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A SUPERVISORY ENRICHMENT PROGRAM BASED ON FLIPPED LEARNING FOR A SAMPLE OF SCHOOL COUNSELING STUDENTS AT THE UNIVERSITY

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Abstract

Flipped learning represents an unconventional approach aimed at empowering students. This study sought to assess the impact of an enrichment supervisory program utilizing flipped learning on enhancing motivation for learning and academic achievement. The sample comprised 348 third and fourth-year students majoring in school counseling at a government university in Jordan. Among them, 40 students exhibiting low motivation and achievement levels were identified and evenly split into 20 experimental groups, taught via flipped learning, and 20 control groups, taught through traditional methods.

The counseling supervisory program implemented the flipped learning strategy through 8 enrichment sessions. Results indicated significant differences in both motivations for learning and academic achievement scores between the experimental and control groups, favouring those exposed to flipped learning. Key study recommendations include developing enrichment programs across all courses, particularly those with practical applications, leveraging flipped learning strategies, and creating a comprehensive guide to assist teachers in effectively implementing this approach.

Keywords – Academic achievement, Enrichment program, Flipped learning, Motivation for learning, School counseling, Supervision in counseling.

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1. Introduction

To foster a more engaging and psychologically secure learning environment, as well as to enhance students' motivation for achieving exceptional academic outcomes, it is essential for educators across all educational levels, from primary to university, to incorporate technologies such as the Internet, computers, and smartphones. This integration not only supports student engagement but also aligns with contemporary pedagogical practices aimed at optimizing learning experiences. In the modern era, technology is reshaping education by accommodating different learning styles and enabling the implementation of innovative teaching methods. The incorporation of multimedia tools and internet resources has expanded learning opportunities, extending educational experiences beyond the traditional classroom environment (Hassan, 2024).

The integration of technology into education has been pivotal in addressing the challenges of the knowledge revolution, necessitating diversity in educational approaches and curricula. A notable strategy that merges traditional learning with e-learning is the flipped learning model. This approach reverses the conventional roles of students at home and in school. In flipped learning, students engage with educational content outside the classroom, often through multimedia tools and the internet, allowing classroom time to be dedicated to interactive activities that enhance understanding and application. (Al-Kahili, 2015).

In the flipped learning method, students access new information at home through engaging videos or texts prepared by teachers and made available online for short periods. They are assessed through quizzes or worksheets in class. During class time, students apply their learned material through activities like concept mapping, problem-solving, role-playing, case studies, debates, dialogues, and group work, with each student taking individual notes (Stone, 2012).

Flipped learning fosters the creation of an effective learning environment and facilitates the development of a wide range of knowledge and skills. It involves students watching recorded lectures outside of class, which allows class time to be used for engaging with related educational content and activities (Roehling, 2017). Enabled by advancements in information and communication technologies, flipped learning also promotes student autonomy and self-directed learning (Hao, 2016).

Yang and Chen (2024) conducted a meta-analysis of 46 studies published between 2015 and 2023, demonstrating that flipped classrooms significantly enhance students' self-directed learning abilities.

The flipped classroom strategy represents an innovative educational approach that shifts from teachercentered to student-centered learning by exchanging classroom and homework activities through educational technology (El-Senousy & Alquda, 2017; Raja, 2013; Tomesko, Cohen & Bridenbaugh, 2022).

Interest in flipped learning has grown as a modern educational method aligned with student-focused curricula (Green, 2015), offering flexible learning approaches (Butt, 2014). Research indicates flipped learning yields significant benefits, including positive academic outcomes, improved motivation, critical thinking, increased participation, and enhanced classroom interaction (Zainuddin & Halili, 2016).

To enhance motivation for learning, contemporary and effective learning models are essential, including flipped learning. This approach places students at the center of the educational process, emphasizing the acquisition of diverse learning skills (Butzler, 2016).

From an educational perspective, motivation for learning is recognized as a goal in itself. By stimulating and directing students' motivation, and cultivating specific interests, educators aim to encourage active engagement in cognitive activities as effective means to achieve educational goals. Therefore, motivation for learning is considered a critical variable influencing students' mindset, transforming them from passive learners into purposeful participants (Biehler & Snowman, 1995).

The flipped learning approach has proven successful in fostering communication and collaboration among students, which in turn supports the development of higher-order thinking skills. Additionally, this

approach enhances student motivation by promoting full engagement throughout the learning process (Rutkiene, Kaçar, Karakuş, Baltacı, Altun, Şahintaş et al., 2022).

The flipped learning model encourages active and independent learning while redefining student-teacher relationships. Additionally, it fosters innovation within the learning process, enhancing overall educational effectiveness (Romero, Buzón-García & Touron, 2019).

The Flipped Learning Network (2013) conducted a comprehensive literature review that highlighted the contribution of the flipped learning approach to curriculum development at all educational levels, ranging from primary education to higher education.

The flipped learning approach has transitioned from pre-university education to higher education, aiming to address challenges in teaching and learning by reimagining student-teacher roles and transforming the nature of learning activities both at home and in the classroom (Phillips & Trainor, 2014). This shift has led to an increasing number of universities offering courses through flipped classrooms. In this model, university lecturers are able to utilize class time for in-depth discussions and practical activities, moving away from the traditional lecture-focused method (Bane, 2014).

Numerous studies have highlighted the effectiveness of flipped learning in enhancing various factors that influence the educational outcomes of university students. These include improvements in academic achievement (Al-Baghaidi, 2018), reading comprehension (Seydou & Hassan, 2018), teaching skills and professional self-assertion (Ahmed, 2016), and collaborative learning skills (Al-Shalabi, 2017).

Higher education is currently undergoing a significant transformation in its learning models, with educational institutions like universities adapting their curricula to integrate widely accepted teaching methods. Flipped learning, in particular, stands out as a prominent model aimed at enhancing student engagement and increasing motivation towards learning (Subrahmanyam, 2019). In higher education, the flipped classroom model has become increasingly popular as an educational innovation. This model emphasizes the role of technology in improving student engagement and enhancing learning outcomes (Baig & Yadegaridehkordi, 2023).

A recent study exploring the application of the flipped classroom model to enhance active learning in higher education environments highlighted the importance of collaborative learning strategies in achieving positive educational outcomes for students (Fernández-Ferrer & Espinoza-Pizarro, 2022).

The flipped learning strategy has been a distinctive model in higher education, benefiting learners across various academic disciplines. It is essential to transfer expertise in this model to university students who will enter the educational sector, including teachers, counselors, and other professionals. The role of school counselors has evolved beyond traditional guidance functions to better address the emerging needs of students. As traditional counselor roles failed to fully meet students' evolving needs, universities have increasingly focused on academic preparation and training programs to ensure that counselor students are well-prepared for their future roles (Alkhazaleh & Alharbi, 2017).

School counselors oversee essential programs that significantly contribute to the school's mission and vision. By managing these programs, they become leaders, possessing unique skills vital for maintaining the positive mental health of the school environment, staff, and students. Therefore, novice school counselors need guidance, training, and education from experienced supervisors (Wines & Fikac, 2025). Flipped classroom methods assist school counselors in managing traditional guidance roles while encouraging students to be active, communicative, and engaged participants in the guidance process. This approach is expected to help students develop well in their social, academic, and professional lives. School counselors can innovate in delivering classroom guidance services through flipped guidance. The steps to implementing flipped classroom guidance include identifying topics based on students' needs, creating a service program plan, preparing activities for pre-class and in-class engagement, implementing these activities, evaluating them, and conducting follow-ups (Mulawarman, Susilawati, Syifa & Rifani, 2020).

On the other hand, school counselors require effective supervisory programs to enhance the quality of services they provide to students. Flipped learning methods in classroom instruction support school counselors in managing traditional guidance while fostering student engagement, communication, and active participation in the counseling process. This approach is expected to help students develop effectively in their social, academic, and professional lives. Since work is crucial for mental health, flipped learning helps build students' confidence in performing professional counseling. Therefore, it requires significant attention from supervisors who teach career development skills (Fulton & Gonzalez, 2015).

It increases the available classroom time for practicing counseling skills, engaging in application-based activities, and participating in discussions, aligning with the curriculum standards set by the Council for Accreditation of Counseling and Related Educational Programs (CACREP) (Merlin, 2016).

Flipped learning is particularly advantageous in counselor education due to the need for both theoretical content and practical application in the discipline (Merlin-Knoblich, Harris & McCarty-Mason, 2019).

Flipped learning in counseling courses offers enjoyable and beneficial learning experiences inside and outside the classroom, as well as case study analyses (Merlin-Knoblich & Camp, 2018).

The principles of flipped learning have recently gained attention from supervisors teaching educational counseling courses. Studies show that educational counselors prioritize using flipped learning principles and support a culture of reflective and feedback-centered learning (Hug, 2023).

Recently, various teaching methods, including flipped learning and online learning, have gained popularity in counselor education (Merlin-Knoblich, Chase, Smith & Opiola, 2022).

Educational supervisors in psychological counseling must innovate by effectively integrating information and communication technology (ICT) into the supervision process. However, many supervisors fail to incorporate technology due to a lack of knowledge and confidence in ICT among the counselors they oversee. Effective supervisory performance depends on both initial and ongoing training. In this context, digital literacy is essential, as it enables supervisors to utilize digital resources and adopt a more innovative approach to integrating technology into their practices (Dores, Geraldo, Carvalho & Barbosa, 2020). Active learning methodologies play a key role in enhancing digital literacy in higher education while also improving effective teaching practices (Molina-Torres, 2024).

The success of digital transformation in supervision depends on school counselors' acceptance of technology. Without this acceptance, supervisors may struggle to promote technological integration, potentially lowering counselors' motivation. Institutions must support supervisors by offering training and incorporating technology into their practices. However, there are currently very few remote supervisory training programs for counseling (Košir, Dugonik, Huskić, Gračner, Kokol & Krajnc, 2020).

Educational counselors experience greater comfort and confidence when utilizing electronic methods such as flipped learning and supervision rooms equipped with digital devices. Their willingness to integrate information and communication technology (ICT) into supervision processes is largely determined by their technological proficiency and prior training in counseling through advanced technological methods (Foon, Zainudin, Yusop, Norhayati & Othman, 2020).

A study by Abu-Shaqra (2022) in the field of supervisory programs for psychological counseling showed the effectiveness of an electronic supervisory program in enhancing counselors' electronic counseling skills. The program's positive impact was sustained even after a follow-up period of six weeks.

One of the key advantages of electronic supervision using the flipped learning approach is improved access to professional development and higher satisfaction levels for both supervisors and counselors. This approach enhances flexibility and provides more support. It also leads to improvements in knowledge, confidence, counseling techniques, critical thinking, and overall counseling skills for both supervisors and counselors. Additionally, electronic supervision fosters increased enthusiasm, professional growth, and organizational commitment (Varela, Hays, Knight & Hays, 2021).

Electronic supervision through flipped learning offers a cost-effective and time-efficient solution for the counseling process. It removes barriers such as geographical distance and adverse weather conditions, which may hinder traditional supervision. By reducing travel time, supervisors can focus more on the supervision itself. This approach also creates opportunities for training more students, particularly those in remote areas or enrolled in online graduate programs. Furthermore, electronic supervision allows universities to employ a broader pool of qualified candidates for supervising students during counseling internships, thanks to its wide geographical accessibility (Klarowska, 2019).

2. Problem of the Study and Its Hypotheses

The flipped learning strategy is a contemporary approach that utilizes educational technologies to enhance interactions between teachers and students, as well as among students themselves. It helps in developing students' thinking and critical thinking skills, thereby boosting their self-learning capabilities.

However, more research is necessary to verify the academic and personal gains from supervisory models in counseling that incorporate flipped learning. Such research will enrich the curriculum and educational methods in counseling.

The current study aims to employ the flipped learning strategy to enhance motivation towards learning and academic achievement among university students. This approach seeks to counteract negative self-perceptions by instilling confidence through appropriate and stimulating methods and strategies in the learning process, which can be developed through the flipped learning strategy.

2.1. Hypotheses

- 1. There are statistically significant differences at the significance level ($\alpha = 0.05$) between the mean scores of students in the experimental group (subjected to the flipped learning strategy) and the control group (subjected to the traditional method) on the learning motivation scale.
- 2. There are statistically significant differences at the significance level ($\alpha = 0.05$) between the mean scores of students in the experimental group (subjected to the flipped learning strategy) and the control group (subjected to the traditional method) on academic achievement.

2.2. Study Boundaries and Limitations

Human Boundaries: This study focuses on university students.

Spatial Boundaries: The study is conducted at the Hashemite University, a public university in Jordan.

Temporal Boundaries: The study is conducted in the second semester of the academic year 2023/2024.

2.3. Limitations of the Study

The results of the study are determined by the accuracy and objectivity of the sample members' responses to the study tools. The findings cannot be generalized beyond the population from which the sample was drawn and other similar populations.

2.4. Participants

The study included 348 student counselors specializing in school counseling from their third and fourth years at a public university in Jordan. Among them, 40 students showing low levels of motivation and achievement were selected. These students were evenly distributed into two groups: 20 in the experimental group, exposed to the flipped learning strategy, and 20 in the control group, taught using the traditional method. The flipped learning sessions were conducted over 8 enrichment sessions, held twice a week.

3. Methodology

The study utilized a quasi-experimental approach suitable for its objectives, dividing the sample into experimental and control groups. Lesson topics were delivered differently to each group: the control group received instruction through traditional methods, while the experimental group underwent the flipped learning strategy. Both groups underwent pre-tests and post-tests to assess the outcomes of the interventions.

3.1. Study Instruments

3.1.1. Motivation to Learn Scale

The Motivation to Learn Scale used in this study was developed by Kozeki and Entwistle (1984) and initially comprised 60 items. Suleiman (1989) adapted and validated the scale for the Arabic context, ensuring logical validity and aligning items with their intended dimensions. Initially, 24 items unsuitable for the study's sample were excluded. The remaining items were validated through correlation coefficients ranging from 0.21 to 0.63 with the total score, demonstrating adequate internal consistency and validity with a reliability coefficient (Cronbach's alpha) of 0.72.

To tailor the scale for university students in this study, additional adjustments were made. A pilot test was conducted, confirming satisfactory validity with item correlations ranging from 0.24 to 0.76. The final version of the scale consists of 16 items, rated on a scale of 0 to 4: strongly agree (4), agree (3), uncertain (2), disagree (1), and strongly disagree (0). The total score ranges from 0 to 64, with reverse scoring applied to negative items during data analysis.

3.1.2. Academic Achievement

Academic achievement was assessed by monitoring participants' grades before and after the implementation of the enrichment program. This comparative approach allowed for an evaluation of the impact of the flipped learning strategy on students' academic performance.

These instruments were employed to assess the influence of the flipped learning strategy on motivation to learn and academic achievement among university students in this study.

3.1.3. The Enrichment Program

The enrichment program implemented in the study aimed to enhance university students' understanding and application of flipped learning methodologies through a series of eight enriching sessions. Each session was designed to progressively introduce and deepen students' engagement with flipped learning principles and practices.

First Enrichment Session: Introduction to Flipped Learning.

- Objective: Introduce the concept and significance of flipped learning.
- Activities: Discuss the fundamental principles and benefits of flipped learning.

Second Enrichment Session: Understanding Flipped Learning.

- Objective: Familiarize students with methods and practical applications of flipped learning.
- Activities: Explore effective strategies for implementing flipped learning in educational settings.

Third Enrichment Session: Tools, Advantages, and Challenges of Flipped Learning.

• Objective: Identify tools used in flipped learning, discuss its advantages, and address potential challenges.

• Activities: Analyze different tools and platforms suitable for creating and sharing flipped learning content.

Fourth Enrichment Session: Flipped Oriented-Discussion.

- Objective: Implement flipped learning focused on discussion (flipped oriented-discussion).
- Activities: Create instructional videos on lesson topics, curate educational videos from platforms like YouTube, and conduct discussions exploring various perspectives and relevant information.

Fifth Enrichment Session: Inquiry-Based Flipped Learning (Flipped Inquiry).

- Objective: Implement inquiry-based flipped learning.
- Activities: Provide recorded lectures on essential study topics, assign educational tasks requiring research and inquiry skills, and facilitate collaborative exploration to uncover important information. Students share findings and discuss effective approaches to learning tasks.

Sixth Enrichment Session: Teaching the Flipped.

- Objective: Practice role reversal in flipped learning scenarios.
- Activities: Engage in role-playing activities where students create and share instructional videos, explaining specific concepts or skills. Videos are exchanged and discussed among peers to promote knowledge exchange and collaborative learning.

Seventh Enrichment Session: Expert Video Discussion.

- Objective: Engage with subject matter experts through video discussions.
- Activities: Students participate in discussions with external experts via video, sharing insights and discussing implications within the classroom.

Eighth Enrichment Session: Feedback on the Enrichment Program.

- Objective: Provide feedback on the overall enrichment program.
- Activities: Offer constructive feedback on the effectiveness and impact of the enrichment sessions and the flipped learning experience as a whole.

These sessions were structured to progressively deepen students' understanding and application of flipped learning, promoting active engagement, collaborative learning, and critical thinking among university students participating in the study. Each session was designed to build upon the previous one, aiming to enhance students' proficiency in utilizing flipped learning methodologies effectively.

3.1.4. Study Procedures

The study aimed to investigate the impact of a flipped learning enrichment program on motivation towards learning and academic achievement among third and fourth-year students majoring in Counseling Psychology at a Jordanian university during the second semester of the academic year 2023/2024. Here is a detailed outline of the procedures followed:

3.1.4.1. Participant Selection

Initially, 348 students were invited to participate in the study through a self-administered questionnaire distributed over a three-week period at the beginning of the second semester.

Based on pre-selection sessions and individual assessments, 40 students were chosen who exhibited lower scores in both the learning motivation scale and academic achievement measures.

The final sample included 20 participants in the experimental group (flipped learning) and 20 in the control group (traditional teaching), randomly assigned to ensure unbiased group composition.

3.1.4.2. Random Assignment and Course Scheduling

Participants from both groups were enrolled in the same courses, particularly those with multiple sections. This setup ensured that each section either received flipped learning (experimental group) or traditional teaching methods (control group).

For example, students enrolled in Section A of the "Counseling Skills" course were assigned to the experimental group experiencing flipped learning, while students in Section B of the same course were assigned to the control group receiving traditional teaching.

3.1.4.3. Implementation of Flipped Learning Enrichment Program in Counseling and Educational Contexts

Preparatory Sessions: Participants attended initial sessions designed to introduce them to the concept, methods, tools, advantages, and challenges of flipped learning. This phase aimed to prepare students for effective engagement in subsequent enrichment sessions.

- Enrichment Sessions: Eight sessions were conducted progressively throughout the semester, each focusing on specific aspects of flipped learning:
- Introduction to flipped learning in counseling and educational contexts.
- Understanding and applying flipped learning in counseling and educational contexts.
- Tools and platforms for flipped learning in counseling and educational contexts.
- Flipped oriented-discussion in counseling and educational contexts.
- Flipped inquiry-based learning in counseling and educational contexts.
- Teacher role reversal in flipped learning in counseling and educational contexts.
- Expert video discussions in counseling and educational contexts.
- Feedback and evaluation of the enrichment program in counseling and educational contexts.

3.1.4.4. Data Collection

Learning Motivation Scale: Administered before and after the intervention using a validated scale adapted for the study's context. This scale assessed changes in participants' motivation towards learning as a result of the flipped learning program.

Academic Achievement: Assessed through pre- and post-tests aligned with the courses where flipped learning was implemented. Performance metrics were compared between the experimental and control groups to evaluate academic improvement.

3.1.4.5. Statistical Analysis

Quantitative data obtained from the pre- and post-tests, as well as the learning motivation scale, were subjected to statistical analysis using appropriate methods such as t-tests and ANOVA.

Statistical analysis aimed to determine significant differences in learning motivation and academic achievement between the experimental (flipped learning) and control (traditional teaching) groups.

By following these structured procedures, the study aimed to provide insights into how flipped learning can potentially enhance student engagement and academic outcomes in Counseling Psychology at the university level.

To ensure the experimental and control groups were equivalent before starting the enrichment program, a test was conducted on the pre-test results for both low motivations to learn and low academic achievement. Table 1 displays the levels of motivation to learn and academic achievement.

Factor	Group	Mean	SD	Т	Sig.
Motivation to learn	Experimental group	1.62	0.47	1 21 0	0.19
	Control group	1.46	0.29	1.312	
Academic achievement	Experimental group	20.65	5.07	0.156	0.87
	Control group	20.45	2.66	0.150	

Table 1. The means and standard deviations of pre-test scores for motivation to learn and academic achievement by group

Table 1 indicates that the t-values for motivation to learn and academic achievement are not statistically significant, demonstrating that the experimental and control groups are equivalent in terms of the study variables.

The study authors participated in implementing the enrichment supervisory program based on flipped learning. They prepared the enrichment material using flipped learning and selected several psychological counseling courses for the experimental group, including a course on counseling skills. The educational content was divided into multiple classroom sessions, each containing selected texts, self-assessment questions, exercises, and relevant activities. The educational unit consisted of eight enrichment sessions, delivered by the course instructor over an entire semester under the direct supervision of the researcher.

The experimental group was instructed using the flipped learning model, with two sessions per week throughout the semester, while the control group received traditional instruction during the same period.

Data was collected, statistical analyses were performed, and the results were tabulated and interpreted.

4. Results Related to the First Hypothesis

To verify the validity of this hypothesis, means and standard deviations for the pre-test and post-test measurements of the responses of individuals in the experimental and control groups on the motivation to learn scale were calculated. Table 2 presents these results.

		pre-test		post-test	
Factor	Group	Mean	SD	Mean	SD
Matimation to loan	Experimental group	1.62	0.47	3.39	0.21
Motivation to learn	Control group	1.46	0.29	1.53	0.21

Table 2. Mean and standard deviation of the study participants on the scale of the motivation to learn

From Table 2, substantial differences in means between the pre-test and post-test measurements of motivation to learn are evident across the groups. To evaluate the statistical significance of these variances, a paired sample analysis of covariance (ANCOVA) was performed, and the findings are presented in Table 3.

This analysis was conducted to determine whether the observed changes in motivation to learn from pre-test to post-test were statistically significant and influenced by the group variable (experimental vs. control).

Factor	Source	Type III sum of squares	DF	Mean square	F	Sig.	Partial eta squared
Motivation to learn	Dre test	0.116	1	0.116	2 568	0.11	0.065
	110-1051	0.110	1	0.110	2.300	0.11	0.005
	Group	32.155	1	32.155	712.727	0.00	0.951
	Error	1.669	37	0.045			
	Corrected total	36.242	39				

Table 3. Results of the paired samples ANCOVA for the motivation to learn variable

The ANCOVA analysis reveals a highly statistically significant F value of 712.717, indicating significant differences between the pre-test and post-test measurements of motivation to learn. Specifically, individuals in the experimental group demonstrated significantly greater improvement in motivation to learn compared to those in the control group.

Moreover, the eta squared value ($\eta^2 = 0.951$), as shown in the previous table, signifies a substantial effect of the enrichment counseling program on enhancing motivation to learn among individuals in the experimental group relative to the control group. This highlights the program's effective impact in bolstering learning motivation.

5. Results Related to the Second Hypothesis

To assess the validity of this hypothesis, means and standard deviations for the pre-test and post-test measurements of academic achievement among individuals in the experimental and control groups were computed. Table 4 presents these results.

		pre-test		post-test	
Factor	Group	Mean	SD	Mean	SD
A andomia antioxomont	Experimental group	20.65	5.07	26.15	1.78
Academic achievement	Control group	20.45	2.66	19.75	1.94

Table 4. Mean and standard deviation of the study participants on the academic achievement

From Table 4, it is evident that there are statistically significant differences in means between pre-test and post-test academic achievement scores, which are attributed to the group variable (experimental and control). To assess the statistical significance of these differences, an Analysis of Covariance (ANCOVA) was performed, and the detailed results are presented in Table 5.

The purpose of this analysis was to determine whether the observed differences in academic achievement from pre-test to post-test are statistically significant and influenced by group membership (experimental versus control).

		Type III sum		Mean			Partial eta
Factor	Source	of squares	DF	square	F	Sig.	squared
Academic achievement	Pre-test	7.702	1	7.702	2.287	0.139	0.058
	Group	406.499	1	406.499	120.712	0.00	0.765
	Error	124.598	37	3.368			
	Corrected total	541.900	39				

Table 5. Results of ANCOVA for the academic achievement variable

The ANCOVA results show a statistically significant F-value of 120.712, indicating significant differences between pre-test and post-test academic achievement scores, with higher scores observed among individuals in the experimental group during the post-test measurement.

Additionally, the eta squared (η^2) value of 0.765, as noted in the previous table, highlights the substantial impact of the enrichment program in improving academic achievement levels among individuals in the experimental group compared to those in the control group.

6. Discussion

The study's results highlight significant improvements in learning motivation among individuals in the experimental group following the enrichment program. This program, which included diverse and engaging methods such as videos, homework assignments, and collaborative activities with peers and

teachers, effectively created an environment conducive to enhancing motivation, increasing participation, fostering interactive classroom engagement, and overcoming learning obstacles.

Central to the program's success was the flipped learning approach, which tailored learning experiences to meet students' preferences and needs. This approach not only heightened enjoyment but also positively impacted students' motivation to excel in academic tasks. Additionally, it bolstered their feelings of competence, self-worth, and appreciation, all of which contributed to enhanced academic performance.

The enjoyment students derived from the enrichment program's methods played a crucial role in cultivating motivation, as it sparked enthusiasm and prompted active involvement in academic pursuits. This underscores the program's effectiveness not only in addressing academic requirements but also in establishing a supportive learning atmosphere that sustains motivation and engagement among students over time. Studies have shown that most students hold highly positive perceptions toward the use of flipped learning (Zainuddin & Halili, 2016).

Moreover, research highlights the importance of students mastering and engaging in career counseling courses within a competitive landscape where counseling programs compete for applicants, maintain accreditation standards, and adapt to the diverse and dynamic expectations of adult learners (Mason, Dispenza, Placeres, Grad, Ray, Robertson et al., 2022). In accordance with the ethical and professional standards set by the American School Counselor Association (ASCA), effective supervision programs must offer structured training in school counseling models. This training is essential to ensure that school counselors develop into competent practitioners (American School Counselor Association, 2022).

Flipped learning has demonstrated effectiveness in enhancing motivation among counselor students, leading to positive impacts on their professional competence (Fulton & Gonzalez, 2015).

The findings of the current study align with those reported in studies conducted by Mulawarman, Nugroho, Susilawati, Afriwilda and Kunwijaya (2019) and Sirakaya and Ozdemir (2018). This consistency across studies signifies the strength and reliability of the observed relationships or effects, thereby bolstering the validity and credibility of the present study's findings within the broader context of research in this field. This alignment underscores the robustness of the identified impacts or outcomes associated with the variables under investigation, contributing to a deeper understanding and confidence in the conclusions drawn from this research.

Regarding the second hypothesis, the positive outcomes associated with the use of flipped learning in enhancing students' academic achievement can be attributed to several key factors:

- 1. Diverse Teaching Methods: Flipped learning integrates a variety of teaching methods and activities that cater to different learning styles, thus accommodating the diverse academic needs and preferences of students.
- 2. Implementation Strategy: The structured implementation of flipped learning allows students to develop a broad range of skills and knowledge through active learning approaches such as discussions, discovery-based learning, collaborative activities, and self-directed study.
- 3. Enhanced Motivation: Flipped learning creates a dynamic and engaging learning environment where students actively participate in educational activities. This active engagement enhances their intrinsic motivation to learn and encourages deeper understanding and retention of academic content.
- 4. Teacher's Role: Flipped learning empowers educators to select and customize teaching methods and activities that align with students' academic levels and individual learning requirements. Ongoing feedback from students enables teachers to adjust their instructional strategies effectively, thereby optimizing learning outcomes.

Moreover, the application of flipped learning has shown academic and personal benefits for students (Al-Qahtani, 2021; Guifang & Zhonggen, 2016; Mitchell, 2019). Flipped classrooms have been shown to significantly enhance students' self-directed learning skills (Yang & Chen, 2024). Additionally, flipped learning principles have proven effective across various educational and therapeutic contexts for counseling students, facilitating the development of their knowledge, attitudes, and skills (Counselman-Carpenter, 2018).

The findings of this study are consistent with research conducted by Avci (2024), Counselman-Carpenter (2018), El-Senousy and Alquda (2017), and Merlin-Knoblich et al. (2019). This consistency across studies highlights the robustness and versatility of flipped learning in enhancing academic achievement and fostering holistic student development in diverse educational settings.

7. Conclusions

Universities can significantly contribute to preparing students for their professional futures by focusing on cognitive and applied enrichment programs and adopting the most effective learning methods of the modern era. Enrichment programs based on contemporary and successful learning models, such as flipped learning, can yield satisfactory and useful results, particularly for students preparing to join the workforce.

Flipped learning contributes significantly to developing students' independence in acquiring knowledge and applying it practically. This is achieved through a deep understanding of academic content and active participation in a variety of activities. Aligning educational strategies with modern trends, such as utilizing digital platforms and media applications, facilitates the learning process and improves the quality of graduates' outcomes.

Enrichment and training programs directed at school counseling students are of particular interest to many universities. These programs aim to empower counseling students through two main avenues: theoretical knowledge and practical application. This dual approach not only enhances academic achievement but also increases opportunities for professional and personal growth.

By incorporating flipped learning principles, universities can enhance the theoretical and practical skills of counseling students. This method fosters an environment of active engagement and personalized learning, preparing students to meet contemporary challenges in counseling practice. Ultimately, focusing on cognitive and applied enrichment programs ensures that students are well-equipped with the necessary skills and competencies to excel in their professional careers and make meaningful contributions to the counseling profession.

7.1. Recommendations

Based on the findings of the current study, here are several recommendations and proposals aimed at enhancing the educational process and improving learning outcomes, particularly in counseling and education:

1. Design of Supervisory Programs in School Counseling:

Develop specialized supervisory programs tailored specifically for school counseling students. These programs should emphasize the enhancement of counseling and guidance skills necessary for effective practice in educational settings. Supervisory programs could include mentorship, practical training sessions, and opportunities for real-world application of counseling theories.

2. Development of Guidance Programs for Motivation Enhancement and Reducing Learning Gaps: Create comprehensive guidance programs designed to boost students' motivation towards learning and address any existing learning gaps among university students. These programs should incorporate strategies such as goal-setting workshops, motivational seminars, personalized counseling sessions, and peer support networks. By focusing on both academic and personal development, these programs can foster a supportive environment conducive to student success.

- 3. Guidance towards Personal Development Enhancement:
 - Organize regular guidance lectures and seminars that promote personal development among students. Topics can include time management skills, stress management techniques, study habits improvement, and resilience-building strategies. These initiatives are crucial for equipping students with the necessary life skills to navigate academic challenges and achieve their academic and personal goals.
- 4. Conducting Training Courses on Flipped Learning for Teachers:

Implement ongoing professional development courses to educate teachers on the principles and practical applications of flipped learning. These training sessions should equip educators with the skills and confidence to implement flipped learning methodologies effectively in their classrooms. By engaging teachers in continuous learning and innovation, educational institutions can enhance the quality of teaching and learning experiences for students.

5. Conducting Additional Research Studies:

Encourage further research initiatives to explore the broader impact of flipped learning across different academic disciplines and educational stages. Research studies should investigate not only academic performance outcomes but also student engagement, motivation, and long-term educational benefits associated with flipped learning. By expanding the evidence base, educational stakeholders can make informed decisions regarding the integration and adaptation of flipped learning approaches in diverse educational contexts.

These recommendations aim to promote innovation, improve educational practices, and foster a supportive learning environment that meets the diverse needs of students. By implementing these proposals, educational institutions can enhance student outcomes and contribute to their holistic development in counseling and education fields.

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References

- Abu-Shaqra, S.M. (2022). The effectiveness of an electronic supervisory counseling program based on the skill development model in improving electronic counseling skills among educational counselors during the COVID-19 pandemic. Master's thesis. Al-Quds Open University, Palestine.
- Ahmed, M. (2016). The effect of a flipping classroom on writing skill in English as a foreign language and students' attitude towards flipping. *US-China Foreign language*, 14(2), 98-114. https://doi.org/10.17265/1539-8080/2016.02.003
- Al-Shalabi, E. (2017). Effectiveness of a teaching program based on flipped classroom strategies in developing the competencies of evaluation and mind habits of student teachers at Imam Mohammad Ibn saud Islamic University. *Jordan Journal of Educational Sciences*, 13(1), 99-118.
- Al-Baghaidi, G. (2018). The effectiveness of flipped classroom through the blackboard system in developing academic achievement and attitude towards flipped classroom among students of the Department of Kindergartens at the Faculty of Education, Al-Jouf University, Saudi Arabia. *Journal of the Islamic University for Educational and Psychological Studies*, 26(3), 29-53. https://doi.org/10.12816/0050168
- Al-Kahili, I. (2015). Effectiveness of flipped classrooms in education. Madinah: Dar al-Zaman Library.

- AlKhazaleh, Z., & ALharbi, B. (2017). Knowledge fields in school counseling at a sample of counseling students in the jordanian universities accordance of some variables. *International Journal of Research in Social Sciences*, 7(4), 591-609.
- Al-Qahtani, S.S.M. (2021). The effectiveness of using the flipped learning strategy in teaching the "Education and Learning" course on cognitive achievement, retention of learning, and attitudes toward distance learning among female students of the Early Childhood Department at the College of Education in Al-Muzahimiyah. *Journal of the Faculty of Education, Ain Shams University*, 45(3), 187-244.
- American School Counselor Association (2022). ASCA Ethical standards for school counselors. Alexandria, VA: Author.
- Avci, M. (2024). Analyzing the effects of the flipped classroom method on counselling students' competencies and effective counselling characteristics in ethics class. *British Journal of Guidance & Counselling*, 52(1), 81-93. https://doi.org/10.1080/03069885.2023.2170980
- Baig, M.I., Yadegaridehkordi, E. (2023). Flipped classroom in higher education: a systematic literature review and research challenges. *International Journal of Educational Technology in Higher Education*, 20, 61. https://doi.org/10.1186/s41239-023-00430-5
- Bane, J. (2014). Flipped by design: Flipping the classroom through instructional design. Ohio: Ohio State University.
- Biehler, R., & Snowman, P. (1995). Psychology Applied to teaching. Houghton Mifflin.
- Butt, A. (2014). Student views on the use of a flipped classroom approach: evidence from Australia. Business Education & Accreditation, 6, 33-43.
- Butzler, K. (2016). The synergistic effects of self-regulation tools and the flipped classroom. *Computers in the Schools*, 33(1), 11-23. https://doi.org/10.1080/07380569.2016.1137179
- Counselman-Carpenter, E.A. (2018). Efficacy of the flipped classroom to teach play therapy: A mixed-methods study. *International Journal of Play Therapy*, 27(3), 146-156. https://doi.org/10.1037/pla0000076
- Dores, A.R., Geraldo, A., Carvalho, I.P., & Barbosa, F. (2020). The use of new digital information and communication technologies in psychological counseling during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 17(20), 7663. https://doi.org/10.3390/ijerph17207663
- El-Senousy, H., & Alquda, J. (2017). The Effect of Flipped Classroom Strategy Using Blackboard Mash-Up Tools in Enhancing Achievement and Self-Regulated Learning Skills of University Students. *World Journal on Educational Technology*, 9(3), 144-157. https://doi.org/10.18844/wjet.v6i3.1974
- Fernández-Ferrer, M., & Espinoza-Pizarro, D. (2022). A flipped classroom experience in the context of a pandemic: Cooperative learning as a strategy for meaningful student learning. *Journal of Technology and Science Education*, 12(3), 644-658. https://doi.org/10.3926/jotse.1701
- Flipped Learning Network (2013). A review of flipped learning. Flipped Learning Network. Available at: https://flippedlearning.org/wp-content/uploads/2016/07/WhitePaper_FlippedLearning.pdf
- Foon, L., Zainudin, Z., Yusop, Y., Norhayati, W., & Othman, W. (2020). E- Counselling: The Fostering Resistance to Adoption of Evidence Based Practices. *The Qualitative Report Journal*, 17(191-199).
- Fulton, C., & Gonzalez, L. (2015). Making career counseling relevant: Enhancing experiential learning using a "flipped" course design. *Journal of Counselor Preparation and Supervision*, 7(2), 2.
- Green, T. (2015). Flipped classrooms: an agenda for innovative marketing education in the digital era. *Marketing Education Review*, 25(3), 179-191. https://doi.org/10.1080/10528008.2015.1044851

- Guifang, W., & Zhonggen, Y. (2016). Academic achievements and satisfaction of the clicker-aided flipped business English writing class. *Journal of Educational Technology & Society*, 19(2), 298-312.
- Hao, Y. (2016). Exploring undergraduates' perspectives and flipped learning readiness in their flipped classrooms. *Computers in Human Behavior*, 59, 82-92. https://doi.org/10.1016/j.chb.2016.01.032
- Hassan, N. (2024). The Role of Technology in Modern Education: A Comparative Analysis of Benefits and Challenges. *International Journal of Science and Research*, 13(11), 460-463. https://doi.org/10.21275/SR241029140949
- Hug, R.L. (2023). Patterns of Prioritizing Flipped Learning Tenets in Counselor Education. Doctoral dissertation. Kent State University.
- Klarowska, M.S. (2019). *Telesupervision: How Remote Supervision Can Help*. Time2 track (on-line). Available at: https://blog.time2track.com/supervision-telehealth/
- Košir, K., Dugonik, Š., Huskić, A., Gračner, J., Kokol, Z., & Krajnc, Ž. (2020) Predictors of perceived teachers and school counsellors werk stress in the transition period of online education in schools during the COVID-19 piendemme. *Educational Studies*, 1-5. https://doi.org/10.31234/osf.io/gj3e5
- Kozeki, B., & Entwistle, N. (1984). Identifying Dimensions of School Motivation in Britain and Hungary. British Journal of Educational Psychology, 54 (3), 306-319. https://doi.org/10.1111/j.2044-8279.1984.tb02594.x
- Mason, E.C.M., Dispenza, F., Placeres, V., Grad, R., Ray, M., Robertson, A. et al. (2022). Student engagement and counseling skill self efficacy: Comparing two course formats. *Counselor Education and Supervision*, 61(3), 206-216. https://doi.org/10.1002/ceas.12243
- Merlin, C. (2016). Flipping the Counseling Classroom to Enhance Application-Based Learning Activities. *Journal of Counselor Preparation and Supervision*, 8(3). https://doi.org/10.7729/83.1127
- Merlin-Knoblich, C., & Camp, A. (2018). A case study exploring students' experiences in a flipped counseling course. *Counselor Education and Supervision*, 57(4), 301-316. https://doi.org/10.1002/ceas.12118
- Merlin-Knoblich, C., Chase, L., Smith, J.D., & Opiola, K.K. (2022). A comparison of student engagement in flipped, active lecture, and online counseling courses. *Journal of Creativity in Mental Health*, 17(1), 27-40. https://doi.org/10.1080/15401383.2020.1822245
- Merlin-Knoblich, C., Harris, P.N., & McCarty-Mason, E.C. (2019). Examining Student Classroom Engagement in Flipped and Non-Flipped Counselor Education Courses. *Professional Counselor*, 9(2), 109-125. https://doi.org/10.15241/cmk.9.2.109
- Mitchell, A.E. (2019). Flipped Classroom Methodology Applied to Counselor Development. *Louisiana Journal of Counseling*, 26(1), 4. https://doi.org/10.59020/90238
- Molina-Torres, M.P. (2024). Flipped classroom to teach digital skills during Covid-19. Journal of Technology and Science Education, 12(3), 658-669. https://doi.org/10.3926/jotse.2256
- Mulawarman, M., Nugroho, I.S., Susilawati, S., Afriwilda, M.T., & Kunwijaya, I. (2019). Enhancing self-esteem and optimism based on flipped classroom guidance on undergraduate counseling student in Indonesia. *European Journal of Education Studies*, 6(5).
- Mulawarman, M., Susilawati, S., Syifa, L., & Rifani, E. (2020). Classroom guidance strategy with flipped method in guidance and counseling services at Indonesia schools in the digital era. *Islamic Guidance and Counseling Journal*, *3*(2), 61-74. https://doi.org/10.25217/igcj.v3i2.646
- Phillips, C., & Trainor, J. (2014). Millennial students and the flipped classroom. *ASBBS Annual Conference*. *Las Vegas*, 21(1),519-530.

- Raja, T. (2013). Flipped classroom concept application. The Business and Management Review, 3(4), 213-234.
- Roehling, P. V. (2017). Flipping the college classroom: An evidence-based guide. Springer. https://doi.org/10.1007/978-3-319-69392-7
- Romero, M.C., Buzón-García, O., & Touron, J. (2019). The flipped learning model in online-based education for secondary teachers. *Journal of Technology and Science Education*, 9(2), 135-146. https://doi.org/10.3926/jotse.435
- Rutkiene, A., Kaçar, I., Karakuş, E., Baltacı, H., Altun, M., Şahintaş, Z. et al. (2022). The Impact of Flipped Learning on Students' Engagement and Satisfaction Development: A Cross-Country Action Research Study. *Pedagogy*, 147(3), 253-281. https://doi.org/10.15823/p.2022.147.12
- Seydou, Y., & Hassan, A. (2018). The impact of using flipped classroom strategy on students' achievement in the Faculty of Education. *International Journal of Human and Social Sciences*, 2, 1-30.
- Sirakaya, A., & Ozdemir, S. (2018). The Effect of a Flipped Classroom Model on Academic Achievement, Self-Directed Learning Readiness, Motivation and Retention. *Malaysian Online Journal of Education Technology*, 6, 76-91.
- Stone, B. (2012). Flip your classroom to increase active learning and student engagement. Paper Presented at the 28th Annual Conference on Distance Teaching & Learning. Madison, Wisconsin, USA.
- Subrahmanyam, V.V. (2019). Flipped Classroom Models for Conventional and Open and Distance Education Learners. Journal of Emerging Technologies and Innovative Reserch, 6(5), 84-89.
- Suleiman, O. (1989). *Identifying the domains of academic motivation among students in the Greater Amman Area* (Unpublished master's thesis). University of Jordan, Amman, Jordan.
- Tomesko, J., Cohen, D., & Bridenbaugh, J. (2022). Using a virtual flipped classroom model to promote critical thinking in online graduate courses in the United States: a case presentation. *Journal of Educational Evaluation for Health Professions*, 19. https://doi.org/10.3352/jeehp.2022.19.5
- Varela, S.M., Hays, C., Knight, S., & Hays, R. (2021). Models of remote professional supervision for psychologists in rural and remote locations: A systematic review. *Australian Journal of Rural Health*, 29(2), 211-225. https://doi.org/10.1111/ajr.12740
- Wines, L.A., & Fikac, N. (2025). School Counselor Leaders. In School Counselors as Practitioners (377-412). Routledge. https://doi.org/10.4324/9781003400417-27
- Yang, Q., & Chen, C. (2024). The effectiveness of flipped classroom on autonomous learning ability: A meta-analysis. *Asia Pacific Education Review*, 1-16. https://doi.org/10.1007/s12564-024-10013-2
- Zainuddin, Z. & Halili, S. (2016). Flipped classroom research and trends from different fields of study. *International Review of Research in Open and Distance Learning*, 17(3), 313-340. https://doi.org/10.19173/irrodl.v17i3.2274

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