First Leap – Early Childhood Development App

High-Level Feasibility Study

Submitted to:
The Ministry of Digital Economy and Entrepreneurship

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Executive Summary

This high-level feasibility study evaluates the potential of the First Leap Early Childhood Development (ECD) App, an innovative solution designed to address the challenges of early childhood education in Jordan. Despite widespread primary education access, formal early education enrollment remains low, with only half of ECD staff having specialized training. Societal norms often overlook the link between early childhood health, nutrition, and cognitive development. The First Leap App helps fill these gaps by providing a cloud-based mobile application featuring activities and guided content in Arabic for children aged 0 to 6 years.

The First Leap App employs a dual revenue model: B2C for parents and B2B for educational centers and kindergartens. It offers Arabic language resources, including learning modules, parental tools, and educator support. This study examines how First Leap can capitalize on market growth by targeting parents, educational centers, and relevant organizations. It also explores the potential synergies with the health and nutrition sectors, cultural preservation initiatives, and technology companies to enhance early childhood education and improve cognitive and emotional development outcomes for children in Jordan and beyond.

The global early childhood education market was valued at USD 256 billion in 2021 and is projected to reach USD 582 billion by 2031. The MENA region, with over 100 million children aged 0 to 8 years, offers a substantial opportunity for digital ECD solutions. Jordan's current ECD enrolment rates reveal a significant market gap that First Leap aims to address.

The app will operate on a subscription-based model, offering monthly or annual subscriptions for premium content for advanced features. Additional revenue streams include in-app purchases, institutional partnerships, and advertising. First Leap targets various socio-economic segments, providing accessible and affordable educational resources. Total revenues are projected to grow from JOD 44,000 in Year 1 to JOD 326,000 in Year 5. The app is expected to achieve a positive net profit starting from the second year of operation. Sensitivity analysis indicates that the project is feasible and resilient to unfavorable market conditions.

The First Leap Early Childhood Development App represents a practical tool for improving early childhood education in Jordan and potentially the broader MENA region. By offering a user-friendly, culturally relevant, and accessible educational platform, First Leap aims to enhance cognitive and emotional development outcomes for young children, aligning with global trends in tech-enhanced education.

1. Introduction

In Jordan, the Early Childhood Development (ECD) sector faces significant challenges that hinder the foundational learning and holistic development of children from birth to six years. Despite nearly universal access to primary education in Jordan, the disparity in ECD participation is stark with only 13% of children aged 3 to 4 years attending Kindergarten 1

(KG1), and 59% attending Kindergarten 2 (KG2)[1], and less than half of the ECD teaching staff have received specialized training, affecting learning outcomes. Additionally, societal norms and practices in Jordan often overlook the vital relationship between early childhood health, nutrition, and cognitive development, despite research emphasizing its significance for long-term outcomes.

The First Leap Early Childhood Development App aims to address these issues. With enrolment in institutions being a major issue adversely impacting foundational learning, the envisioned start-up is a cloud-based mobile application designed to provide easy home-based access to Early Childhood Development (ECD) resources. It offers a rich assortment of activities and guided content in Arabic primarily, aimed at fostering the cognitive and emotional growth of children aged 0-6. The application stands as a comprehensive resource for parents and educators, aiming to fill the void in affordable educational materials tailored for young learners. Focusing on offering high quality content in Arabic, First Leap can also cater to users in the MENA region and Arabs in the diaspora, thus enhancing its global appeal as well as communities that are unable to benefit from the plethora of resources in English online because of the language barrier. This strategic addition not only broadens the app's utility but also serves as a cultural bridge, making it an invaluable tool in the educational journey of children across various regions.

2. Market Analysis

The global early childhood education market was valued at USD 258.948 billion in 2021 and is projected to reach USD 581.711 billion by 2031, with a compound annual growth rate (CAGR) of 8.43%.[2] The Middle East and North Africa (MENA) is home to over 100 million children aged 0-8 years, accounting for around one-fifth of the total population according to UNICEF[3]a major role. The importance of technology in early childhood education is vast and it must be carefully used. It helps develop fine motor skills, improves coordination and reaction time, boosts social and emotional growth, promotes teamwork, builds cultural awareness, supports language development, and enhances information processing.[4] Additionally, ECD is essential for skill development, and investing in it yields a 7 to 10 percent annual return on investment.[5] There is increasing recognition of the connection between early education, health, and social services, presenting a significant opportunity for the MENA region, which has the third-lowest pre-primary gross enrolment ratio globally.[6] Given the gap in ECD enrolment in Jordan there is a significant opportunity for new start-ups to bridge this gap and fulfil the need to quality ECD services.

Globally, Preschool learning companies offer a variety of educational apps that enhance early childhood education through engaging and interactive activities. Notable apps include **Endless Alphabet** for vocabulary building[7], **Monkey Preschool Lunchbox** for learning colors,

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[1] *Education.* (2016). Unicef.org. https://www.unicef.org/jordan/education

[2] *Early Childhood Education Market Future Growth Report, 2023 To 2030.* (n.d.). www.businessresearchinsights.com. https://www.businessresearchinsights.com/market-reports/early-childhood-education-market-102664

[3] https://ecdan.org/wp-content/uploads/2024/04/MENA-ECD-Overview-Final-3.pdf

[4] *Gregory, L. (2023, January 11). Technology in Early Childhood Education. Mybrightwheel.com. https://mybrightwheel.com/blog/technology-in-early-childhood-education#:~:text=In%20early%20childhood%20education%2C%20technology*

[5] *The future of learning in MENA | McKinsey.* (n.d.). Www.mckinsey.com. https://www.mckinsey.com/industries/education/our-insights/the-skills-revolution-and-the-future-of-learning-and-earning

[6] *Ibid.*

[7] *The Best Educational Apps for Preschool Lesson Enrichment. (n.d.). Blog.kaplanco.com. https://blog.kaplanco.com/best-educational-apps-preschoolers*

letters, and counting[8], and **Starfall ABCs** for phonics.[9] **Toca Boca** encourages creativity[10], while **ABCmouse** offers a comprehensive curriculum in reading, math, and art.[11] **Khan Academy Kids** provides interactive lessons across subjects[12], and **PBS Kids Games** feature popular characters[13]. **Busy Shapes** focuses on cognitive development[14], while **Sago Mini Friends** promotes social skills[15]. Additionally, **Dr. Panda**, **Peppa Pig: Happy Mrs. Chicken**, and **Duck Duck Moose Reading** support life skills, math, and early reading, respectively[16]. In the MENA region, examples of digital ECD applications and platforms focusing on Arabic content include **Little Thinking Minds** which develops Arabic digital learning solutions to enhance children's language, literacy, and critical thinking skills[17], **Karim and Jana** which is a free mobile application developed by Queen Rania Foundation to promote early childhood education and improve numeracy skills, and **Lamsa;** an edutainment app that focuses on early childhood development for children aged between 2 and 8 using interactive Arabic stories, songs, games and videos among others.

Starting with Jordan, the First Leap App targets diverse socio-economic segments to enhance education for children aged 0-6 years, a group that comprised approximately 1.03 million individuals in 2022.[18] For families with young children, the app offers engaging and effective tools that support cognitive and emotional development, with high-quality content in Arabic. Early childhood education professionals' benefit from flexible and rich educational materials tailored to various developmental stages. NGOs and ECD organizations may use the app for bolstering community-driven educational projects. The app serves urban communities by providing curated, high-quality content suited to fast-paced lifestyles, helping parents lay a strong educational foundation for their children. It also reaches rural and isolated communities, where access to quality educational materials is limited, by offering extensive resources through its cloud-based platform that could be sponsored by grants from the government, donors and private sector CSR initiatives. Additionally, the app supports the Arabic-speaking diaspora globally, helping to maintain cultural and linguistic ties.

Current market trends in early childhood education highlight the increasing adoption of digital learning resources to provide comprehensive, age-appropriate materials for children in their formative years. There is also a growing emphasis on cultural and linguistic preservation, particularly within diaspora communities, where tools for Arabic language learning help maintain cultural identity and language retention. Additionally, non-governmental organizations and community groups are playing a larger role in early childhood education, driven by the need for effective and scalable educational tools that can be adapted to diverse socio-economic contexts prompting children's physical, cognitive, social, and emotional, sensory, and speech development.

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[8] *Ibid.*
[9] *Ibid.*
[10] *Ibid.*
[11] *Ibid.*
[12] *Ibid.*
[13] Ibid.
[14] Ibid.
[15] Ibid.
[16] Ibid.
[17] Parents – Little Thinking Minds. (n.d.). Retrieved May 28, 2024, from https://www.littlethinkingminds.com/en/parents/
[18] Jordan, I. (n.d.). THE SITUATION OF CHILDREN. https://www.unicef.org/mena/media/19921/file

3. Business Model

First Leap App will operate on a B2C model targeting parents and guardians with children between 0-6 years, a B2B model with educators, and institutional partnerships with educational institutions and initiatives (i.e. sponsored by government, private sector and donors). The core services of the First Leap - ECD App are as follows:

1. <u>Arabic Interactive Learning Modules</u>: Provides a rich assortment of engaging and interactive activities in Arabic covering multiple subjects essential for the cognitive and socio-emotional development of children aged 0-6. These modules include developmentally appropriate content in key areas such as language, math, science, and social emotional skills, designed to enhance early learning experiences at home. Additionally, it also promotes cultural awareness by incorporating content that reflects the cultural heritage and language needs of children in Jordan and the Arabic-speaking diaspora.

2. <u>Parental Facilitation Tools</u>: Includes tools and resources for parents to support their child's learning journey, ensuring effective use of the app's content and maximizing educational outcomes.

3. <u>Educator Support Resources</u>: Provides supplementary materials for early childhood educators to integrate app-based activities into their teaching practices, enhancing classroom learning with digital tools.

4. <u>Institutional Support:</u> the start-up offers a white labelled version of the app that can be integrated in ECD systems or customized based on educational development projects or needs of schools and educational businesses, including the creation of bespoke content.

The First Leap App's revenue model is multifaceted, designed to accommodate the diverse needs of families, educators, and organizations. The revenue streams include **subscription fees**, offering monthly or annual subscriptions for accessing premium content and advanced features. This provides regular income and allows users to choose the level of service that best fits their needs. A **freemium model** is also available, offering basic content for free with in-app purchases for additional resources and features, catering to different economic segments and enhancing accessibility. Subcommittee fees are earned through B2C and B2B revenue streams.

Additionally, **institutional partnerships** involve collaborations with schools, donors, NGOs, ECD research bodies and community organizations to provide bulk subscriptions and customized content packages and mobile application adaptations. This ensures that larger groups can benefit from the app's resources at a reduced cost. Advertising can also potentially generate additional revenue through non-intrusive ads tailored to parents and educators, keeping the app affordable for users. Under this revenue streams, **Grant funding and sponsorships** can also be secured from government bodies, international organizations, and private sponsors to support app development and expansion. These grants can also be used for continuing education during wars, conflicts, and refugee crises.

The revenue projections for the first five years of the start-up show a significant increase across the three main revenue streams: Standard B2C Subscription, Bespoke Modules Creation, and Institutional Partnerships. Each service shows growth in demand over the five years:

- **B2C Subscription**: Quantity demand increases from 200 subscribers to 3000 in year 5, with stable pricing in the first three years leading to revenue growth from JOD 12,000 in Year 1 to JOD 180,000 in Year 5.
- **B2B Subscription for Bespoke Module Creation:** Charging a JOD 5 fee annually per students, the B2B revenue can generate JOD 2000s in the first year (for example, securing 4 schools with a total of 100 student subscribers or more schools that are smaller) and grow to JOD 6000 in year 5.
- **Institutional Partnerships:** Starts in year two upon achieving some traction and figuring out an optimized content development and learning journey, with 2 partnerships in years 2 and 3 at JOD 20,000 each and growing modestly to 4 partnerships annually in years 4 and 5 also at JOD 20,000 each.

Starting with modest but realistic revenues given the need to build the content, application and brand reputation, total revenues grew from JOD 44,000 in Year 1 to JOD 326,000 in Year 5, reflecting on the scaling of operations and market penetration. Itemized revenues and total annual revenues are summarized in the table below:

Table 1: Revenue projection

Description / Year	1	2	3	4	5
Projected Demand (Quantity) B2C Subscriptions	700	1500	2000	3000	4000
Price / Unit B2C	60	60	60	60	60
Sub-total B2C (JOD)	42,000	90,000	120,000	180,000	240,000
Projected Demand (Quantity) B2B Bespoke Module Creation	4	8	8	10	12
Price / Unit Bespoke Module Creation	500	500	500	500	500
Sub-total Bespoke Module Creation (JOD)	2,000	4,000	4,000	5,000	6,000
Projected Demand (Quantity) Institutional Partnerships		2	2	4	4
Price / Unit Institutional Partnerships		20,000	20,000	20,000	20,000
Sub-total Institutional Partnerships (JOD)	0	40,000	40,000	80,000	80,000
Total Revenues (JOD)	44,000	134,000	164,000	265,000	326,000

The following charts show the product mix by revenue and by quantity. The analysis reveals a practical distribution between the three revenue streams, both in terms of quantity and revenue focusing more heavily on the B2C revenue stream which is in line with edtech trends in MENA.
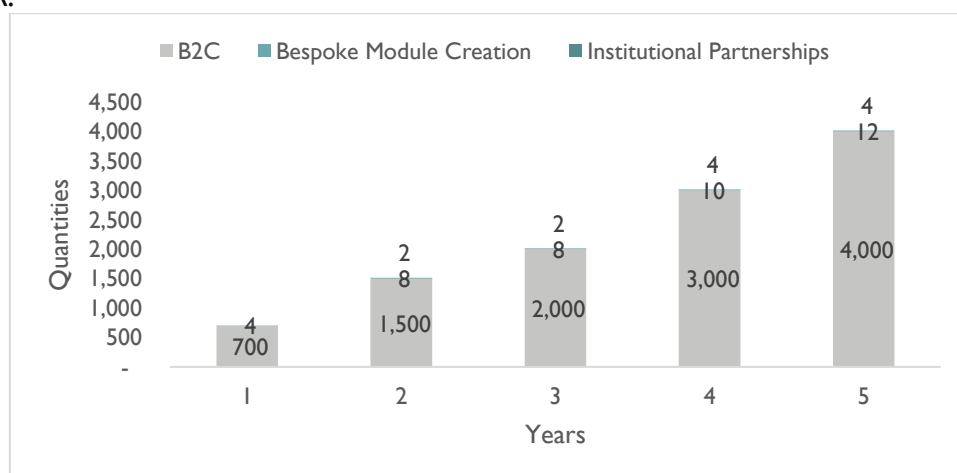
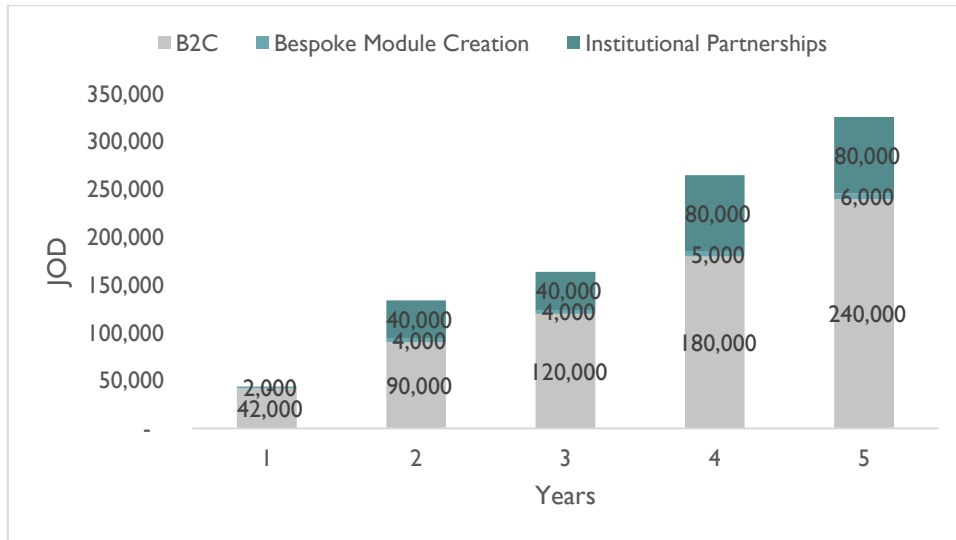

Figure 1: Product Mix by Quantity

Figure 2: Product Mix by Revenue

4. Technical Analysis

The cost of goods sold (COGS) are embedded in manpower and operating expenditure costs primarily covering content development and application upgrades, and hosting fees are covered through the COGS of the third stream which are marked at 35% of the revenues.

In the second year, the total COGS is projected to be JOD 14,000 growing to JOD 28,000 in Year 5 , which is a proportional increase relative to the growth in revenue, indicating improving operational efficiency and economies of scale.

The table below outlines the projected COGS over five years:

Table 2: Cost of Goods Sold – Five Year Projection

Description / Year	1	2	3	4	5
Projected Demand (Quantity) B2C	700	1,500	2,000	3,000	4,000
COGS / Unit B2C	-	-	-	-	-
Sub-total B2C (JOD)	-	-	-	-	-
Projected Demand (Quantity) Bespoke Module Creation	4	8	8	10	12
COGS / Unit Bespoke Module Creation	-	-	-	-	-
Sub-total Bespoke Module Creation (JOD)	-	-	-	-	-
Projected Demand (Quantity) White Label	0	2	2	4	4
COGS / Unit White Label		7,000	7,000	7,000	7,000
Sub-total White Label (JOD)	-	14,000	14,000	28,000	28,000
Total COGS (JOD)	-	14,000	14,000	28,000	28,000

Team composition grows over the years, starting with CEO who serves as the CTO for the company and a Content Manager reflecting the focus on speeding the creation of the mobile application and foundational education modules to enable sales. In year 2, a Developer is added to the team given the assumption that the startup has achieved product-market fit and is ready to further invest in the MVP to create the full-fledged version of the application. In year three, a marketing and business development manager and a finance & HR part-time specialist are added to the team. This composition is only feasible in the presence of operating and financial models that rely on consultants and service providers to set up the mobile application in collaboration with the CEO at the beginning and create the content in collaboration with the content Manager. These consultants are hired on a project basis. The startup can also look into ways to help it leverage educational consultancies from Advisors, Mentors and Research Institutions on a pro-bono basis to further enrich its educational framework.

Table 3: Manpower recruitment plan – five-year projection

Title / Year	1	2	3	4	5
CEO (Also CTO)	1	1	1	1	1
Developer	0	1	1	1	1
Content Manager	0	1	1	1	1
Marketing & Business Dev	1	0	1	1	1
Finance & Admin (part time)	0	0	1	1	1

The table below provides an overview of human resource costs, accounting for social security and health insurance expenses. Social security contributions were computed at 14.25% of the gross salary, following the guidelines set by the Social Security Corporation.

As for operational expenditure, costs center around digital marketing and advertising, office rental (in a serviced business center) and legal & Accounting fees at a projected cost of JOD8,800 in year one almost doubling in year 5 at JOD 14,630

Table 4: Operational Expenditures – five-year projection

Description / Year	1	2	3	4	5
Digital Marketing (including social media)	6,000	10,000	10,000	10,000	10,000
Meeting Room Rentals in a shared office	1,000	1,000	1,200	1,200	1,300
Legal & Accounting Fees	1,000	1,000	2,000	2,000	2,000
Sub-total OpEx	**8,000**	**12,000**	**13,200**	**13,200**	**13,300**
Other Costs	800	1,200	1,320	1,320	1,330
Total OpEx	**8,800**	**13,200**	**14,520**	**14,520**	**14,630**

The setup costs for First Leap App will include the development of the mobile application and the first few educational modules. Additionally, the management team should focus on getting the donor funded projects enabling the creation of educational content as early as possible in the first year. Significant initial investments are planned in Year 1 with JOD 20,000 allocated to mobile application development (could be explored through a phased approach after launching an MVP) and JOD 10,000 dedicated for the creation of the initial library of educational content. Further capital injections for content creation may be needed with a total of JOD 7,500 from year 2 till year 5 besides the content development costs accounted for under the COGS of the third revenue stream. A total of JOD 5,500 are also required for setting up the company, purchasing laptops for the team members and covering hosting and other subscription fees.

Table 5: Capital Expenditures Cost – five-year projection

Description / Year	0	1	2	3	4	5
Mobile App	20,000	-				
Modules (content)	10,000	-	3,000	1,000	2,000	1,500
Laptops	4,500	-	-	500	500	-
Digital Tools and Subscriptions	1,000	500	500	500	500	500
Total CapEx	**35,500**	**500**	**3,500**	**2,000**	**3,000**	**2,000**

5. Financial Analysis

5.1 Financial Study Assumptions

The feasibility study is based on the following key assumptions:

Discount Rate: The study employs a conservative discount rate of 14%, reflecting a cautious approach to valuation.

Financing Structure: The project is entirely financed by equity. This conservative approach avoids the financial leverage and thus underestimates project value, given the lower cost of debt compared to equity.

Terminal Value: The project assumes a zero-terminal value at the end of year five, aligning with the study's conservative outlook.

Cash Flow Projection: Cash flows beyond year five are excluded from the analysis, focusing on the initial project phase.

Tax Rate: The assumed tax rate of 20% complies with Jordan's income tax law.

Depreciation Rate: Capital expenditure (CapEx) is depreciated at an annual rate of 20%. Any deviation from this rate may impact projected profitability but not project feasibility, as depreciation is a non-cash expense.

Working Capital Assumptions

Operational liquidity requirements are guided by the following assumptions:

Cash Reserves: The project will maintain cash equivalent to 90 days of projected annual operational expenses, ensuring robust liquidity management.

Accounts Receivable (A/R) Collection Period: The average collection period for receivables is 30 days, reflecting expected credit sales conversion into cash.

Accounts Payable (A/P) Payment Period: The average payment period for payables is 30 days, indicating the timeframe for settling supplier obligations.

Capital expenditures expected to be incurred in the first year were included as part of the initial costs of the project.

Provisions were made within the initial cost to cover any potential negative net free cash flow that may arise during the first five years of operation, if needed.

5.2 Financial Study:
5.2.1 Projected Working Capital

This table shows that the net working capital needed for the project for the first year of operation is JOD 15,492, which has to increase steadily year over year to reach JOD 60,333 in the fifth year. The steady increase in the working capital comes to cover the rapid increase in the project operations and mainly the increase in the projected revenues.

Table 6: Working capital projection (JOD)

Description / Year	1	2	3	4	5
Cash	11,825	19,683	29,638	31,367	35,500
Accounts Receivable (A/R)	3,667	11,167	13,667	22,083	27,167
Accounts Payable (A/P)	-	1,167	1,167	2,333	2,333
Net Working Capital (JOD)	15,492	29,683	42,138	51,117	60,333
Change in Working Capital (JOD)	-	14,191	12,455	8,979	9,216

5.2.2 Project Initial Cost

The project's initial cost is projected to be JOD 54,794, comprising JOD 36,000 as CapEx, JOD 3,302 as provisions for the first-year negative free cash flow and JOD 15,492 as net working capital.

Table 7: Initial Cost Summary (JOD)

Description / Year	JOD
CapEx	36,000
Provisions for first year(s) negative free cash flows	3,302
Net Working Capital	15,492
Total Initial Cost	**54,794**

5.2.3 Projected Income Statement
Table 8: Projected Income Statement (JOD)

Description / Year	1	2	3	4	5
Total Revenues	44,000	134,000	164,000	265,000	326,000
COGS	-	14,000	14,000	28,000	28,000
Gross Profit	**44,000**	**120,000**	**150,000**	**237,000**	**298,000**
OpEx	47,302	78,731	118,553	125,468	142,000
Net Probit Before Tax and Depreciation	**-3,302**	**41,269**	**31,447**	**111,532**	**156,000**
Depreciation	7,200	7,900	8,300	8,900	9,300
Net Pprofit Before Tax	**-10,502**	**33,369**	**23,147**	**102,632**	**146,700**
Tax Expense	-	7,373	6,029	21,926	30,740
Net Profit	**-10,502**	**28,795**	**18,518**	**82,106**	**117,360**

The projected income statement indicates that the project will generate a loss of JOD 3,502 in the first year of operation. However, the net profit is expected to be positive and increase gradually starting from the second year of operation, reaching JOD 122,960 in the fifth year.

In the first year of operation, the project is expected to generate a negative net profit margin of 8.0%. However, the net profit margins are expected to be positive and increase gradually starting in the second year. In the fifth year of operations, the gross profit margin is expected to be 91.4%, and the net profit margin is 37.7%.
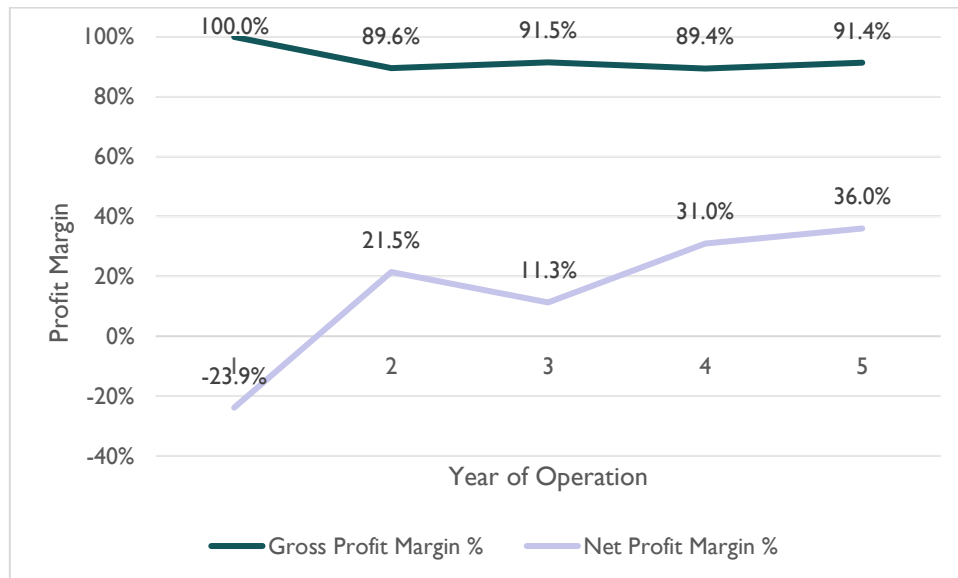

Figure 3: Gross vs Net Profit Margin

On the asset management side, the study shows that the return on investment will increase steadily from -21.2% in the first year of operation to 455.5% in the fifth year.
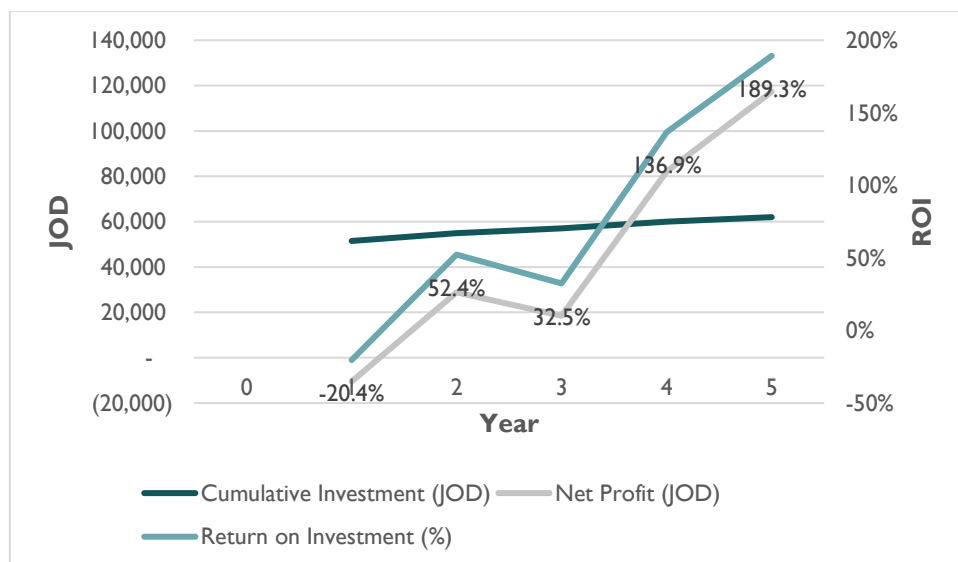

Figure 4: Return on Investment

5.2.4 Projected Free Cash Flow Statement

The table below demonstrates that the project can generate a negative free cash flow in the first year of operation, JOD 3,302. However, the free cash flow is expected to be positive and increase gradually from the second year onwards. By the end of your five, the projected free cash flow will reach JOD 114,044.

Table 9 : Free Cash Flow (FCF) Projection (JOD)

Description / Year	0	1	2	3	4	5
Cash-In Flow						
Net Profit		-10,502	28,795	18,518	82,106	117,360
Depreciation		7,200	7,900	8,300	8,900	9,300
Injected Capital	54,794					
Total Cash-In Flow (JOD)	**54,794**	**-3,302**	**36,695**	**26,818**	**91,006**	**126,660**
Cash-Out Flow						
Initial Cost	51,492		3,500	2,000	3,000	2,000
Changes in Working Capital		-	14,191	12,455	8,979	9,216
Total Cash-Out Flow (JOD)	**51,492**	**-**	**17,691**	**14,455**	**11,979**	**11,216**
Free Cash Flow (JOD)	**3,302**	**-3,302**	**19,004**	**12,362**	**79,027**	**115,444**

Based on these results, the project's feasibility indicators demonstrate its viability, with a net present value of JOD 102.370 and a profitability index of 6.17. Moreover, the project's internal rate of return (IRR) is expected to be 76.92%, indicating feasibility is not sensitive to changes in market conditions.

5.3 Sensitivity Analysis

To assess the project's sensitivity to market conditions, a sensitivity analysis was conducted involving six unfavourable scenarios:

- Decrease projected revenues by 5% while keeping other variables constant.
- Decrease projected revenues by 10% while keeping other variables constant.
- Increase operational expenditure by 5% while keeping other variables constant.
- Increase operational expenditure by 10% while keeping other variables constant.
- Increase initial costs by 5% while keeping other variables constant.
- Increase initial costs by 10% while keeping other variables constant.

Table 10 Sensitivity analysis outcomes

Sensitivity Scenario	Net Present Value (NPV)	Profitability Index (PI)	Internal Rate of Return (IRR)
Original Case	72,025	2.31	39.42%
Drop in revenue by 5%	46,633	1.82	30.67%
Drop in revenue by 10%	21,241	1.36	21.74%
Increase in OpEx by 5%	55,016	1.95	32.99%
Increase in OpEx by 10%	38,007	1.63	26.86%
Increase in initial cost by 5%	65,984	2.08	35.91%
Increase in initial cost by 10%	60,824	1.92	33.25%

The sensitivity analysis shows that the project is feasible and not sensitive to unfavourable market conditions. The project's economic feasibility is strong and viable under all the above-mentioned scenarios. The drop in revenues has a more dramatic impact on the project viability than the increase in the OpEx or initial cost by the same magnitude. It is recommended that investors check and further study the market to ensure that the projected revenues are achievable within the thresholds of the proposed initial cost and operational expenditures.

Feasibility Indicators	Value
Net Present Value (NPV)	72,025
Profitability Index (PI)	2.31
Internal Rate of Return (IRR)	39.42%

6. Integration with Other Sectors

<u>Health and Nutrition Sector</u>: First Leap App presents a valuable opportunity for integration with the health and nutrition sector in Jordan and potentially beyond. Given the critical role of early health and nutrition in cognitive and emotional development[19], partnerships with healthcare providers and nutritionists can enhance the app's impact. Features such as health monitoring tools, nutritional guidelines, and access to expert advice can be incorporated. This integration ensures a holistic approach to child development, addressing physical health alongside educational needs. Collaborating with local health clinics and nutrition programs can provide parents with comprehensive resources, including immunization schedules, growth tracking, and dietary recommendations tailored to young children's needs.

<u>Cultural and Linguistic Preservation Initiatives</u>: The First Leap App's focus on Arabic content aligns well with cultural and linguistic preservation efforts. Collaborations with cultural institutions, language academies, and community organizations can help develop content that promotes Arabic language skills and cultural heritage. This integration can extend to creating educational content that includes traditional stories, songs, and cultural practices, fostering a sense of identity and continuity among young learners.[20] By partnering with diaspora organizations, the app can also support Arabic-speaking communities globally, helping maintain cultural ties and language proficiency among children living abroad.

<u>Technology Sector</u>: The development and expansion of the First Leap App offers significant opportunities for collaboration with the technology sector. Partnerships with tech companies can facilitate the continuous improvement of the app's features, incorporating the latest advancements in AI, machine learning, and data analytics. Tech companies can assist in developing adaptive learning algorithms that personalize content based on an individual child's progress and learning styles.[21] Additionally, collaborations can enhance the app's accessibility through innovations in mobile technology, ensuring that it reaches a broader audience, including those in remote and underserved areas.

7. Entrepreneur Persona

The optimal entrepreneur for leading the First Leap App combines several key attributes:

<u>Technical Knowledge</u>: The leader must possess a comprehensive understanding of educational technology and a basic knowledge of early childhood development at minimum to be able to work with experts in the field of content development. The leader should be familiar with current trends in educational apps and the specific needs of the Jordanian and MENA markets,

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[19] *Office of Disease Prevention and Health Promotion. (2020). Early Childhood Development and Education - Healthy People 2030 | health.gov. Health.gov. https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/early-childhood-development-and-education*

[20] *(2024). Apa.org. https://www.apa.org/pubs/magination/pdf/heart-mi-familia-helping-your-child-embrace-their-cultural-identity.pdf*

[21] *Gligorea, I., Cioca, M., Oancea, R., Gorski, A.-T., Gorski, H., & Tudorache, P. (2023). Adaptive Learning Using Artificial Intelligence in e-Learning: A Literature Review. Education Sciences, 13(12), 1216–1216. https://doi.org/10.3390/educsci13121216*

ensuring the app remains competitive and relevant given the high competition in this market. The founder should also master Arabic language.

Entrepreneurial Skills: Strong business acumen is essential for navigating the complexities of launching and scaling an educational tech company in Jordan. The leader should possess skills in strategic planning to set clear goals and define the company's direction. Expertise in market analysis, customer segmentation, and developing a multifaceted revenue model are crucial for ensuring financial sustainability. The leader should also excel in business development and nurturing partnerships to expand the app's reach and impact. Understanding the market dynamics and leveraging trends in the global early childhood education market will be vital for positioning the app successfully.

Vision and Leadership: The ability to inspire and lead a team towards a shared vision of innovative and accessible early childhood education is critical. Effective leadership involves building a strong organizational culture that values inclusivity, cultural preservation, and continuous improvement. The leader should foster teamwork, encourage innovation, and create an environment where creativity and collaboration thrive. They must also be adept at communicating the app's mission and impact to a wide range of stakeholders, including parents, educators, and potential investors. The leader should have a clear vision of how the app can bridge the educational gaps in Jordan and globally.

8. Stakeholders

The success of the First Leap App will hinge on engaging a diverse array of stakeholders, each playing a unique role in the ecosystem:

Early Childhood Educators and Experts: Educators and Experts are vital stakeholders who will both create content for the App and integrate the app's resources into their teaching practices. Their insights and feedback will ensure the educational content aligns with developmental milestones and learning objectives.

Parents and Guardians: Parents and guardians are the primary users of the First Leap App. Their engagement is critical for the app's success as they utilize its resources to support their children's cognitive and emotional development at home. Their feedback will help in continuously improving the app's content and usability. Parents who are Social Media influencers should also be leveraged to help promote the app and support its adoption among parents.

Educational Institutions: Schools, kindergartens, and early childhood education centers are key partners. These institutions can support and adopt the app to enhance their educational offerings, providing a blend of digital and traditional learning experiences. Their participation in pilot programs and research will help in refining the app's features and content.

Donors and NGOs: Donors and non-governmental organizations focused on child development and education are essential for reaching underserved populations. Their support and involvement will ensure equitable access to the app's resources and help in community-

driven educational projects. These organizations can also provide valuable feedback on the app's effectiveness in different socio-economic contexts.

Technology Providers: Tech companies and developers are critical for the continuous improvement and innovation of the First Leap - ECD App. Their expertise in AI, machine learning, and data analytics will help enhance the app's features and personalization capabilities. Reliable technology partners will ensure the app remains cutting-edge and accessible.

Investors and Sponsors: Investors, grant providers, and private sponsors are essential for securing the financial resources needed for the app's development and expansion. Their support will ensure the app's sustainability and ability to scale. Engaging these stakeholders will help maintain financial health and growth.

Public Sector: Government agencies, particularly those involved in education, can facilitate widespread adoption and provide funding opportunities. Collaboration with these bodies will ensure the app aligns with national educational policies and objectives.

9. Risk Assessment and Mitigation

Risk	Impact	Likelihood	Risk Mitigation Technique
Competition and User Preferences	The digital education space is highly competitive, with many established and emerging players offering a variety of educational resources. New entrants must navigate these competitive waters while aligning with the ever-evolving preferences and expectations of parents and educators and emerging solutions and technologies in the market.	High	1. Conduct regular market analysis to stay updated on competitor offerings and emerging trends. 2. Engage with parents and educators through surveys and focus groups to understand their evolving preferences and remain user-centric in product development and strategy. 3. Invest in user-driven unique features and user experiences to stand out in the market.
Technological Scalability and Security	As the app grows, maintaining performance and ensuring data security becomes increasingly complex and costly. Ineffective scaling can cause technical issues that degrade user experience, while data breaches could lead to loss of trust, legal repercussions, and damage to the app's reputation and viability.	Moderate	1. Regularly perform security audits and vulnerability assessments. 2. Use encryption and advanced security protocols to protect user data.
Content Relevance and Cultural Sensitivity	Continuously updating the app with high-quality, engaging, and culturally sensitive content requires substantial effort and resources. There's a risk that the content may not fully resonate with or meet the diverse needs of the target audience, potentially limiting the app's appeal and educational impact especially if quality ever drops.	Low	1. Set up a content review board with cultural and educational experts to ensure relevance and sensitivity. 2. Incorporate user feedback to continuously improve content. Regularly update content to align with current educational standards and cultural trends.

Regulatory Compliance and Legal Challenges	Navigating the complexities of local and international educational standards, as well as data protection laws, poses a significant risk. Non-compliance could result in legal challenges, fines, or the need to overhaul parts of the app, leading to increased costs and potential setbacks.	Moderate	1. Work with legal experts to navigate local and international regulations. 2. Create compliance checklists and conduct regular reviews to ensure adherence to educational standards and data protection laws.

The First Leap - Early Childhood Development App is vital for improving Jordan's early education for children aged 0-6. It tackles low participation rates, and the need for specialized ECD education in the face of lack of trained educators. Offering a user-friendly mobile application with bite sized edutainment content in Arabic that is engaging and culturally sensitive, aligns the App with global trends in tech-enhanced education. With the market projected to grow, the First Leap App can provide scalable services to diverse socio-economic groups. Despite challenges in competition, scalability, costly content creation operations and data security, the benefits outweigh the drawbacks. The app's learning modules, parental tools, and targeted partnerships built with educational institutions position it as a key resource for enhancing early childhood development in Jordan and beyond.

10. Conclusion

In conclusion, the project demonstrates promising feasibility indicators based on the assumptions formed during the development of this study. Nonetheless, entrepreneurs are advised to conduct additional analysis on projected demand, initial costs, and operational expenses to mitigate potential risks associated with adverse market conditions that could jeopardize its validity.