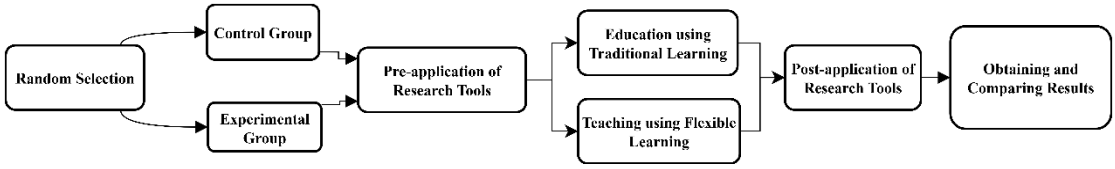

Figure 1: *Design used in the Study.*

Based on the preceding plan, it is evident that the selected participants were categorised into two distinct groups:

1 Experimental: Exposed to flexible learning.
2 Control: Exposed to traditional learning.

This procedure was undertaken to assess the level of life skills in each group and to identify any significant differences between them.

Research Tools

In this study, the following life skills were assessed: 1- Self-awareness, 2- Problem-solving, 3- Leadership, 4- Ethical skills. The scale was initially administered to a pilot group consisting of 25 male and female students from the Arabic Language Department at the College of Islamic Sciences, with a response time allocated at 40 minutes.

Validity of Items

To establish the validity of the items developed for the scale, the researcher presented them to a panel of 15 specialised experts to solicit their evaluations regarding the appropriateness of the items in measuring the intended constructs. The percentage of agreement among the experts was calculated following the review process, yielding a consensus rate of 86.5%. No expert recommended the removal of any item; however, they suggested revisions to improve the clarity of wording and correct linguistic errors, as reflected in Table 1.

Table 1: *Arbitrators' Opinions.*

Item Number	Agree	Opposed Amendment	Percentage
1, 4–5–6–8–9–10, 11–12, 13–14, 15–1, 2–22, 23–24, 25–26	12	3	80%
2, 3–7, 15–16, 17–1, 28, 21–22, 23–24	14	1	93%
Total			86.50%

Clarity of Items

The researcher verified the clarity and comprehensibility of the scale items in terms of their content, response options, and linguistic structure, in order to identify any difficulties encountered by the participants while responding. To achieve this objective, the final version of the scale was administered to the target sample. This procedure also facilitated the determination of the time required by respondents to complete the scale. For this purpose, the scale was piloted on a randomly selected survey sample comprising 26 male and female students enrolled in the second year of the Department of Arabic Language at the College of Islamic Sciences, as detailed in Table 2.

Table 2: *Distribution of the Survey Sample.*

Gender	repetition	Percentage
Male	12	0.46
Female	14	0.54
Total	26	1

The proportion of female respondents within the questionnaire sample was 46 percent, while male participants constituted 54 percent of the total. To ensure clarity in the response process, the researcher included an illustrative example demonstrating how to select the appropriate response option. Participants were informed that their responses would be utilised solely for academic research purposes, would remain confidential, and would not be subject to publication. It was also emphasised that there were no correct or incorrect answers. These procedures were conducted in the presence of the researcher to address any potential queries raised by the participants. Additionally, it was observed that the time required to complete the questionnaire ranged between 38 and 42 minutes, with an average completion time of approximately 40 minutes.

Scale Validity

The scale was submitted for review to a panel of experts specialising in Arabic language teaching methodologies as well as in the fields of educational measurement and evaluation. Their feedback and recommendations were carefully considered and incorporated to enhance the accuracy and relevance of the instrument.

Overall Scale Reliability

The reliability of the scale, as assessed by Cronbach's alpha coefficient, was determined to be 0.80, indicating an acceptable level of internal consistency, as presented in Table 3. The reliability coefficients for the sub-dimensions of the scale were as follows: 0.83 for self-awareness, 0.77 for problem-solving, and 0.80 for moral skills. These values fall within the acceptable range, indicating satisfactory internal consistency for each domain.

Table 3: *Cronbach's Alpha Coefficient.*

Dimension	Cronbach's Alpha	Significance
Self-Conscious	0.83	0
Problem Solving	0.77	0
Ethical Skills	0.82	0
Total	0.8	0

The Discriminative Power of the Scale

The objective of evaluating the discriminatory power of the scale items is to eliminate unsuitable components and retain those that are appropriate, thereby ensuring the effectiveness of each item in differentiating between individuals with high and low levels of the measured attribute. To achieve this, the researcher employed the extreme groups method, as illustrated in Table 4. The self-awareness scale is composed of nine items, with item difficulty indices ranging from 0.23 to 0.74 and a mean value of 0.42. These figures fall within the acceptable threshold of 0.2 to 0.8, indicating that the items exhibit an appropriate level of difficulty. The problem-solving dimension comprises six items, with difficulty indices spanning from 0.24 to 0.63 and an average of 0.43, again falling within the established acceptable range, thereby affirming the adequacy of item difficulty. The leadership

scale includes nine items, with difficulty values ranging from 0.30 to 0.71 and a mean coefficient of 0.50, which also confirms the suitability of the items in terms of complexity. Similarly, the ethical skills scale consists of five items, with difficulty scores between 0.32 and 0.65 and a mean value of 0.48. These metrics, positioned within the acceptable limits, further validate that the items are appropriately calibrated in terms of difficulty.

Table 4: *Discriminative Power.*

N.	Calculated T-Value	Lower Group		Top Group		Sig.
		Arithmetic Mean	Standard Deviation	Arithmetic Mean	Standard Deviation	
1	6.32	3.89	1.12	4.62	0.53	0
2	7.59	3.54	1.08	4.61	0.5	0
3	8.01	3.61	1.22	4.93	0.78	0
4	2.89	3.08	1.31	4.66	0.52	0
5	3.99	2.93	1.09	4.23	0.97	0
6	4.52	3.83	1.67	4.56	1.18	0
7	6.23	3.44	1.14	4.79	0.65	0
8	2.49	2.56	1.23	4.63	0.71	0
9	4.02	2.25	1.16	4.38	1.01	0
10	2.88	2.75	1.27	4.93	0.73	0
11	3.17	2.63	1.02	4.16	0.54	0
12	5.15	3.41	1.19	4.23	0.99	0
13	6.79	2.29	1.07	4.43	0.49	0
14	2.98	2.21	1.09	4.9	0.66	0
15	3.68	2.83	1.11	4.48	0.74	0
16	4.22	3.13	1.05	4.73	0.64	0
17	5.32	3.43	1.96	4.81	0.77	0
18	6.27	3.37	1.22	4.44	0.53	0
19	4.61	3.65	1.35	4.93	0.46	0
20	5.87	3.1	1.02	4.65	0.51	0
21	2.96	3.33	1.09	4.22	0.76	0
22	3.22	3.06	1.22	4.88	0.6	0
23	3.03	3.39	1.77	4.69	0.81	0
24	4.63	3.19	1.08	4.33	0.55	0
25	5.02	3.04	1.66	4.56	0.85	0
26	6.2	3.48	1.32	4.39	0.72	0
27	7.69	3.09	1.33	4.6	0.64	0
28	2.94	3.61	1.36	4.54	0.87	0

Results

The First Hypothesis

The t-value for independent samples was calculated to examine the differences in mean scores between the two groups under study, both prior to and following the application of flexible learning, with respect to the enhancement of students' life skills. The findings of this comparison are presented in Table 5. According to Table 5, the probability value was found to be P = 0.00, which indicates a significance level below the 5% threshold (*p* < 0.05). The arithmetic mean of the experimental group was higher than that of the control group, signifying the presence of statistically significant differences in favour of the experimental group. Additionally, the value of Eta Square was 0.19, which is considered high. This result suggests that flexible learning has a notable impact on enhancing the self-awareness skills of the student sample. Figure 2 presents the disparity in self-awareness skill levels between the control and experimental groups. The diagram reveals that the experimental group achieved a substantially higher mean score (2.35) in comparison with the control group (1.17), suggesting that the implemented intervention contributed positively to the enhancement of self-awareness among the students.

Table 5: *Calculation of the T-Value and Eta-Squared Coefficient to Verify the First Hypothesis.*

	P	$^2\eta$	T-Value	Standard Deviation	Arithmetic Mean	Sample	The Group	Significant
Self-Awareness Skill	0	0.19	4.63	0.662	2.35	46	E.	Sig.
		-		0.939	1.17	46	C.	

Note: *T: Experimental *D: Control.

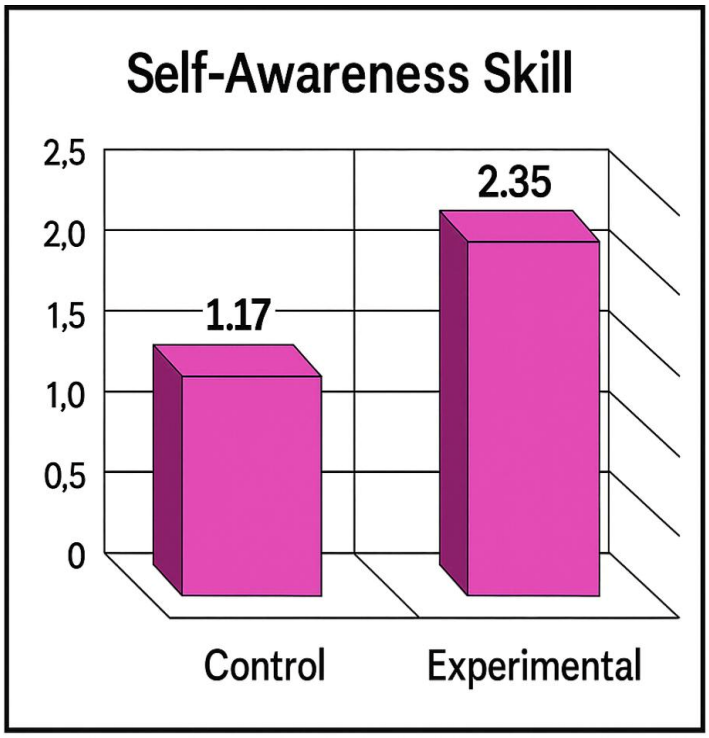

Figure 2: *Comparison of Self-Awareness Skill Between Control and Experimental Groups.*

The Second Hypothesis

To confirm the effect of flexible learning on problem-solving abilities, the t-test was employed to assess the differences between the two study groups, and the Eta squared coefficient was used to determine the magnitude of the effect. The findings are presented in Table 6. In the variable of problem recognition, the resulting t-value was 4.58 and thus higher than the critical value. The resulting Eta squared was 0.15 and thus revealing a statistically significant impact of flexible learning on the capacity to recognize problems with a moderate effect size. In the competency of identifying problems, the value of t was 3.68 and thus higher than the critical value. The resulting coefficient of Eta squared was 0.28. This finding suggests a large influence of flexible learning on the improvement of students' skills in identifying problems.

Regarding hypothesis formulation, the t-value obtained was 4.47, which also exceeds the critical value. The associated Eta squared coefficient was 0.23, signifying a meaningful effect of flexible learning on students' capacity to formulate appropriate hypotheses. In the area of data collection, the calculated t-value was 4.01, exceeding the accepted threshold, and the Eta squared value was 0.17. This suggests a significant contribution of flexible learning to students' abilities to gather relevant research data. Concerning the generation of solutions, the t-value was 5.67, surpassing the standard threshold, with an Eta squared coefficient of 0.24. This indicates a notable impact of flexible learning in fostering students' skills in generating viable solutions. For the skill related to selecting appropriate solutions, the t-value recorded was 4.87, which again exceeds the critical value. The Eta squared coefficient was 0.16, reflecting a statistically significant effect, whereby flexible learning enhances students' ability to choose the most effective solutions. Overall, the composite t-value for problem-solving skills was found to be 9.15, accompanied by a high Eta squared coefficient of 0.52. This denotes a strong and significant impact of flexible learning on the overall development of students' problem-solving competencies.

Table 6: *The Means, Standard Deviations, Calculated T-Values, and Eta Squared (η^2) to Test the Second Hypothesis.*

Skill	Group	N	Mean	Std. Deviation	T-Value	Significance (P)	η^2 (Eta Squared)
Feeling the Problem	Experimental	46	2.32	0.674	4.58	0.00	0.15
	Control	46	1.45	0.812			
Defining the Problem and Describing it	Experimental	46	2.40	0.491	4.74	0.00	0.23
	Control	46	1.82	0.871			
Formulating Hypotheses	Experimental	46	2.51	0.566	4.01	0.00	0.17
	Control	46	1.95	0.975			
Creating and Inventing Solutions	Experimental	46	2.63	0.70	5.67	0.00	0.24
	Control	46	1.16	0.86			
Choosing the Best Solution	Experimental	46	2.33	0.68	4.87	0.00	0.16
	Control	46	1.25	0.95			
Total Problem-Solving Skill	Experimental	46	2.61	0.96	9.15	0.00	0.52
	Control	46	1.38	0.83			

Based on the results presented in Table 6, the p-value associated with the overall problem-solving skill was found to be 0.00. This outcome indicates the presence of statistically significant differences at the 5% significance level ($p < 0.05$) between the mean scores of the control and experimental groups concerning problem-solving abilities. The direction of significance favoured the experimental group, as the p-value was significant across all assessed sub-skills. Furthermore, Table 6 demonstrates that the Eta squared value for the total problem-solving score was notably high, with similarly significant values observed across the individual sub-skills. These findings suggest a robust influence of flexible learning on the enhancement of students' life skills. Accordingly, this provides compelling evidence that the implementation of flexible learning approaches contributes positively to the development of students' problem-solving competencies.

The Third Hypothesis

To validate this hypothesis, the t-value was computed to assess the differences between the two study groups. The resulting value was 5.01, as indicated in Table 7, which exceeds the critical threshold, thereby confirming statistical significance. In addition, the researcher calculated the Eta squared coefficient to evaluate the effect of flexible learning on leadership as one of the key life skills. Table 7 indicates that the p-value is P = 0.00 and thus statistically significant at a probability level of less than 5%. The experimental group also produced a higher mean score than the control group and thus statistically significant differences in favour of the experimental group. The value of Eta squared was also calculated to be 0.22 and deemed to be large. This suggests that flexible learning has a large effect on the leadership ability of the students in the sample.

Table 7: *Calculation of T-Value and ETA Squared Coefficient to Verify the Third Hypothesis.*

	P	$^2\eta$	T-Value	Standard Deviation	Arithmetic Mean	Sample	The Group	Significance
Leadership Skill	0	0.22	5.01	0.541	2.62	46	T	**Sig.**
		-		0.852	1.58	46	D	

The Fourth Hypothesis

To validate this hypothesis, an independent samples t-test was employed to ascertain the statistical differences between the experimental and control groups. The computed t-value of 5.62, as indicated in Table 8, exceeded the critical threshold, thereby confirming the presence of significant variation. Furthermore, the researcher calculated the Eta squared coefficient to quantify the effect size, thereby assessing the influence of

flexible learning on the development of moral skills as a dimension of life skills. As shown in Table 8, the p-value was calculated as P = 0.00, indicating statistical significance at a threshold below 5% (*p* < 0.05). The findings also revealed that the mean score of the experimental group surpassed that of the control group, demonstrating statistically significant differences favouring the experimental cohort. An Eta squared value of 0.26 was obtained, which is considered substantial, signifying that flexible learning exerted a notable influence on the moral skills of the students within the sample. Figure 3 illustrates a comparative analysis of life skills scores between the experimental and control groups. Interestingly, the control group recorded a higher average score (2.43) compared to the experimental group (2.01), suggesting that the intervention administered to the experimental group may not have yielded superior outcomes in enhancing overall life skills relative to traditional instructional methods. This outcome underscores the importance of re-evaluating the design or implementation of the experimental learning strategy.

Table 8: *Calculating the T-Value and the ETA Squared Coefficient for Testing the Fourth Hypothesis.*

	P	$^2\eta$	T-Value	Standard Deviation	Arithmetic Mean	Sample	The Group	Significance
Ethical Skills	0	0.26	5.62	0.433	2.43	46	T	Sig.
		-		0.972	2.01	46	D	

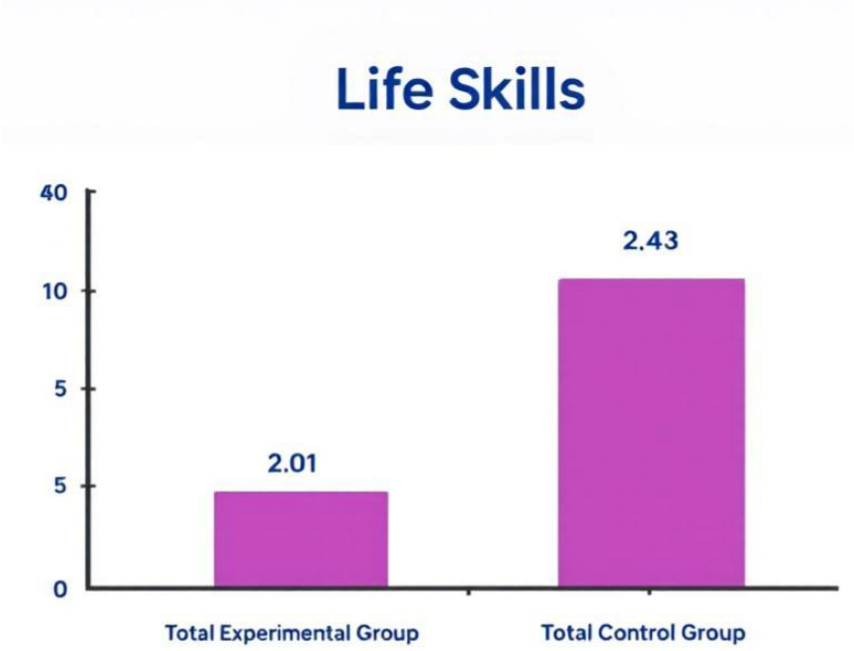

Figure 3: *Comparison of Life Skills Scores Between Experimental and Control Groups.*

Conclusions, Recommendations and Suggestions

The pilot investigation, which involved two groups—an experimental group exposed to flexible learning and a control group engaged in conventional instruction—aimed to evaluate the development of life skills among students. The findings revealed the following:

- Statistically significant differences were identified in the mean scores on the self-awareness scale, favouring the experimental group. This outcome indicates the considerable influence of flexible learning on enhancing self-awareness as a component of life skills.
- The problem-solving scale also revealed significant mean differences in favour of the experimental group, demonstrating that flexible learning exerts a meaningful impact on students' problem-solving capabilities.
- With respect to leadership skills, notable disparities were recorded in the mean scores, again favouring the experimental group. This underscores the effectiveness of flexible learning in fostering leadership

competencies.

- Similarly, statistically significant differences on the ethical skills scale were observed, with the experimental group outperforming the control group. This highlights the robust effect of flexible learning in supporting ethical skill development.

Recommendations

In light of these results, the following recommendations are proposed:

- Broaden the scope of future research to include students enrolled in non-Arabic programmes or from faculties beyond Islamic studies, thereby enabling a more comprehensive assessment of flexible learning's effectiveness in developing life skills across academic disciplines.
- Undertake longitudinal research to evaluate the enduring effects of flexible learning on students' life skills. Long-term tracking of participants could provide valuable insights into the sustainability of observed improvements.
- Examine the efficacy of various flexible learning modalities, such as blended learning, project-based instruction, and traditional face-to-face approaches, to identify which strategies yield the most substantial gains in life skill acquisition.
- Integrate qualitative research techniques, including semi-structured interviews and focus group discussions, to gain nuanced understanding of students' subjective experiences, perceptions, and the specific dimensions of flexible learning that contribute to skill development.

Suggestions for Future Research

- Investigate how training and professional development for academic staff in flexible learning methodologies influence the effectiveness of these approaches in cultivating students' life skills.
- Explore the extent to which contextual variables—such as cultural, social, economic, or institutional factors—mediate or moderate the effectiveness of flexible learning in life skill enhancement.
- Assess the degree to which life skills acquired through flexible learning are transferable to other academic settings or professional contexts, and identify mechanisms to facilitate such transfer.
- Conduct comparative studies examining the impact of flexible versus traditional pedagogical methods on life skill development, thereby offering a clearer understanding of the relative benefits of innovative educational strategies.
- Explore the integration of advanced, technology-enhanced learning tools—such as virtual reality (VR) and augmented reality (AR)—into flexible learning environments aimed at developing life skills, to assess their potential in enriching educational outcomes.

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