AMERICAN UNIVERSITY OF BEIRUT

SELF-DIRECTED LEARNING AMONG HIGH SCHOOL STUDENTS IN LEBANON

by
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ABSTRACT

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This thesis examines the readiness for self-directed learning (SDL) among high school students in Lebanon. By focusing on students in grades 10 through 12 across six private high schools, the study investigates individual readiness for SDL and the extent to which educational environments support such learning paradigms. The main finding reveals that students' readiness for SDL is low and significantly influenced by the level of school support provided. This study not only contributes to the academic discourse on SDL but also provides practical insights for implementing educational reforms aimed at enhancing learner autonomy and resilience. Furthermore, it highlights a negative correlation between both age and grade level with SDL readiness, challenging traditional expectations that older and more senior students would naturally be more prepared for SDL. These findings underscore the necessity for targeted educational strategies to foster a supportive environment that enhances SDL readiness at all high school levels.

Keywords: Self-directed learning, School support, Highschool students

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ABBREVIATIONS

AUB	American University of Beirut
CRDP	Center for Educational Research and Development
IRB	Institutional Review Board
LMS	Learning Management Systems
MENA	Middle East and North Africa
PBL	Project-based learning
PSCI	Primary School Characteristics Inventory
SDG	Sustainable Development Goals
SDL	Self-Directed Learning
SDLI	Self-Directed Learning Instrument
SDLRS	Self-Directed Learning Readiness Scale
SDLRS-A	Self-Directed Learning Readiness Scale for Adults
SDLRS-E	Self-Directed Learning Readiness Scale for Elementary Levels
SDLRS-NE	Self-Directed Learning Readiness Scale for Nursing Education
SPSS	Statistical Package for the Social Sciences
SRSSDL	Self-Rating Scale of Self-Directed Learning
SRSSDL-ITA	Self-Rating Scale of Self-Directed Learning- Italian Version

CHAPTER 1

INTRODUCTION

Context

In the contemporary landscape, characterized by relentless change and global challenges, education systems worldwide are undergoing significant transformations. These changes are driven by the need to equip learners with the skills and knowledge necessary to navigate the complexities of the 21st century. The United Nations' Sustainable Development Goals (SDGs), particularly Goal 4, which advocates for inclusive and equitable quality education and promotes lifelong learning opportunities for all, underscore the global commitment to redefining educational objectives (UNESCO, 2020). The Lebanese National Center for Educational Research and Development (CRDP) has, since its comprehensive development plan of 1994 and subsequent curriculum revisions, underscored the importance of aligning education with scientific progress and the demands of the modern world (CRDP, 1994). This initiative reflects a broader recognition of the need for educational systems to evolve in response to dynamic global trends.

Lebanon's educational sector finds itself at the nexus of multiple crises that have exacerbated existing vulnerabilities and introduced new challenges. The convergence of an unprecedented economic and political meltdown, the COVID-19 pandemic, and the devastating Beirut port explosion has plunged the country into a state of turmoil (Dabaj, 2021; LHF, EU & REACH, 2022). This turmoil has not only strained Lebanon's socio-economic fabric but has also profoundly impacted the education system. The resulting disruptions have underscored the fragility of traditional educational models in the face

of such crises, revealing an urgent need for adaptable and resilient learning methodologies (Hammoud & Shuayb, 2021; UNICEF, 2021, 2022).

The adverse effects on education have been profound, as evidenced by the transition to less effective modes of distance learning and prolonged school closures, which have further eroded educational outcomes (World Bank Group, 2022). This decline has been exacerbated by an increase in teacher strikes and rising school dropout rates, indicating a deepening crisis in education. During the 2021-2022 academic year, schools operated for a mere 34 days, highlighting the severity of the situation (Human Rights Watch, May 2022; UNICEF, 2021, 2022). The current academic year of 2023-2024 faces additional challenges due to military actions in the southern region, forcing many schools to shut down and displacing students to other areas within the country.

The Imperative for Self-Directed Learning

Amidst this backdrop, the concept of self-directed learning (SDL) emerges as a critical solution. SDL, characterized by learners' proactive role in steering their educational journey, aligns with the need for adaptable, lifelong learning strategies in today's rapidly changing world (Boyer et al., 2014; Knowles, 1975). This approach not only fosters individual empowerment but also cultivates resilience, enabling learners to navigate and adapt to changing circumstances with agility (Abou-Rokbah, 2002).

The pertinence of SDL in Lebanon is magnified by the educational disruptions caused by socio-political unrest and public health crises. In this context, SDL not only serves as means to bridge learning gaps but also as a foundational element in building a resilient educational framework capable of withstanding future challenges (Van Deur, 2018). Moreover, the transition from traditional pedagogical methods to SDL is imperative for preparing students for the demands of higher education and the

workforce, where self-directedness becomes increasingly valued (Robinson & Persky, 2020).

Research Gap and Significance

Despite the recognized importance of SDL in fostering lifelong learners capable of navigating the complexities of the 21st century, its implementation in Lebanon's high school education remains underexplored. This gap is particularly concerning given the recent educational disruptions and the critical role of SDL in ensuring continuity of learning, especially in environments marked by instability and change. Research on SDL has predominantly focused on adult education and higher education settings, with limited attention to its application and effectiveness at the high school level (Ellinger, 2004; Boyer et al., 2014).

This study aimed to fill in this gap by assessing the readiness of grade 10, 11, and 12 students and the school environment in a sample of six private high schools in Lebanon to support and apply SDL. It sought to understand the current state of SDL readiness among students and the extent to which schools are equipped to foster an environment conducive to self-directed learning practices. Additionally, this research explored the relationship between learners' self-directedness levels and school support for SDL, providing insights that could inform curriculum development, teaching practices, and policy formulation aimed at enhancing the quality of education in Lebanon.

Through this exploration of SDL within the Lebanese high school context, this study endeavors to contribute to the global discourse on education reform and the adoption of innovative learning paradigms. It addresses the urgent need for educational approaches that not only withstand crises but also empower students to thrive in a rapidly changing world. As Lebanon navigates through its myriad challenges,

understanding and enhancing SDL readiness emerges as a critical step towards building a resilient, adaptable, and future-ready education system.

Study Purpose

The purpose of this thesis is to investigate the readiness for self-directed learning (SDL) among high school students in Lebanon, particularly in the wake of recent educational disruptions. With a focus on students in grades 10 to 12 within six private high schools, the study examines the extent of individual readiness for SDL and the role schools play in supporting such learning practices. The correlation between a student's readiness for self-directed learning and the school support provided is a key area of exploration adding on it gender, age, and grade as secondary layers of analysis.

Given the shifts in global education towards more self-reliant learning strategies, as highlighted by the United Nations' Sustainable Development Goals, and Lebanon's own educational reforms starting with the CRDP development plan of 1994, the study's purpose is both timely and relevant. It aims to add to the sparse body of research on SDL within the Lebanese high school context, filling in gaps regarding its readiness and support provided at this educational level.

Research questions:

1. How ready are students and schools for self-directed learning (SDL)?
2. Is there a relationship between learners' self-directedness level and school support for SDL?

By addressing these questions, the study aimed to provide a preliminary assessment of SDL readiness among high school students and the supporting educational infrastructure in Lebanon. This exploration is pivotal for informing future educational reforms and strategies aimed at integrating SDL within the curriculum,

thereby enhancing the resilience and adaptability of Lebanon's education system to global changes and local challenges.

CHAPTER 2

LITERATURE REVIEW

The literature review explores the concept of Self-Directed Learning (SDL) within the context of secondary education, emphasizing its increasing importance in fostering independent, lifelong learners. By integrating theoretical foundations from Malcolm Knowles' theory of andragogy and applying these concepts to the educational paradigm shift towards learner-centered approaches, the review highlights SDL's role in developing critical thinking, problem-solving, and self-management skills essential for the 21st century.

The discussion extends to the global application and outcomes of SDL, showcasing its varying implementation across different educational systems and its impact on student engagement and academic performance. It particularly focuses on the readiness for SDL among students, underscoring the influence of cognitive, motivational, emotional, and cultural factors.

Furthermore, the review addresses the critical role of schools in supporting SDL by providing necessary resources and cultivating an environment conducive to self-directed practices. It also identifies challenges within the Lebanese educational system, such as curriculum rigidity and resistance to change, while suggesting best practices for overcoming these obstacles.

This overview underscores the significance of SDL in preparing students not only for academic success but also for personal and professional development in an ever-evolving global landscape.

Introduction to Self-Directed Learning (SDL)

Definition and Significance of SDL

Self-Directed Learning (SDL) represents a significant shift in the educational paradigms of the 21st century, emphasizing the learner's proactive role in their educational journey. SDL is characterized by individuals taking the initiative, with or without the help of others, to diagnose their learning needs, formulate learning goals, identify human and material resources for learning, choose and implement appropriate learning strategies, and evaluate learning outcomes (Knowles, 1975). This approach is integral to fostering a culture of independent, lifelong learning, critical for navigating the complexities and rapid changes in today's world (Gibbons, 2002).

Theoretical Foundations

At the heart of SDL lies Malcolm Knowles' theory of andragogy, which contrasts with traditional pedagogy by highlighting the self-directed nature of adult learning (Knowles, 1980). Andragogy posits that adults are motivated to learn as they experience needs and interests that learning will satisfy; therefore, they are more self-directed, bring a wealth of experience to the learning process, are ready to learn things they feel they need to know, and are life-centered in their learning orientation. While originally focused on adult education, these principles have increasingly been recognized as relevant to younger learners, particularly in secondary education, where the groundwork for lifelong learning habits is laid.

Role of SDL in Education

The transition towards learner-centered approaches marks a significant evolution in educational strategies. SDL stands at the forefront of this shift, promoting the development of independent learners capable of self-regulation, critical thinking, and

effective problem-solving (Abdullah, Mohd-Isa, & Samsudin, 2019). These skills are not just academic; they are essential for personal growth, professional development, and societal contribution in an ever-changing global landscape.

By establishing SDL as a foundational element of the learning process, education systems can better prepare students to meet the demands of the 21st century. This entails not only the acquisition of knowledge but also the development of competencies that empower individuals to manage their learning throughout their lives, adapting to new challenges and opportunities as they arise.

SDL in Secondary Education

The application and outcomes of Self-Directed Learning (SDL) in secondary education settings present a compelling narrative of its potential to transform educational experiences globally. By integrating SDL into secondary education, schools can cultivate a range of essential skills among students, including critical thinking, problem-solving, and self-management (Ansoff & McDonnell, 1990; Artis & Harris, 2007). These skills are pivotal not only for academic success but also for personal and professional development in a rapidly changing world.

Application and Outcomes Globally

The adoption of Self-Directed Learning (SDL) in secondary education across the globe is as diverse as the educational systems, cultures, and resources of each country, yet the aim is universally aligned: to arm students with the necessary skills to navigate the complexities of the 21st century. This preparation focuses on cultivating independent learning capabilities, crucial for adapting to our rapidly evolving world. Research underscores the efficacy of SDL strategies, illustrating notable benefits such as enhanced academic outcomes, deeper student engagement, and bolstered motivation

and self-efficacy. Garrison's seminal work in 1997 provides a foundation for understanding the impact of SDL on critical thinking and student engagement, asserting that an educational environment fostering self-direction significantly amplifies students' analytical capabilities (Garrison, 1997). Similarly, Cho's 2002 study delves into the motivational aspects, showing that SDL strategies elevate students' self-efficacy and drive to learn by instilling a sense of competence in their learning journey (Cho, 2002). Further supporting this, Fisher, King, and Tague's research in 2001 evidences the direct correlation between SDL and academic performance, revealing that students actively engaged in their learning process through SDL not only perform better academically but also exhibit a higher degree of learning engagement and personal interest alignment, thus fostering critical thinking and problem-solving skills (Fisher, King, & Tague, 2001).

This integration of SDL into diverse educational landscapes reflects a global acknowledgment of the shift in skills required for success in the 21st century—emphasizing adaptability, critical thinking, and lifelong learning. Through SDL, students are better prepared to face the challenges of today's dynamic world, demonstrating the profound impact of empowering students to take ownership of their educational journeys.

SDL is often integrated through project-based learning, flipped classrooms, and personalized learning paths. These methods encourage students to take ownership of their learning, engage with content more deeply, and apply their knowledge in practical, real-world contexts. The positive outcomes of such approaches include improved academic performance, higher motivation, and greater student satisfaction (Galindo, 2014; Kokotsaki et al, 2016; Pane et al, 2015).

Early vs. Later Secondary Education

The impact and implementation of SDL can vary significantly between early and later stages of secondary education (Frambach et al, 2012). In early secondary education (typically grade 10), students are often introduced to SDL concepts in a structured manner, with guided support from teachers. This gradual introduction helps students develop the necessary skills to manage their learning processes effectively.

As students progress to later stages of secondary education (grades 11 and 12), they are usually given more autonomy over their learning. This transition reflects their advancing cognitive development and readiness for more self-directed learning approaches. Studies comparing SDL in early and later secondary education have found that older students demonstrate a greater capacity for self-regulation and a more proactive approach to learning, suggesting that developmental factors play a crucial role in SDL readiness (Zimmerman, 2002). Research also indicates that educational systems that adapt to these developmental stages by providing more self-directed opportunities can enhance learning outcomes and better prepare students for adult life (Boekaerts et al, 2000). These insights underscore the critical role of aligning educational practices with the developmental readiness of students for SDL.

Curriculum differences also influence the effectiveness of SDL strategies. In subjects that require higher-order thinking and problem-solving, such as sciences and humanities, SDL can be particularly beneficial in promoting deep learning and conceptual understanding Loyens & Gijbels, 2008). Conversely, subjects that rely heavily on rote memorization may pose challenges for SDL implementation, indicating the need for a balanced and flexible approach to curriculum design.

Developmental Considerations and Curriculum Differences

The effectiveness of SDL in secondary education is significantly influenced by developmental considerations and curriculum differences. Cognitive development theories, like those proposed by Piaget (1952), suggest that as students mature, they acquire the necessary skills to engage more effectively in SDL, including self-regulation, time management, and the ability to critically evaluate information. However, the curriculum must also be designed to support and nurture these skills, providing opportunities for students to engage in self-directed projects, collaborative learning, and reflection (Cheng, Kuo, Lin, & Lee-Hsieh, 2010).

Incorporating SDL into the curriculum requires a careful balancing act. Educators must ensure that students are not only exposed to the concepts and practices of SDL but also supported through structured guidance and feedback. This support is crucial in helping students navigate the challenges of SDL, including managing their learning processes, setting realistic goals, and developing resilience in the face of learning setbacks.

Factors Influencing SDL Readiness

The readiness of students to engage in Self-Directed Learning (SDL) is influenced by a complex interplay of cognitive, motivational, emotional, and cultural factors. Understanding these influences is crucial for effectively implementing SDL in secondary education (Alharbi, 2018; Alfaifi, 2016), particularly in diverse educational contexts like Lebanon.

Cognitive Development

Cognitive development plays a pivotal role in SDL readiness. As students mature, they develop critical thinking, metacognitive skills, and the ability to manage

their learning processes more effectively. The transition from concrete to abstract thinking allows for more sophisticated approaches to learning, enabling students to engage in self-assessment, goal setting, and strategic planning—key components of SDL. Research indicates that fostering these cognitive skills from an early age can significantly enhance students' capacity for SDL, underscoring the importance of cognitive development in educational strategies (Phillips & Shonkoff, 2000).

Motivation

Motivation is another critical factor influencing SDL readiness. Intrinsic motivation, or the drive to learn for personal satisfaction and achievement, greatly enhances students' engagement in SDL. Extrinsic motivation, such as grades or rewards, may initially drive learning but can undermine the development of self-directed habits over time. Educational strategies that foster a love of learning, curiosity, and a sense of autonomy can support intrinsic motivation, making students more likely to embrace SDL (Ryan & Deci, 2017).

Emotional Intelligence

Emotional intelligence, including self-awareness, self-regulation, and empathy, influences students' ability to engage in SDL. Students who can manage their emotions and maintain motivation despite challenges are better equipped to handle the uncertainties and frustrations that can accompany self-directed projects. Cultivating emotional intelligence through supportive teacher-student relationships and a positive school climate can facilitate SDL by helping students navigate the emotional aspects of learning (Okwuduba et al, 2021).

Cultural Background

Cultural background significantly affects students' predisposition towards SDL. In societies where educational systems are traditionally teacher-centered and rote learning is prevalent, students may find the transition to SDL challenging (Frambach et al, 2012). Lebanese educational norms, which often emphasize memorization and exam performance, might initially hinder the adoption of SDL practices. However, cultural values that stress independence, resilience, and a strong work ethic can also support the development of SDL skills. Understanding and addressing these cultural factors is essential for fostering SDL readiness in Lebanese students.

Schools' Role in Supporting SDL

The successful implementation of Self-Directed Learning (SDL) within any educational system necessitates a supportive and conducive school environment, a premise strongly supported by Deur, 2018. Schools are crucial in this endeavor, as they are responsible for providing essential resources, fostering positive attitudes among teachers towards SDL, and implementing pedagogical strategies that empower students to take charge of their own learning. This role is especially critical in the Lebanese educational system, which stands at a crossroads, moving away from traditional, teacher-centered methods towards more adaptive, student-centered models. Deur's research underscores the transformative potential of SDL in nurturing independent, motivated learners capable of navigating their educational journeys. It emphasizes the need for a systemic shift in educational practices, including the integration of technology, the retraining of educators to adopt facilitator roles, and the restructuring of learning environments to promote curiosity, critical thinking, and a love for learning (Deur, 2018). By leveraging these insights, the Lebanese educational system can significantly enhance the

effectiveness and relevance of its educational models, preparing students for the challenges of the 21st century.

Facilitating SDL

To foster an environment conducive to SDL, schools must provide access to a wide range of resources, including libraries, technology, and online materials (Bahous, Nassar, & Ouaiss, 2022). These resources empower students to explore topics of interest, conduct research, and engage in self-directed projects. Additionally, creating flexible learning spaces that encourage collaboration, discussion, and independent study can significantly enhance SDL practices.

Teacher attitudes towards SDL are also crucial. Educators need to be open to shifting from traditional authoritative roles to more facilitative roles, guiding students in their SDL journeys rather than dictating every step. This requires professional development programs that equip teachers with the skills to support SDL, including how to design learning activities that promote autonomy, provide constructive feedback, and encourage reflection.

Challenges and Best Practices

Implementing SDL in schools, especially within the Lebanese educational system, presents several challenges. These include curriculum rigidity, standardized testing pressures, and resistance from educators and parents accustomed to traditional teaching methods (Dabaj, 2021; Human Right Watch, 2022). Overcoming these obstacles requires a concerted effort from all stakeholders to recognize the long-term benefits of SDL in preparing students for the demands of the 21st century.

Despite these challenges, there are examples of best practices and innovative programs from around the world that Lebanese schools could emulate. For instance,

project-based learning initiatives that integrate real-world problems, interdisciplinary approaches that encourage broader perspectives, and peer-teaching models that leverage student expertise can all support SDL. Moreover, technology plays a critical role in facilitating SDL, offering tools and platforms that personalize learning and expand access to information.

Project-Based Learning Initiatives Integrating Real-World Problems

Project-based learning (PBL) initiatives that incorporate real-world problems are a cornerstone of SDL, engaging students in tasks that extend beyond traditional classroom boundaries. Thomas (2000) highlights the effectiveness of PBL in engaging students with real-world problems, enhancing their problem-solving and critical thinking skills. Similarly, Bell (2010) discusses how PBL prepares students for future challenges by developing key 21st-century skills, such as collaboration and innovation. Through such initiatives, learners apply theoretical knowledge to practical scenarios, which enhances retention and fosters a deeper understanding of the subject matter.

Interdisciplinary Approaches Encouraging Broader Perspectives

Interdisciplinary approaches in education are crucial for cultivating broader perspectives among learners. Drake and Burns (2004) emphasize the importance of integrated curricula in meeting educational standards while fostering a comprehensive understanding of complex issues. Jacobs (1989) further explores the benefits of designing and implementing interdisciplinary curricula that encourage students to draw connections between different areas of knowledge. This method supports SDL by encouraging learners to explore diverse viewpoints and apply their learning in varied contexts, preparing them to think critically and creatively about global challenges.

Peer-Teaching Models That Leverage Student Expertise

Peer-teaching models leverage the diverse expertise within the student body, promoting an environment where learners teach and learn from one another. Topping (1996) underscores the effectiveness of peer tutoring in enhancing learning outcomes across various educational levels. Boud, Cohen, and Sampson (2001) provide a comprehensive examination of peer learning, detailing its principles, practices, and the theoretical underpinnings that support its use in higher education. By taking on teaching roles, students not only deepen their own understanding but also engage more actively with the material, reflecting the core principles of SDL.

These best practices—project-based learning initiatives that address real-world problems, interdisciplinary approaches that foster a comprehensive understanding, and peer-teaching models that capitalize on student expertise—are instrumental in integrating SDL into education. They not only support the development of essential skills such as critical thinking, collaboration, and problem-solving but also prepare students to navigate and contribute to an increasingly complex world. As education continues to evolve, these strategies represent pivotal steps towards creating more engaging, relevant, and student-centered learning experiences.

Innovative Programs and Strategies

Innovative educational programs leveraging technology include the integration of Learning Management Systems (LMS) which enable university students to tailor their educational paths, interactive educational apps, and digital portfolios for tracking and reflecting on their learning journeys. These technologies not only facilitate Self-Directed Learning (SDL) but are also instrumental in developing essential digital literacy skills for contemporary learners. This approach is highlighted in the work of

Laurillard (2013), who discusses how digital tools can transform learning by supporting self-management and reflective practices.

LMS as a Facilitator for SDL

LMS platforms like Moodle, Blackboard, and Canvas offer a suite of features that support SDL. These include access to a wide range of materials, interactive modules, forums for discussion, and tools for self-assessment. Such features empower students to learn at their own pace, explore subjects more deeply, and engage with content in a way that suits their learning preferences. For instance, Dabbagh and Kitsantas (2012) highlight the role of LMS in promoting self-regulation skills among learners by providing a structured environment that still allows for autonomy and flexibility in learning processes.

Promoting Interaction and Collaboration

Self-Directed Learning (SDL) thrives on autonomy but also gains substantially from collaborative elements, which can be effectively integrated through Learning Management Systems (LMS). LMS platforms enhance SDL by offering tools such as discussion boards, group projects, and peer review systems, which facilitate meaningful interactions between learners and instructors. These interactions allow learners to benefit from diverse perspectives and constructive feedback, enriching the SDL experience. According to Zheng, Rosson, Shih, and Carroll (2015), the social features of LMS not only foster a community atmosphere but also boost motivation and engagement by providing a supportive learning network. This community aspect is crucial in maintaining an enriched, continuous, and self-motivated learning journey, demonstrating how SDL can leverage LMS for a more holistic educational experience.

Challenges and Considerations

To fully harness the benefits of Self-Directed Learning (SDL) through Learning Management Systems (LMS), it's essential to consider several factors beyond just the technical setup. These include selecting the right platform, designing learner-centric materials, and ensuring both instructors and learners are proficient in using the system. According to Lee, Watson, and Watson (2011), integrating LMS with SDL goes beyond technical aspects, requiring comprehensive pedagogical support to empower learners to manage their educational journey effectively. By focusing on these elements, LMS can be optimized to support SDL, fostering an environment where learners not only access content but also engage deeply with it, develop critical thinking skills, and tailor their learning experiences to meet personal educational goals. This strategic integration enhances the learning process, making it more flexible and responsive to individual needs.

Self-Directed Learning Moderating Variables: Environmental Turbulence and Organizational Learning Climate

In the evolving landscape of education, two significant moderating variables play a crucial role in the effectiveness and adoption of Self-Directed Learning (SDL): environmental turbulence and the organizational learning climate within educational institutions (Artis & Harris, 2007). These factors are especially pertinent in regions experiencing rapid changes or facing unique educational challenges, such as Lebanon.

Environmental Turbulence

Environmental turbulence refers to the degree of change and unpredictability in the external environment that can impact educational systems (Ansoff et al, 2019). This includes socio-political instability, economic fluctuations, and technological

advancements. In such contexts, the ability of students to adapt and direct their learning becomes increasingly important. SDL empowers students to navigate these changes by developing resilience, flexibility, and problem-solving skills. However, environmental turbulence can also pose challenges to implementing SDL, as schools may struggle with resource allocation, infrastructure, and maintaining a stable educational agenda.

Organizational Learning Climate

The organizational learning climate within schools significantly affects the adoption and success of SDL. This climate is shaped by factors such as school leadership, teacher collaboration, and the emphasis on continuous learning and improvement. A positive learning climate encourages experimentation, reflects a commitment to student empowerment, and supports innovative teaching practices (Kipley et al, 2018). Schools that foster an open, supportive organizational climate are more likely to successfully implement SDL, as they provide the psychological safety necessary for students and teachers to embrace new approaches to learning.

Interplay Between Environmental Turbulence and Organizational Learning Climate

The interplay between environmental turbulence and the organizational learning climate can either facilitate or hinder the adoption of SDL. In stable environments with a supportive learning climate, implementing SDL may be more straightforward. However, in contexts marked by significant environmental turbulence, a strong and positive organizational learning climate becomes even more critical to counterbalance external pressures and uncertainties. Schools must be adaptive, leveraging SDL to equip students with the skills to manage and thrive amidst change.

Importance of SDL in Students and Teachers during Environmental Turbulence

Boyer et al (2014) pointed out that SDL is a lifelong learning tool and a crucial strategy for overcoming immediate challenges. The later has been magnified in recent years, especially during the COVID-19 pandemic, highlighting its value in overcoming immediate challenges. The pandemic forced an unprecedented shift to remote learning, requiring both students and teachers to quickly adapt to online environments without prior experience or adequate training. This rapid transition underscored the necessity of SDL skills such as resilience, discipline, and perseverance, enabling individuals to set and achieve specific goals independently (Morris, 2021).

In this context, the role of technology in facilitating learning has become more critical than ever. Although technology had been recognized as a vital tool in developing 21st-century skills, its use became essential as students and teachers navigated the new norm of online learning. This adaptability and problem-solving capability, inherent to self-directed learners, proved instrumental in adjusting to the sudden changes (Evensen et al., 2000; Abdullah et al., 2019). Furthermore, the credibility of assessments in online learning environments posed a significant challenge, emphasizing the need for learners who prioritize knowledge acquisition over grades to maintain integrity (Mahlaba, 2020).

Self-directed learners, known for their effective problem-solving skills and long-term memory recall, are particularly adept at using reflective thinking to identify solutions and adapt to changes (Knowles, 1975; Gureckis & Markant, 2012). Their view of learning as essential for survival and growth enables them to embrace change, assess their abilities, identify resources for improvement, and achieve their objectives. These attributes were especially relevant as both students and teachers had to learn new skills swiftly to continue their educational pursuits online.

Self-directed teachers, adopting the role of facilitators, helped create environments conducive to learning by guiding rather than directing, focusing on higher order thinking skills and encouraging learners to take initiative in their learning (Gibbons, 2002). This approach, emphasizing diagnosing learning needs and executing personalized learning plans, became critical in maintaining educational continuity and supporting students' emotional well-being.

During periods of environmental turbulence, such as the COVID-19 pandemic, the significance of SDL in navigating uncertain and rapidly changing contexts cannot be overstated. For students, adaptability, self-regulation, and critical thinking became essential, while for teachers, SDL principles guided professional development and the adaptation of teaching strategies to better meet shifting student needs. The implementation of SDL under these conditions required leveraging online learning platforms, digital self-study resources, and flexible curriculum designs, ensuring that education remained responsive and resilient in the face of adversity.

Self-Directed Learning Approach Challenges

Adopting a Self-Directed Learning (SDL) approach within secondary education involves navigating a variety of challenges. These obstacles can range from individual learner differences to systemic issues within educational institutions and policies. Understanding these challenges is crucial for developing effective strategies to support SDL, particularly in contexts like Lebanon, where traditional educational models are predominant.

Individual Learner Differences

One of the primary challenges in implementing SDL is the wide range of individual learner differences. Students’ readiness for SDL can vary significantly,

influenced by factors such as their cognitive development, motivation levels, emotional intelligence, and prior learning experiences. Tailoring SDL opportunities to meet diverse needs and readiness levels requires flexible instructional designs and resources, which can be difficult to manage within the constraints of standardized curricula.

Teacher Preparation and Mindsets

Another challenge lies in preparing teachers to facilitate SDL effectively. This requires a shift from traditional teaching roles to more of a mentor or guide, supporting students in setting their learning goals, developing strategies, and reflecting on their learning processes. Many teachers may not have been trained in these methods or may resist changing long-established instructional practices. Professional development and support systems are essential to help teachers adopt new mindsets and skill sets for SDL facilitation (Kazachikhina, 2019).

Curricular and Assessment Constraints

Curricular rigidity and assessment practices focusing on standardized testing can also hinder the implementation of SDL. These structures often leave little room for the flexibility and personalization that SDL requires. Finding ways to align SDL with existing curriculum standards and assessment methods is a significant challenge, necessitating creative approaches and potentially systemic changes to how educational success is measured.

Resource and Technological Limitations

Access to adequate resources and technology is critical for SDL, especially in settings where students are encouraged to explore their learning interests independently. In many Lebanese schools, limited access to digital tools, educational materials, and internet connectivity can restrict the possibilities for SDL. Ensuring equitable access to

resources is a fundamental challenge that needs addressing for SDL to be successfully implemented.

Cultural and Societal Expectations

Cultural norms and societal expectations about education can also present challenges to SDL. In cultures where teacher-directed learning and rote memorization are valued, transitioning to SDL approaches may encounter resistance from educators, parents, and even students themselves. Changing these deeply ingrained perceptions requires time, communication, and evidence of the benefits of SDL for student learning and development (Frambach et al, 2012).

Ways to Develop Self-Directed Learners

Self-Directed Learning (SDL) represents a spectrum, with teacher-directed learning at one end and self-directed learning at the other. To foster SDL, it is crucial to employ strategies that reduce learners' dependency on instructors. Robinson and Persky (2020) propose three strategies for nurturing self-directed learners: flipped classrooms, learning contracts, and minimal guidance instruction. Implementing these approaches requires teachers to adapt their teaching methods and deepen their understanding of SDL's core principles.

Flipped Classrooms involve introducing learners to new material and resources through guided questions that facilitate exploration at their own pace, within a predetermined timeframe. This method transforms the classroom into a space for application and deeper inquiry. It encourages self-paced learning and has been effective in certain courses at the American University of Beirut (AUB), enhancing students' confidence and investigative skills.

Learning Contracts entail agreements between the teacher and learner on specific tasks to be completed within a set period. This strategy emphasizes autonomy, requiring learners to set objectives, choose resources, and assess their progress. It has proven to increase self-confidence among nursing students by fostering a sense of responsibility for their learning. In graduate studies at AUB, thesis work often operates as a learning contract, with students taking primary responsibility under their advisor's guidance. Minimal Guidance Instruction, including problem-based and inquiry-based learning, challenges learners to solve problems or seek new knowledge with minimal teacher intervention. This approach demands considerable prior knowledge and may not suit all learners.

To transition effectively towards SDL, strategies should be applied systematically, supporting learners in moving from traditional to self-paced and then to self-regulated learning. This gradual shift helps develop SDL traits and self-confidence in learners.

Self-Directed Learning, Self-paced learning, and Self-Regulation

Self-Directed Learning (SDL), Self-Paced Learning, and Self-Regulation are often confused, leading some to mistakenly believe they are implementing SDL when they are, in fact, applying a different concept. Distinguishing SDL from similar concepts is crucial. Both Self-Paced Learning and Self-Regulation share aspects of SDL but differ significantly. In Self-Paced Learning, the teacher outlines the learning objectives, evaluation criteria, and resources, allowing the learner to progress at their own pace within a set timeframe. Conversely, in SDL, learners set their own goals, evaluation criteria, resources, and deadlines, essentially steering their own learning journey, as implied by the term "self-directed." Self-Regulation, which can be seen as a

component of SDL, involves managing one's cognitive, emotional, and behavioral levels to align with personal interests. This may include setting priorities, identifying resources, and enhancing metacognitive awareness. A notable difference is that Self-Regulation often occurs within a classroom setting, with the teacher defining the primary learning outcomes, whereas SDL is learner-driven, extending beyond the classroom, with the learner taking full charge of their learning process, from goal setting to evaluating outcomes, with the teacher acting as a facilitator. These concepts stand in stark contrast to traditional learning environments, where the teacher controls the timing and order of material, without the need for learners to select their own resources or develop metacognitive awareness (Robinson & Persky, 2020).

Promoting SDL: Challenges and Solutions

Promoting SDL requires addressing various challenges through targeted strategies that consider learners' diverse needs and contexts. Key approaches include:

Promoting a Growth Mindset:

Encouraging both students and teachers to believe that skills can be developed through effort and perseverance.

Personalizing Learning Paths:

Allowing students to pursue their interests and goals, customizing educational experiences to fit individual needs (Tomlinson, 2014).

Enhancing Metacognitive Skills:

Teaching students to plan, monitor, and evaluate their learning processes, improving their self-direction.

Fostering a Supportive Learning Environment:

Creating a classroom atmosphere that supports experimentation, risk-taking, and reflection, aiding students in the SDL journey.

Leveraging Technology:

Using educational technologies to facilitate access to resources, enable collaborative learning, and provide personalized learning experiences (Means et al, 2013).

Engaging in Professional Development:

Providing continuous professional development opportunities for educators on SDL strategies, curriculum design, and assessment practices that encourage self-directed learning (Darling-Hammond et al, 2017).

These strategies aim to build a foundation for self-directed learners by addressing the multifaceted aspects of SDL, from cultivating the necessary mindset and skills to providing the right tools and environment for growth (Hattie & Yates, 2014).

Assessing Self-Directed Learning

Assessing Self-Directed Learning (SDL) is essential for understanding and enhancing its implementation and outcomes, especially considering the nuanced overlap of its constructs with other educational practices. Since SDL's inception in 1967, a variety of tools have been developed to assess different aspects of SDL, marking a significant evolution in how educators gauge students' readiness and personal attributes conducive to self-directed learning. These tools primarily assess SDL readiness and the learner's personality characteristics that are inherent to self-directed learners, highlighting the critical role of effective assessment in monitoring progress and evaluating the necessary support systems for SDL.

The Self-Directed Learning Readiness Scale (SDLRS), developed by Guglielmino in 1977 as part of her doctoral dissertation, stands out as the most widely used tool in SDL research for assessing readiness. This scale reflects SDL as a process, catering to various audiences with versions like the SDLRS-A for adults, the SDLRS-E for elementary levels, and the SDLRS-NE for nursing education. On the other spectrum, Oddi's Continuing Learning Inventory, introduced in 1984, focuses on evaluating the learner's personality characteristics, diverging from the process-oriented approach of the SDLRS.

Furthermore, several instruments have been constructed to measure self-direction beyond readiness and personality traits. The Self-Rating Scale of Self-Directed Learning (SRSSDL), the Oddi Continuing Learning Inventory (Oddi, 1984), and the SRSSDL-ITA, an Italian revision of the SRSSDL, offer comprehensive assessments across multiple dimensions such as motivation, awareness, self-management, and interpersonal skills. The SRSSDL, for example, spans five dimensions and uses a five-point Likert scale to categorize SDL abilities into low, moderate, and high levels, while the SRSSDL-ITA includes eight dimensions to provide a nuanced view of SDL abilities. The Self-Directed Learning Instrument (SDLI), another tool, evaluates SDL across four dimensions: motivation, plan and execution, self-monitoring, and interpersonal relationships, again utilizing a Likert scale to determine the level of SDL abilities. This diversity in assessment tools, from readiness scales to personality and support system evaluations, underscores the complexity of SDL and the multifaceted approach required for its effective assessment.

In addition to individual readiness and personality traits, the assessment of school support for SDL is pivotal. Tools like the Primary School Characteristic

Inventory (PSCI), created by Van Deur, emphasize the importance of evaluating the educational environment's role in fostering SDL. By integrating the assessment of readiness, personality characteristics, and educational support systems, educators and researchers can more effectively understand and facilitate the conditions necessary for SDL to thrive, ensuring a comprehensive approach to self-directed learning assessment (Robinson & Persky, 2020; Guglielmino, 1977; Oddi, 1984; Brockett & Hiemstra, 1991; Williamson, 2007; McCune, 1988; Cadorin et al, 2011; Cheng et al., 2010).

Self-Directed Learning Readiness Scale (SDLRS)

The Self-Directed Learning Readiness Scale (SDLRS), developed by Guglielmino in 1977 as part of her post-doctoral dissertation, is a comprehensive tool designed to measure an individual's readiness for self-directed learning (SDL). It was created following a three-round Delphi survey that included esteemed authorities in SDL such as Malcolm Knowles, Cyril Houle, and Allen Tough. These experts were asked to list and rate significant SDL characteristics, such as attitudes, abilities, and personality traits. The consensus described the ideal self-directed learner as someone who demonstrates initiative, independence, and persistence; views problems as challenges; possesses self-discipline and curiosity; has a strong desire for learning and self-confidence; employs basic study skills; effectively organizes their time and sets a learning pace; and is goal-oriented (Guglielmino, 1977).

To mitigate response bias, the SDLRS is also referred to as the Learning Preference Assessment (LPA). This self-report tool comprises 58 items on a five-point Likert scale, where responses range from 1 (strongly disagree) to 5 (strongly agree). Sample statements include expressions of a lifelong love for learning, knowledge of

personal learning goals, strategies for overcoming obstacles, and a proactive approach to acquiring new knowledge.

The original SDLRS spans eight dimensions, capturing a broad spectrum of qualities essential for SDL: openness to learning opportunities, self-concept as an effective learner, initiative, independence, a love of learning, creativity, a positive future orientation, basic study skills, and problem-solving abilities. Similarly, the SDLRS for Nursing Education (SDLRSNE) and the elementary version (SDLRS-E) adapt the scale to specific audiences, with the SDLRSNE focusing on self-management, desire for learning, and self-control, and the SDLRS-E maintaining the original 58-item format tailored for a younger demographic.

The reliability and widespread use of the SDLRS underscore its importance. With a reliability coefficient of 0.94 in recent studies and translations into 22 major languages, its global application across over 500 organizations, targeting 120,000 adults and 5,000 children, demonstrates its value in assessing SDL readiness (LPA SDLRS, 2024). Moreover, it has supported over 95 doctoral dissertations, highlighting its academic significance (Guglielmino, 2022; Merriam & Caffarella, 1999; Merriam, Caffarella, & Baumgartner, 2007).

Beyond assessing readiness, the SDLRS enables educators to identify students who may need further support in developing SDL skills, facilitating a tailored approach to instruction that accommodates diverse learner needs. This tool offers crucial insights into cognitive, motivational, and behavioral dimensions of SDL readiness, empowering educators to cultivate a personalized learning environment that nurtures self-directed learning capabilities among students.

Assessing School Support for SDL

Assessing the level of school support for Self-Directed Learning (SDL) is crucial in fostering an educational environment that encourages and nurtures self-directed learners. The tool developed by Van Deur in 2018, known as the Primary School Characteristic Inventory (PSCI), provides a comprehensive framework for evaluating how well schools facilitate SDL through inquiry-based learning, personalized instruction, and the provision of necessary resources. This assessment tool is instrumental in identifying the extent to which schools advocate for inquiry skills integral to the SDL process versus adhering to more traditional, teacher-centered instructional methods. Although this tool was initially created for primary schools, but the majority of its covered domains continue to be present throughout the high school setting. For example, there are questions about collaborative management, supporting environment, availability of resources, and many others. Refer to Appendix B for an overall view of the tool.

The PSCI initially included 58 statements for school staff to rate, covering five key areas: the general ethos of the school, organization of the school, classroom tasks, the role of the teacher, and the role of students. These areas were assessed using a five-point Likert scale ranging from "never" (1) to "always" (5), with higher scores indicating stronger school support for inquiry, which Van Deur (2018) argues is foundational for enabling SDL.

Following an item analysis, the tool was refined to 50 items across three subscales: Motivation, Strategy, and Context. This refinement led to a more focused evaluation of school support, with 31 items in the Motivation component achieving a reliability score above 0.94, 8 items in the Strategy component above 0.79, and 11 items

in the Context component above 0.86. These high reliability scores indicate that the items within each component consistently measure the intended dimension.

By focusing on the availability of learning resources, teacher attitudes towards SDL, the flexibility of curricular and assessment practices, and the school's overall inquiry orientation, the PSCI enables educators and administrators to pinpoint specific areas that require improvement. Implementing strategies based on this comprehensive assessment can significantly enhance the school's support for SDL. Such targeted efforts ensure that the educational environment is conducive to developing inquiry skills and fostering self-directed learners, thereby aligning instructional practices with the core principles of SDL as outlined by Van Deur (2018).

Teacher Training for SDL Facilitation

Effective facilitation of SDL requires educators to possess a unique set of skills and attitudes that differ significantly from traditional teaching methods. There is a notable gap in the provision of professional development programs focused on training teachers to support SDL. Such training should cover areas including designing learner-centered curricula, creating flexible learning environments, and employing assessment strategies that encourage self-reflection and self-regulation.

Teacher training programs should also emphasize the importance of fostering a growth mindset, both in themselves and their students, to cultivate an atmosphere where trial, error, and learning from mistakes are valued. Incorporating case studies, peer collaboration, and reflective practices in these programs can enhance teachers' abilities to facilitate SDL effectively. By investing in teacher training, educational institutions can ensure that educators are well-equipped to guide students in becoming autonomous, self-directed learners.

Impact of Educational Policies on SDL Adoption

Educational policies play a pivotal role in either facilitating or hindering the adoption of SDL. Policies that emphasize standardized testing and curriculum conformity can limit the opportunities for implementing SDL strategies, which thrive in flexible and personalized learning environments. Conversely, policies that support innovation in teaching and learning, allocate resources for SDL resources and technology, and recognize diverse learning outcomes can promote SDL.

There is a need for research into how specific educational policies impact the adoption and effectiveness of SDL. This includes examining the effects of curriculum standards, teacher evaluation systems, and funding allocations on SDL initiatives. Policymakers should consider how regulations can be adapted or developed to support SDL, such as by providing grants for innovative SDL programs, encouraging partnerships between schools and communities for real-world learning experiences, and integrating SDL competencies into teacher certification requirements.

SDL in the MENA Region and Internationally

The exploration of Self-Directed Learning (SDL) across different educational landscapes unveils a complex interplay between traditional and modern pedagogical philosophies. Within the Middle East and North Africa (MENA) region, a shift from didactic teaching methods to more learner-centered approaches is emerging, mirroring a global trend towards prioritizing autonomy, critical thinking, creativity, and lifelong learning.

The Shift in the MENA Region

Educational systems in the MENA region, exemplified by countries like Lebanon, have long been anchored in rote memorization and direct instruction.

However, there's a growing awareness of the need for educational reform to prepare students for the demands of the global economy and the rapid pace of technological and societal changes. This evolving landscape is beginning to embrace SDL, recognizing its potential to empower students with the necessary skills for the 21st century. Studies by Zaalouk (2007) and Nazzal (2016) explores the evolution of Self-Directed Learning (SDL) in educational reforms in Egypt and Jordan. These studies detail the shift from traditional, teacher-centered methods to more progressive approaches that emphasize learner empowerment and autonomy. This transition involves incorporating educational practices that not only encourage students to take charge of their learning but also foster an environment where they can develop critical thinking and self-management skills. These changes aim to better prepare students for the demands of the modern world by enhancing their ability to learn independently and adaptively.

Global Perspectives on SDL

Globally, SDL is gaining recognition as a cornerstone of modern education. Finland and Singapore stand out as exemplars of this shift. Finland's education system, known for its progressive approach, emphasizes student autonomy, project-based learning, and problem-solving. This approach aligns with the principles of SDL, reducing the reliance on standardized testing to foster a more personalized and inquiry-based learning experience (Sahlberg & Hargreaves, 2011).

Singapore's educational reforms, including the "Teach Less, Learn More" movement, aim to create an environment that encourages critical thinking and learner autonomy. These reforms showcase a deliberate move towards SDL, aiming to cultivate adaptable, innovative, and self-motivated learners (Deng et al, 2013).

Comparative Insights and Challenges

Comparative studies illuminate the universal benefits of SDL, as well as the unique challenges encountered in diverse educational settings. Al-Harthi (2015) and Ng (2017) explore the adoption of SDL in Oman and Singapore, respectively, identifying cultural and institutional barriers to SDL in traditional contexts and the positive impact of policy reforms in more advanced settings. The integration of technology in education, as discussed by Dabbagh and Kitsantas (2012), further emphasizes the role of SDL in connecting formal and informal learning environments, applicable across both MENA and international contexts.

The journey towards integrating SDL in education varies by context, reflecting a spectrum of approaches from the initial stages of adoption to more advanced implementations. The MENA region's engagement with SDL, alongside international experiences, underscores the importance of cultural, systemic, and policy considerations in shaping effective SDL environments. This integrated review highlights SDL's potential as a transformative educational force, advocating for strategic implementation to foster global communities of self-directed, lifelong learners.

Conclusion

The literature review on Self-Directed Learning Readiness in Lebanese Secondary Education highlights the significance of SDL in fostering independent, lifelong learners capable of navigating the complexities of the 21st century (GEM Report, 2016; World Bank Group, 2021). Through an examination of SDL's application, outcomes, challenges, and strategies for development, this review underscores the potential of SDL to transform educational practices in Lebanon and beyond.

Assessing SDL readiness and school support plays a crucial role in implementing SDL effectively. Tools like the SDLRS and PSCI provide frameworks for understanding and enhancing the conditions necessary for SDL to flourish (Merriam & Bierema, 2014). By learning from international examples and addressing the unique challenges within the Lebanese context, educators and policymakers can work towards creating an educational system that empowers students to take control of their learning journey.

CHAPTER 3

METHODOLOGY

Research Design Overview

The significance of self-directed learning (SDL) in nurturing lifelong learners who can adeptly navigate environmental changes cannot be overstated. This research aims to assess the readiness for SDL among high school students and the level of school support provided to foster SDL, a fundamental step for future investigations in this field. Our methodology encompasses the study design, sampling methods, data collection instruments, administration procedures, timeline, data collection, analysis techniques, results and discussion.

Study Design and Sampling

Our research adopts a quantitative descriptive approach, focusing on evaluating the readiness of students and their school environments to embrace and support SDL within a sample of high schools in Lebanon. Specifically, the assessment seeks to illuminate the levels of readiness among grade 10, 11, and 12 students in high schools and the extent of support these schools provide for SDL.

The sampling strategy involved conveniently selecting ten English-speaking private high schools in Beirut and Mount Lebanon Governorate out of which only six of them accepted to participate. These schools, chosen from a list of 220 provided by the CRDP for the 2020-2021 academic year, represent a segment of the population but are not fully representative due to the sample size and limited representation of Beirut and Mount Lebanon governorates but it can be considered as a pulse check for the educational system.

Data Collection Instruments

The Self-directed Learning Readiness Scale (SDLRS) developed by Guglielmino in 1977, alongside the Primary School Characteristic Inventory (PSCI) created by Van Deur in 2018, served as our primary data collection tools. Despite the PSCI's initial design for primary schools, its relevance extends to any educational setting, including high schools since most of its questions and constructs adhere to any educational setting and they cover the role of the school in supporting student without specifying their academic grade level. The SDLRS, available in over 20 languages including Arabic, was used in its original English version to accommodate the linguistic capabilities of our sample. Given the logistical challenges such as internet access and electrical stability, data collection primarily was in-person, utilizing hard copies of the SDLRS to ensure higher response rates and direct engagement with students.

Administration and Data Collection Procedures

Ethical Approval and Pilot Study

The research commenced following the receipt of Institutional Review Board (IRB) approval, which was granted in May 2023. Subsequently, a single school was contacted to serve as the pilot site for this study. The purpose of the pilot was to serve as a dry run for our assessment tools. It gave us insight into what to expect from schools and how we can interact with students and school officials. During this phase, we conducted a pilot assessment and engaged in practice interactions with both the school principal and students.

Participant Recruitment and School Engagement

Following the pilot, an outreach effort was made to 10 schools, out of which 6 agreed to participate in the study. The schools were high schools that had grades from

10 to 12. The selection process involved contacting schools directly, with priority given to those that were part of larger educational organizations, as this often-required additional coordination with their research departments. Upon expressing interest, schools were formally requested for permission to conduct the research. This process involved detailed coordination with school principals or their designated research departments to secure approval and support for conducting the study within their institutions.

Consent Process and Data Collection

Parental consent forms were distributed at the participating schools and were collected the following day. Participation in the study was contingent upon the return of a signed consent form by the parents, along with the assent of the participating students. The Self-Directed Learning Readiness Scale (SDLRS) was administered to those students who returned signed consent forms. All the data collection process was conducted either by the researcher where he entered to classrooms and explained the study for the students and then distributed the parental consent forms and the SDLRS tool the next day or by the school supervisor where entry to classrooms was prohibited. The data collection time varied from one school to another. In some schools, data collection ended in one week while in others it took several weeks. The data collection was spread over one month. It is noteworthy that the response rate varied significantly across schools; for example, in one school with a student population of 560 in the secondary level, only 15 students participated. Additionally, the Primary School Characteristic Inventory (PSCI) tool was completed by the school principal or an authorized representative from the school administration. It was handled to the school to

be filled and collected once done along with the SDLRS surveys. Both tools are self-reported tools with limited ability to validate their answers.

Data Entry and Analysis

Following the collection of the completed Self-Directed Learning Readiness Scale (SDLRS) and Primary School Characteristic Inventory (PSCI) tools, data were meticulously entered into a database for comprehensive analysis. This analysis, conducted using the Statistical Package for the Social Sciences (SPSS), commenced with the processing of collected hard copies. The analytical process included computing descriptive statistics such as mean scores and standard deviations for both SDLRS and PSCI, as well as conducting inferential statistics to explore correlations between student readiness scores and school characteristics.

This detailed examination of the outcomes was in alignment with our research aims, which focused on assessing students' readiness for self-directed learning (SDL) and examining its correlation with the level of support provided by the schools. Through rigorous analytical processes, we aimed to elucidate the relationship between student readiness for SDL and the institutional support structures that facilitate this educational approach. The analysis further aimed to identify patterns and relationships such as gender, age, and grade, that could inform future interventions and support mechanisms for SDL in high schools.

By integrating past activities with ongoing analysis, this study provides a coherent overview of our efforts to investigate the readiness for self-directed learning among high school students. Through a meticulous design and thoughtful execution, our research aspires to contribute valuable insights into this area, laying the groundwork for

further research and practical applications in the field of education, particularly in enhancing the support structures for SDL within the educational institutions.

Challenges During Data Collection

Several challenges were encountered during the study. First, the IRB approval was delayed until May 2023, coinciding with the end of the academic year, which necessitated waiting for the commencement of the next academic year to begin the study in earnest. Additionally, not all schools approached agreed to participate in the study. Another significant challenge was the low response rate observed in some schools, which may impact the generalizability of the findings. These challenges were critical in shaping the study's design, implementation, and interpretation of the results.

CHAPTER 4

RESULTS

The study aimed to investigate the readiness for self-directed learning (SDL) among high school students in Lebanon, examining both the students' personal readiness and the supporting level of educational institutions. Using a sample of six private high schools, it assessed the SDL readiness levels of students in grades 10 to 12 and analyzed the extent to which their schools provide an environment conducive to SDL practices. The study also explored the correlation between students' self-directedness and this school support for SDL. The results section reflects these aims by reporting results of statistical analysis.

Sample Characteristics

The study commenced with an initial outreach to ten private English-medium high schools located in Beirut and the Mount Lebanon Governorates. Of these, only six schools agreed to participate; although other schools where contacted several times, reflecting a participation rate that aligns with the anticipated engagement levels in educational research within the Lebanese context. As the invitation mentioned confidentiality and anonymity, we will refer to the schools in our results section as School 1 through School 6. All the schools are English language instruction schools located in the Beirut and Mount Lebanon governorates. One school is in Beirut, two are in the suburbs of Beirut (which are part of the Mount Lebanon governorate), and three are in the city of Aley, also in Mount Lebanon. This sample, while not fully representative of Lebanon's diverse educational landscape, provides a pulse check for assessing self-directed learning readiness among high school students. Notably, the response rate among students varied significantly across the participating schools. In

one instance, a school with a total high school student population of 560 students in grades 10, 11, and 12 had participation from only 15 students. Such variability highlights the challenges encountered in engaging students and schools in research activities in the country.

The sample for this study comprised 244 high school students from these six private schools. Participation rates among the schools varied, with the highest representation from School 2 (39.8% of the sample), followed by School 1 (25.4%). The remaining schools had smaller representations, with school 5 contributing the fewest participants (5.3%). Table 1 below presents the students' distribution per school.

Table 1

Students' distribution per school

School	Number of Students	Percent
1	62	25.4
2	97	39.8
3	30	12.3
4	26	10.7
5	13	5.3
6	16	6.6
Total	244	100.0

Students from various grade levels were included, with a relatively even distribution across Grade 10 (32.8%), Grade 11 (32.0%), and Grade 12 (35.2%). Figure 1 presents this distribution in a bar chart. In terms of gender, females constituted a larger proportion of the sample (57.4%), with males representing 42.6% (Table 2).

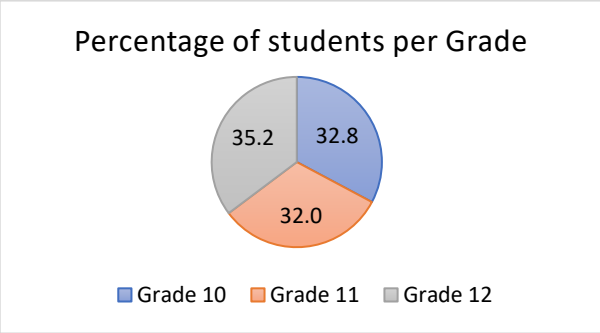
Table 2

Students' distribution per gender

	Frequency	Percent
Male	104	42.6
Female	140	57.4
Total	244	100

Figure 1

Students' distribution per grade



Age-wise, the sample spanned from 14 to 19 years, predominantly clustered between 15 and 17 years old, capturing a critical developmental stage for the emergence of self-directed learning competencies. During adolescence, particularly around the age of 16, there are major reorganizational changes in the brain's functional networks. This is when the prefrontal cortex, crucial for executive functions that are important for SDL, undergoes significant developmental changes (Uus et al, 2021). Table 3 below presents the descriptive statistics of students' age distribution.

Table 3

Students' age descriptive statistics

	N	Minimum	Maximum	Median	Std. Deviation	Variance	Skewness		Kurtosis	
							Statistic	Std. Error	Statistic	Std. Error
Age	244	14	19	16	1.1	1.3	0.2	0.2	-0.8	0.3

All the students were of Lebanese nationality, except for one student who was Syrian.

Reliability of the SDLRS

The reliability of the SDLRS within this sample was confirmed with a Cronbach's Alpha coefficient of .796 for the 58-item scale, demonstrating an acceptable level of internal consistency and aligned with international research analyzing the reliability of the SDLRS tool. Moreover, this reliability indicates that the SDLRS is a stable and coherent instrument for measuring SDL readiness in the context of Lebanese high schools.

SDL Readiness by Gender

The investigation into SDL readiness, as measured by the SDLRS, yielded an average score of 196 (SD = 22.2), suggesting a slightly below average readiness among the participants according to the interpretation of SDLRS scores (Table 4) by Guglielmino (1978). A gender-based analysis of the SDLRS scores indicated statistically insignificant differences, with males averaging at 195.5 (SD = 19.4) and females at a slightly higher mean of 199.7 (SD = 18.3) Refer to table 5 below that presents the students' SDLRS scores per gender.

An Independent Samples T-test was conducted to compare the Self-Directed Learning Readiness Scale (SDLRS) scores for the two gender groups. Levene's test for equality of variances indicated no significant difference in variances between the groups, $F(1, 242) = .224$, $p = .637$, suggesting that the assumption of equal variances was met for the t-test.

For SDLRS scores with equal variances assumed, the results were not statistically significant, $t(242) = -.786$, $p = .433$ (two-tailed), with a mean difference of -2.259. The 95% confidence interval for the mean difference ranged from -7.924 to 3.404, which includes zero, indicating no significant difference between the group means.

When equal variances were not assumed, the t-test results remained statistically non-significant, $t(239.143) = -.808$, $p = .420$ (two-tailed), and the mean difference was still -2.259. The 95% confidence interval under this condition ranged from -7.77 to 3.25, also containing zero.

These results suggest that there is no significant difference in the SDLRS scores between the two gender groups.

Table 4

Interpretations of SDLRS score range and explanation of readiness

SDLRS score range	Explanation Readiness for SDL
58-201	Below average
202-226	Average
227-290	Above average

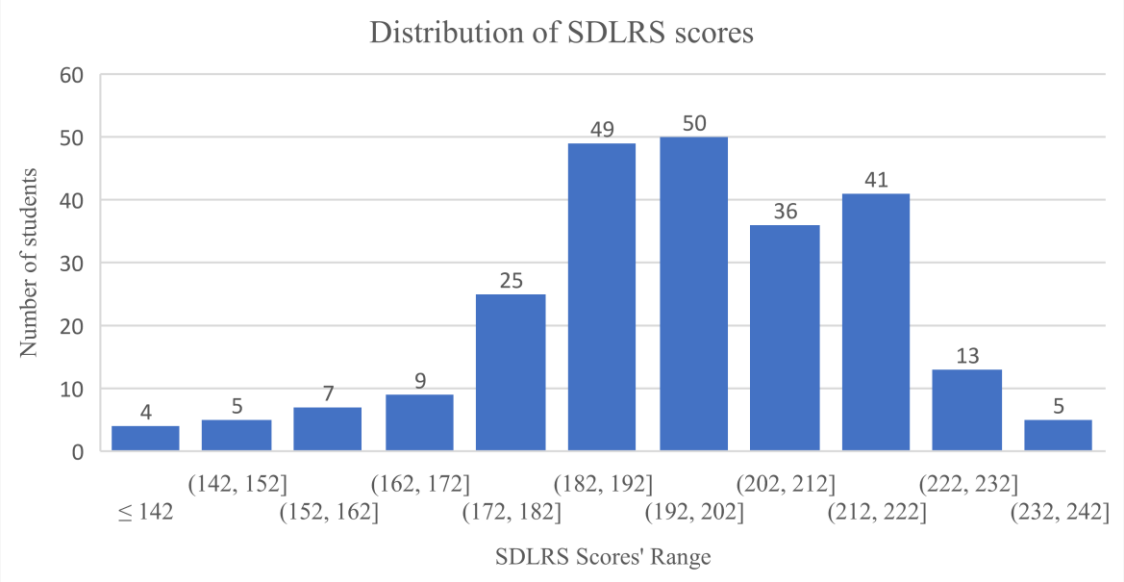
Table 5

Students' SDLRS scores per gender

	N	Minimum	Maximum	Mean	Std. Deviation
SDLRS_Total	244	61	241	196	22.2
SDLRS_Total Male	101	133	236	195.5	19.4
SDLRS_Total Female	135	61	241	199.7	18.3

Figure 2

Distribution of SDLRS scores' range per students' numbers



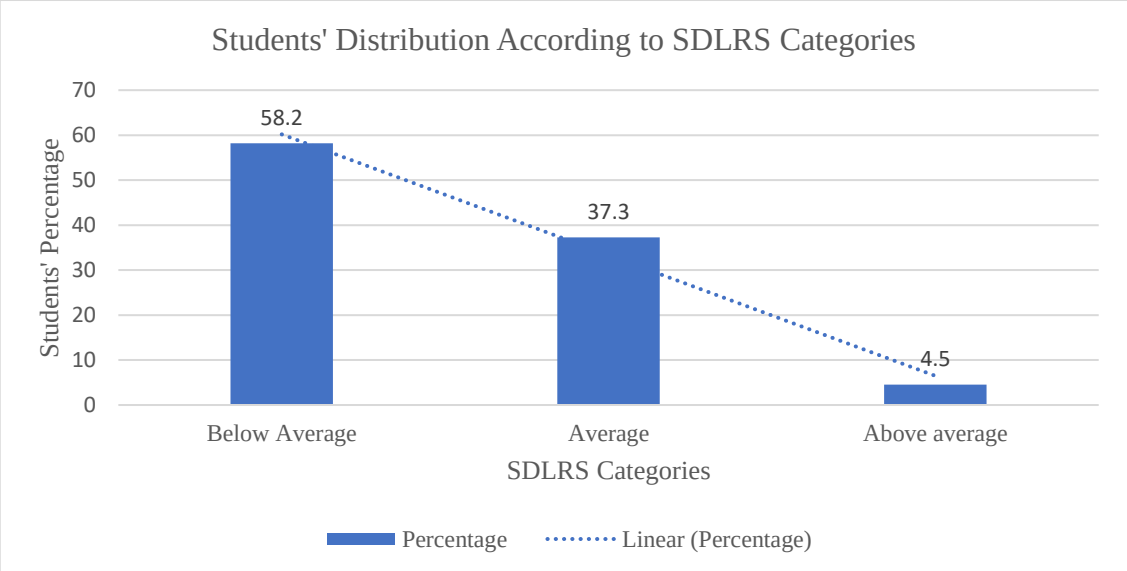
The provided bar graph (Figure 2) illustrates the distribution of SDLRS scores among students in the study. Upon examining the graph, we can observe that the distribution of scores is skewed to the right, indicating that more students scored below the average than above it. The average score range, indicated as 202 to 226 (Guglielmino, 1978), contains a high frequency of students, with the exact count being 36 students in the range of (202, 212) and 41 in the range of (212, 222).

The skewness of the distribution is evident through the concentration of higher frequencies in score ranges below the average and a gradual decrease in frequency as the scores increase above the average. This suggests that while a significant number of students have scores around the average (37.3%), there is a substantial proportion of students who score below the average (58.2%) compared to those scoring above average (4.5%).

There are notably fewer students in the highest score range of (232, 242), with a frequency of 5, and this decline in frequency as scores increase is consistent with the pattern of a right-skewed distribution. Conversely, the left tail of the distribution shows a rapid increase in frequency as one moves from the lowest score range towards the average, with a smaller number of students scoring significantly below average. Refer to Figure 3 below that presents students' distribution according to the SDLRS interpretation ranges in percentages.

Figure 3

Students' distrubtion according to SDLRS categories



SDLRS and Grade

The results showed a statistically significant low negative correlation between SDLRS score and grade (r = -.133, p = .037). Table 6 below presents this correlation in detail.

Table 6

Correlation table between SDLRS scores and grade

		Grade	SDLRS Score
Grade	Pearson Correlation	1	-.133*
	Sig. (2-tailed)		0.03744
	N	244	244
SDLRS Score	Pearson Correlation	-.133*	1
	Sig. (2-tailed)	0.03744	
	N	244	244

Note: *. Correlation is significant at the 0.05 level (2-tailed).

Comparative analyses using the Bonferroni method too indicated that grade 11 students had higher SDL readiness scores compared to grade 10 and 12 students, with a significant mean difference with grade 12 of 8.5 (p = .015). However, the difference in scores between grade 11 and grade 10 students was not significant. Table 7 below presents the comparisons between SDLRS scores and grade level in detail.

Table 7

Multiple comparisons between SDLRS scores and grade level

(I) Grade	(J) Grade	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Grade 10	Grade 11	-4.0399	3.0162	0.54525	-11.313	3.23338
	Grade 12	4.43084	2.93055	0.39571	-2.6359	11.4975

Grade 11	Grade 10	4.03986	3.0162	0.54525	-3.2334	11.3131
	Grade 12	8.47069*	2.98084	0.01465	1.28272	15.6587
Grade 12	Grade 10	-4.4308	2.93055	0.39571	-11.498	2.63586
	Grade 11	-8.47069*	2.98084	0.01465	-15.659	-1.2827

Note: *. The mean difference is significant at the 0.05 level.

Age Correlation with SDL Readiness

A noteworthy negative correlation was observed between age and SDLRS scores ($r = -.183$, $p = .004$), indicating that older students in this sample exhibited lower levels of SDL readiness. Refer to table 8 below for detailed results on the correlation between SDLRS scores and age. This correlation is aligned with grade correlation too where both are negatively correlated with the SDL readiness. This relationship contradicts developmental theories suggesting that self-direction in learning might enhance with age as students gain more control over their cognitive and metacognitive processes (Reio & Davis, 2005).

Comparative analyses using the Bonferroni method too indicated that there is one statistically significant mean difference in SDLRS scores between the ages of 16 and 17 years (mean difference = 15.8, $p < .001$), indicating that the 16-year-olds had higher SDLRS scores than the 17-year-olds. This difference is significant at the 0.05 level, with a 95% confidence interval for the mean difference, suggesting a meaningful difference in SDL readiness between these age groups. Refer to Table 9 for detailed results.

Table 8

Correlation table between SDLRS scores and age

		SDLRS Score	Age
SDLRS Score	Pearson Correlation	1	-.183**
	Sig. (2-tailed)		0.00404
	N	244	244
Age	Pearson Correlation	-.183**	1
	Sig. (2-tailed)	0.00404	
	N	244	244

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Table 9

Multiple comparisons between SDLRS scores and age

(I) Age_range	(J) Age_range	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
14	15	3.83467	4.87473	1.000	-9.9771	17.6464
	16	-2.77743	5.03352	1.000	-17.0391	11.4842
	17	13.02585	5.03352	.102	-1.2358	27.2875
	18 and 19	12.20445	6.48644	.611	-6.1738	30.5827
15	14	-3.83467	4.87473	1.000	-17.6464	9.9771
	16	-6.61209	3.68378	.739	-17.0495	3.8253
	17	9.19119	3.68378	.133	-1.2462	19.6285
	18 and 19	8.36979	5.50525	1.000	-7.2284	23.9680
16	14	2.77743	5.03352	1.000	-11.4842	17.0391
	15	6.61209	3.68378	.739	-3.8253	17.0495
	17	15.80328*	3.89147	<.001	4.7774	26.8291
	18 and 19	14.98188	5.64634	.085	-1.0161	30.9798
17	14	-13.02585	5.03352	.102	-27.2875	1.2358
	15	-9.19119	3.68378	.133	-19.6285	1.2462
	16	-15.80328*	3.89147	<.001	-26.8291	-4.7774
	18 and 19	-.82140	5.64634	1.000	-16.8194	15.1766
18 and 19	14	-12.20445	6.48644	.611	-30.5827	6.1738
	15	-8.36979	5.50525	1.000	-23.9680	7.2284
	16	-14.98188	5.64634	.085	-30.9798	1.0161
	17	.82140	5.64634	1.000	-15.1766	16.8194

Note: *. The mean difference is significant at the 0.05 level.

School Support for SDL and SDLRS scores

The study further sought to assess the school support for SDL using the PSCI. According to Van Deur (2018), PSCI scores are classified into three categories: High (87% agreement or more), Moderate (71-86% agreement), and Low school support for SDL (70% agreement or less). The sample included two schools from the High support category, three from the Moderate support category, and one from the Low school support for SDL category. Table 10 below presents the schools' PSCI scores and their interpretation.

Table 10

Schools' PSCI scores

School	N	Total Percentage Score	Motivation for Student SDL Subscale	Organizational Structures to Support SDL Subscale	Structures to Support SDL Strategies in School Subscale 3	SDL Support Level Category
1	62	78.4	79.35	82.5	72.72	Medium
2	97	88	89.67	87.5	83.63	High
3	30	82	83.22	87.5	74.54	Medium
4	26	68.4	70.32	67.5	63.63	Low
5	13	78.4	77.41	80	80	Medium
6	16	98.4	100	97.5	94.54	High

The results show a significant positive correlation between SDLRS scores, which measure the readiness of students for self-directed learning, and PSCI scores, which evaluate the level of school support for self-directed learning. The Pearson Correlation coefficient is .166, which indicates a low yet statistically significant relationship between the two variables, as the significance value is .009, well below the .01 threshold. This suggests that as the level of school support for self-directed learning (PSCI scores) increases, there is a corresponding increase in the students' readiness for

self-directed learning (SDLRS scores). The significance of the correlation at the 0.01 level (2-tailed) underscores that the likelihood of this correlation occurring by chance is less than 1%, supporting the conclusion that there is a significant association between the students' SDL readiness and the schools' support for SDL. Refer to table 11 below for detailed results on the correlation between SDLRS and PSCI scores.

Table 11

Correlation table between SDLRS and PSCI scores

		SDLRS Score	**PSCI Score**
SDLRS Score	Pearson Correlation	1	.166**
	Sig. (2-tailed)		0.00948
	N	244	244
PSCI Score	Pearson Correlation	.166**	1
	Sig. (2-tailed)	0.00948	
	N	244	244

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Based on the ANOVA post hoc tests using the Bonferroni correction method, a mean difference in SDLRS (Self-Directed Learning Readiness Scale) total scores were found when comparing schools with varying levels of support for self-directed learning (SDL). Specifically, significant differences were observed between the schools characterized by low support for SDL and other schools with higher levels of SDL support. These significant differences are indicated by a p-value of less than 0.05. The analysis does not reveal significant differences between schools with moderate to high SDL support. Tables 12 and 13 below present schools' level of support and the multiple comparison done between SDLRS scores and schools in details.

Table 12

Schools' level of support

School	**N**	**SDL Support Level Category**

1	62	Medium
2	97	High
3	30	Medium
4	26	Low
5	13	Medium
6	16	High

Table 13

Multiple comparisons between SDLRS scores and schools

(I) School	(J) School	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
School 1	School 2	-2.8301	2.97082	1	-11.642	5.98185
	School 3	-9.8634	4.00321	0.21716	-21.738	2.01078
	School 4	13.26323*	4.26447	0.03159	0.61407	25.9124
	School 5	-9.1737	5.49078	1	-25.46	7.11292
	School 6	-8.2843	5.04734	1	-23.256	6.68702
School 2	School 1	2.83011	2.97082	1	-5.9819	11.6421
	School 3	-7.0333	3.79472	0.97647	-18.289	4.22247
	School 4	16.09333*	4.06938	0.00153	4.02283	28.1638
	School 5	-6.3436	5.34068	1	-22.185	9.49781
	School 6	-5.4542	4.88363	1	-19.94	9.03153
School 3	School 1	9.86344	4.00321	0.21716	-2.0108	21.7377
	School 2	7.03333	3.79472	0.97647	-4.2225	18.2891
	School 4	23.12667*	4.87441	5.5E-05	8.66832	37.585
	School 5	0.68974	5.97686	1	-17.039	18.4182
	School 6	1.57917	5.57223	1	-14.949	18.1074
School 4	School 1	-13.26323*	4.26447	0.03159	-25.912	-0.6141
	School 2	-16.09333*	4.06938	0.00153	-28.164	-4.0228
	School 3	-23.12667*	4.87441	5.5E-05	-37.585	-8.6683
	School 5	-22.43692*	6.1549	0.00495	-40.693	-4.1804
	School 6	-21.54750*	5.76279	0.0035	-38.641	-4.454
School 5	School 1	9.1737	5.49078	1	-7.1129	25.4603
	School 2	6.34359	5.34068	1	-9.4978	22.185
	School 3	-0.6897	5.97686	1	-18.418	17.0387
	School 4	22.43692*	6.1549	0.00495	4.18041	40.6934
	School 6	0.88942	6.72107	1	-19.046	20.8253
School 6	School 1	8.28427	5.04734	1	-6.687	23.2556
	School 2	5.45417	4.88363	1	-9.0315	19.9399
	School 3	-1.5792	5.57223	1	-18.107	14.9491
	School 4	21.54750*	5.76279	0.0035	4.45405	38.641
	School 5	-0.8894	6.72107	1	-20.825	19.0464

Note: *. The mean difference is significant at the 0.05 level.

Findings from School Environment

The following section presents the results from a detailed analysis of schools' responses to the PSCI tool, offering a deeper understanding of the school environment's role in supporting self-directed learning (SDL).

All schools generally foster a warm, respectful interaction between staff and students, creating a positive emotional and social climate. However, in the lower-support school (School 4), students experience limited opportunities to express their emotions related to school issues.

Across most schools, students and teachers have access to a broad array of resources, further facilitating SDL. Students are encouraged to express their opinions and engage in dialogue with teachers, who also demonstrate empathetic concern for students' feelings. This reciprocal expression is less prevalent in School 4, where such emotional and resource support is irregular.

Teachers generally encourage students to pursue their interests and think critically about various issues. They also foster confidence by encouraging students to believe in their abilities. However, negotiation on topics and self- and peer-evaluation practices vary, with more consistent encouragement in some schools than others. School 4 shows notable deficiencies in these areas, often only sometimes engaging in these supportive practices.

Student involvement in decision-making and problem-solving varies significantly among schools. While some schools frequently integrate students into these processes, others do so less often, and School 4 rarely involves students in decision-making or displays the results of inquiry-based activities.

Most schools have structures in place that adapt the curriculum to meet diverse learning needs. In contrast, School 4 lacks these adaptations, along with sufficient access to information communication technology and opportunities for parental involvement. Such deficiencies can severely restrict students' ability to engage in SDL, as access to appropriate learning resources and community support are critical.

CHAPTER 5

DISCUSSION

This thesis investigates the readiness for self-directed learning (SDL) among high school students in grades 10 to 12 in Lebanon, a context marked by significant societal upheaval, including economic crises and political instability. Through a sample from six private high schools, the study assesses individual SDL readiness and the extent to which school environments support self-directed learning practices. The Lebanese education system, as described by Bahous, Nassar, and Ouaiss (2022), faces severe strain, underscoring the need for educational reforms aimed at enhancing learner autonomy and resilience. This research not only contributes to the theoretical discourse on SDL but also provides practical insights for educational reforms, further discussing these findings to understand their broader implications for education policy and practice within the challenging Lebanese context.

The primary finding of this research is the relatively low SDL readiness among Lebanese high school students, which appears to correlate with the level of support provided by their schools. This correlation suggests that enhancing school support for SDL could significantly improve students' readiness to engage in self-directed educational practices. This insight prompts further exploration of how various factors, including the school environment and individual student characteristics, influence SDL readiness.

A concerning discovery is the participants' slightly below-average SDL readiness, with an SDLRS score of 196. This finding indicates a potential disconnect between the abilities of Lebanese students and the demands of global educational trends that value SDL, a trend admired since Lebanon's CRDP's developmental plan in 1994.

This situation is reflective of the broader Middle Eastern context where SDL readiness varies significantly, with some settings showing low readiness across students (Alharbi, 2018), and others indicating better preparation (Abou-Rokbah, 2002; Alfaifi, 2016).

The study also highlighted a right-skewed distribution of SDLRS scores among students, suggesting a concentration of scores below the average. This distribution implies a need for targeted interventions to enhance SDL readiness, as the average score range represents a benchmark for sufficient SDL readiness, prompting educational stakeholders to reevaluate current pedagogical approaches.

Unexpectedly, the research revealed a negative correlation between both age and grade level with SDLRS scores, contradicting typical expectations that older students would show higher SDL readiness due to greater maturity and educational experience (Zimmerman, 2002). Notably, Grade 11 students exhibited higher SDL readiness than their counterparts in Grades 10 and 12, possibly due to less curriculum and assessment pressure. This finding suggests a need to support SDL consistently across all high school grades, especially during transitional periods. This perspective aligns with Reio and Davis (2005), who emphasize the need for age and individually tailored educational strategies. Further research could explore the relationship between SDL readiness and academic performance, potentially revealing significant insights, as demonstrated by Kan'an and Osman (2015) who identified a positive correlation between SDLRS scores and academic performance among 10th and 11th grade Qatari high school students.

On other hand, the established reliability of the SDLRS within the Lebanese context underscores its utility as a robust tool for measuring SDL readiness, supporting its use in further research and educational assessment (LPA SDLRS, 2024). The

SDLRS's internal consistency validates its application as a dependable measure for SDL readiness in diverse educational settings.

Moreover, the findings concerning school support, as assessed by the PSCI, show a significant yet mild positive correlation with SDL readiness. This correlation reinforces the notion that the educational environment plays a crucial role in fostering SDL readiness among students (Deur, 2018).

This role will further be discussed by dwelling more into the characteristics of the schools focusing on emotional and social environment, availability of resources and the encouragement for students to express their opinions, encouragement of interests and critical thinking, student involvement in decision-making and problem-solving, and structural support for SDL through the curriculum.

The emotional and social environment within schools has a profound impact on SDL readiness. Warm and respectful interactions between staff and students, which are prevalent across most of the schools in this study, underscore Malcolm Knowles' emphasis on creating a learning environment that fosters mutual respect and collaboration (Knowles, 1980). Such environments support the emotional intelligence necessary for students to engage in self-directed activities (Okwuduba et al., 2021), which is essential for SDL. However, in School 4, where this supportive environment is lacking, potential negative impacts on SDL readiness may arise, echoing Ryan and Deci's (2017) suggestion that emotional and social support are crucial for effective learning.

Furthermore, the availability of resources and the encouragement for students to express their opinions across most of the schools in the study are foundational to fostering SDL. These elements empower students to take initiative, a key principle in

Knowles' theory of andragogy (Knowles, 1975). This aligns with Cho's (2002) research, which demonstrates that access to diverse materials and platforms significantly enhances students' self-efficacy and intrinsic motivation—both vital for SDL.

Encouragement of interests and critical thinking within the schools also reflects SDL's core characteristics of autonomy and self-regulation. Environments that promote these practices are likely to enhance students' critical thinking and analytical skills, as Garrison (1997) found. Similarly, fostering a belief in one's abilities and engaging in self- and peer evaluations correlates with improved academic performance and student engagement, supporting the findings by Fisher, King, and Tague (2001).

The variability in student involvement in decision-making and problem-solving across schools, as indicated by the PSCI tool, demonstrates the global diversity in SDL implementation. This variability highlights how the effectiveness of SDL strategies can differ based on cultural, motivational, and structural factors, as discussed in studies by Alharbi (2018) and Alfaifi (2016).

Lastly, structural support for SDL through curriculum adaptations and technology access is essential. The PSCI findings suggest that flexible curricular designs and ample resources facilitate SDL (Gibbons, 2002; Bahous, Nassar, & Ouaiss, 2022). Conversely, the challenges observed in School 4, such as curriculum rigidity and resistance to change, reflect significant barriers to implementing SDL within the Lebanese educational system. These barriers underscore the necessity of addressing systemic obstacles to enhance SDL readiness effectively.

In conclusion, this thesis underscores the urgent need for comprehensive educational reforms in Lebanon to enhance SDL readiness among high school students. Such reforms should extend beyond curriculum content to include pedagogical

approaches that empower students to manage their learning journeys, thus preparing them to thrive in a rapidly changing global context. These findings call for a collaborative effort among educators, policymakers, and researchers to develop and implement educational policies that ensure the success and empowerment of future generations in Lebanon. Further research exploring the links between SDL readiness and academic performance, through longitudinal studies or broader geographic samples, is also recommended to deepen the understanding of SDL's impact on educational outcomes.

Limitation and Strength

This study recognizes certain limitations, such as its non-representative sample size and its concentration on private English-medium high schools. This focus may not accurately reflect the full diversity of Lebanon's educational environment. However, despite these limitations, this research acts as a crucial initial step in understanding the state of self-directed learning (SDL) readiness in Lebanon. It lays the groundwork for more comprehensive future studies. Given that SDL is predominantly associated with adult education, it is most effectively assessed in the higher grades of the educational system. Furthermore, focusing on high school students—who are on the verge of entering universities or the workforce and are expected to be self-directed—proves advantageous. This specific age group represents a critical transition phase from pedagogical to andragogical learning approaches.

APPENDIX A

SDLRS TOOL

Please fill the following Demographic information about you.

Grade:
Gender:
Age:
Nationality:

INSTRUCTIONS: This part of the questionnaire is designed to gather data on learning preferences and attitudes towards learning. After reading each item, please indicate the degree to which you feel that statement is true of you. Please read each statement carefully and circle the number of the response which best expresses your feeling.
There is no time limit for the questionnaire. Try not to spend too much time on any one item, however. Your first reaction to the question will usually be the most accurate.

	RESPONSES				
Items:	Almost never true of me; I hardly ever feel this way	Not often true of me; I feel this way less than half the time	Sometimes true of me; I feel this way about half the time	Usually true of me; I feel this way more than half the time.	Almost always true of me; there are very few times when I don't feel this way.
1. I'm looking forward to learning as long as I'm living.	1	2	3	4	5
2. I know what I want to learn.	1	2	3	4	5
3. When I see something that I don't understand, I stay away from it.	1	2	3	4	5
4. If there is something I want to learn, I can figure out a way to learn it.	1	2	3	4	5
5. I love to learn.	1	2	3	4	5
6. It takes me a while to get started on new projects.	1	2	3	4	5
7. In a classroom, I expect the teacher to tell all class members exactly what to do at all times.	1	2	3	4	5
8. I believe that thinking about who you are, where you are, and where you are going should be a major part of every person's education.	1	2	3	4	5
9. I don't work very well on my own.	1	2	3	4	5
10. If I discover a need for information that I don't have, I know where to go to get it.	1	2	3	4	5
11. I can learn things on my own better than most people.	1	2	3	4	5

12. Even if I have a great Idea. I can't seem to develop a plan for making it work.	1	2	3	4	5
13. In a learning experience, I prefer to take part in deciding what will be learned and how.	1	2	3	4	5
14. Difficult study doesn't bother me if I'm interested in something.	1	2	3	4	5
15. No one but me is truly responsible for what I learn.	1	2	3	4	5
16. I can tell whether I'm learning something well or not.	1	2	3	4	5
17. There are so many things I want to learn that I wish that there were more hours in a day.	1	2	3	4	5
18. If there is something I have decided to learn, I can find time for it, no matter how busy I am.	1	2	3	4	5
19. Understanding what I read is a problem for me.	1	2	3	4	5
20. If I don't learn, it's not my fault.	1	2	3	4	5
21. I know when I need to learn more about something.	1	2	3	4	5
22. If I can understand something well enough to get a good grade on a test, it doesn't bother me if I still have questions about it.	1	2	3	4	5
23. I think libraries are boring places.	1	2	3	4	5
24. The people I admire most are always learning new things.	1	2	3	4	5
25. I can think of many different ways to learn about a new topic.	1	2	3	4	5
26. I try to relate what I am learning to my long-term goals.	1	2	3	4	5
27. I am capable of learning for myself almost anything I might need to know.	1	2	3	4	5
28. I really enjoy tracking down the answer to a question.	1	2	3	4	5
29. I don't like dealing with questions where there is not one right answer.	1	2	3	4	5
30. I have a lot of curiosity about things.	1	2	3	4	5
31. I'll be glad when I'm finished learning.	1	2	3	4	5
32. I'm not as interested in learning as some other people seem to be.	1	2	3	4	5
33. I don't have any problem with basic study skills.	1	2	3	4	5
34. I like to try new things, even if I'm not sure how they will turn out.	1	2	3	4	5
35. I don't like it when people who really know what they're doing point out mistakes that I am making.	1	2	3	4	5
36. I'm good at thinking of unusual ways to do things.	1	2	3	4	5
37. I like to think about the future.	1	2	3	4	5
38. I'm better than most people are at trying to find out the things I need to know.	1	2	3	4	5
39. I think of problems as challenges, not stop signs.	1	2	3	4	5
40. I can make myself do what I think I should.	1	2	3	4	5
41. I'm happy with the way I investigate problems.	1	2	3	4	5

42. I become a leader in group learning situations.	1	2	3	4	5
43. I enjoy discussing ideas.	1	2	3	4	5
44. I don't like challenging learning situations.	1	2	3	4	5
45. I have a strong desire to learn new things.	1	2	3	4	5
46. The more I learn, the more exciting the world becomes.	1	2	3	4	5
47. Learning is fun.	1	2	3	4	5
48. It's better to stick with the learning methods that we know will work instead of always trying new ones.	1	2	3	4	5
49. I want to learn more so that I can keep growing as a person.	1	2	3	4	5
50. I am responsible for my learning — no one else is.	1	2	3	4	5
51. Learning how to learn is important to me.	1	2	3	4	5
52. I will never be too old to learn new things.	1	2	3	4	5
53. Constant learning is a bore.	1	2	3	4	5
54. Learning is a tool for life.	1	2	3	4	5
55. I learn several new things on my own each year.	1	2	3	4	5
56. Learning doesn't make any difference in my life.	1	2	3	4	5
57. I am an effective learner in the classroom and on my own.	1	2	3	4	5
58. Learners are leaders.	1	2	3	4	5

APPENDIX B

PRIMARY SCHOOL CHARACTERISTIC INVENTORY PSCI TOOL

Instructions: This questionnaire is designed to gather data on primary school characteristics related to self-directed learning. After reading each item, please rate it from 1 to 5 where (1) never, (2) rarely, (3) sometimes, (4) often, and (5) always. Please read each statement carefully and circle the number that represent your rating.
There is no time limit for the questionnaire. Try not to spend too much time on any one item. However, your first reaction to the question will usually be the most accurate.

	RESPONSES				
Items:	Never	Rarely	Sometimes	Often	Always
1.The environment is warm and there are friendly interactions	1	2	3	4	5
2.The management structures have been designed to involve all staff in decision making	1	2	3	4	5
3.The school celebrates events in a unified way	1	2	3	4	5
4.There is equity in opportunities students have to engage in activities that are appropriate for their abilities	1	2	3	4	5
5.There are structures to assist students to have access to an appropriate curriculum through adaptations such as learning assistance	1	2	3	4	5
6.Students and teachers have access to a wide range of resources	1	2	3	4	5
7.A climate of mutual respect exists between staff and students	1	2	3	4	5
8.Curriculum documents in use have an emphasis on inquiry as shown in references to asking questions and collecting information	1	2	3	4	5
9.Results of inquiry activities are displayed around the school	1	2	3	4	5
10.The resource center is accessed easily and frequently	1	2	3	4	5
11.The physical organization of the school supports student collaboration	1	2	3	4	5
12.The buildings encourage student movement around the school	1	2	3	4	5
13.The facilities encourage a positive orientation toward learning	1	2	3	4	5
14.Students have ready access to information communication technology	1	2	3	4	5
15.The daily activities of the school are oriented to student learning	1	2	3	4	5
16.The school day is organized to encourage student learning	1	2	3	4	5
17.The students have a voice in decision making in the school	1	2	3	4	5
18.Parents are encouraged to take part in school activities	1	2	3	4	5
19.The interests of the students are evident in the work displayed	1	2	3	4	5
20.Students are involved regularly in collecting and analyzing information	1	2	3	4	5
21.Students are encouraged to give their opinions about topics	1	2	3	4	5

22.Parents are encouraged to use their expertise in the school	1	2	3	4	5
23.Students are encouraged to reflect on their learning by writing or talking about what they have done	1	2	3	4	5
24.Students are often encouraged to solve problems and work on real issues	1	2	3	4	5
25.Students are encouraged to engage in self and peer evaluation	1	2	3	4	5
26.Students are encouraged to use strategies that help them to understand the information being collected	1	2	3	4	5
27.Students are encouraged to summarize their learning on topics	1	2	3	4	5
28.Group structures and peer tutoring are part of daily classroom organization	1	2	3	4	5
29.Teachers help students to set goals to improve their learning	1	2	3	4	5
30.Teachers act as mentors by working with students on an individual basis	1	2	3	4	5
31.Teachers are able to share their thoughts and feelings with students	1	2	3	4	5
32.Teachers show empathic concern for the feelings of each student	1	2	3	4	5
33.Teachers recognize their limitations and refer students to others who know more about a topic	1	2	3	4	5
34.Teachers and students negotiate topics to be studied in the classroom	1	2	3	4	5
35.Teachers encourage students to develop their interests at school	1	2	3	4	5
36.Teachers encourage students to attribute successful work to making an effort and trying hard	1	2	3	4	5
37.Teachers encourage students to use resources effectively	1	2	3	4	5
38.Students are involved in school decision making and planning	1	2	3	4	5
39.Students are encouraged to negotiate to work on topics of interest	1	2	3	4	5
40.Students are encouraged to decide the purposes of their learning	1	2	3	4	5
41.Students are encouraged to be clear about the purposes of their learning	1	2	3	4	5
42.Students are encouraged to think deeply about issues	1	2	3	4	5
43.Students are able to express their emotions in relation to issues	1	2	3	4	5
44.Students are motivated to carry out their learning	1	2	3	4	5
45.Students are encouraged to work collaboratively	1	2	3	4	5
46.Students are encouraged to make an effort to complete their work with a high level of understanding	1	2	3	4	5
47.Students have opportunities to organize how they will do their work	1	2	3	4	5
48.Students are encouraged to believe in their own abilities	1	2	3	4	5
49.Students are encouraged to persevere with their work	1	2	3	4	5
50.Students are encouraged to reflect on completed classroom work	1	2	3	4	5

2018, Van Deur

APPENDIX C

INVITATION LETTER

AMERICAN UNIVERSITY OF BEIRUT

AUB Social & Behavioral Sciences

Invitation to Participate in a Research Study
This notice is for an AUB-IRB Approved Research Study

for Dr. Karma El Hassan and Osama Salha at AUB.
(AUB- Fisk Hall/Floor: 1/Room: 113)
It is not an Official Message from AUB

I am inviting you to participate in a research study about Self-directed learning among high school students in Lebanon.

Your school has been selected from the CRDP list of private schools to be part in the study that will include 9 other schools from Beirut and Mount Lebanon. In this study, you will be asked along with the students of grades 10, 11, and 12 to fill a survey as part of a study titled "Self-directed learning among high school students in Lebanon". The estimated time to complete this study is approximately 15 minutes.

The research is being conducted with the goal of finalizing a thesis for a graduate program and might be published in academic journals and possibly presentation at academic conferences.

Your school and students' study-related information will be confidential. Data will only be reported in the aggregate. No names of individual children or school will be disclosed in any reports or presentations of this research.

After the conclusion of the study, the Principal Investigator will retain all original study data in a secure location for at least three years to meet institutional archiving requirements. After this period, data will be responsibly destroyed.

The study does not involve any physical risk or emotional risk to you or the school students. This study can give some insights to enable us to understand the readiness for self-directed learning and how the school environment can be supportive to it.

You are free to leave the study at any time without penalty. Your decision not to participate is no way influences your relationship with AUB.

If you have any questions or concerns about the research you may contact: Dr. Karma El Hassan, kelhasan@aub.edu.lb, 01350000 ext:3076 or Osama Salha, ohs08@mail.aub.edu, 03503875

Thank you for your time and cooperation.

Karma El Hassan

Karma El Hassan, PhD., Department of Education, AUB.

APPENDIX D

SCHOOL PRINCIPAL ORAL CONSENT FORM

English Oral Consent Form

Hello Mr. …., I am Osama Salha a graduate student at AUB and I am conducting a study as part of my thesis under the supervision of Dr. Karma El Hassan. Your school has been selected randomly from the CRDP list of private schools to be part in the study that will include 9 other schools from Beirut and Mount Lebanon. Do you have time if I need to explain to you about the study? **If yes then I will say:** In this study, you will be asked along with the student of grade 10, 11, and 12 to fill a survey as part of a study titled "Self-directed learning among high school students in Lebanon".
The estimated time to complete this study is approximately 15 minutes.
The research is being conducted with the goal of finalizing a thesis for a graduate program and might be published in academic journal and possibly presentation at academic conferences.
Efforts will be made to keep your school and students' study-related information confidential. Data will only be reported in the aggregate. No names of individual children or school will be disclosed in any reports or presentations of this research.
After the conclusion of the study, the Principal Investigator will retain all original study data in a secure location for at least three years to meet institutional archiving requirements. After this period, data will be responsibly destroyed.
The study does not involve any physical risk or emotional risk to you or the school students. This study can give some insights to enable us to understand the readiness for self-directed learning and how the school environment can be supportive to it. **If the school principal asks about self-directed learning, then I can give a brief explanation about the concept.**
Participation in this study is voluntary. You are free to leave the study at any time without penalty. Your decision not to participate is no way influences your relationship with AUB. Do you have any questions? Do you wish to participate in this study?

Thank you for your time and cooperation Mr. … I will contact you to inform you about the time that I will attend to your school).

Arabic Oral Consent Form

مرحباً السيد/ة .... ، أنا أسامة صالحة طالب دراسات عليا في الجامعة الأميركية في بيروت وأقوم بإجراء دراسة كجزء من رسالتي تحت إشراف الدكتورة كرمى الحسن. تم اختيار مدرستك بشكل عشوائي من قائمة المركز التربوي للبحوث والإنماء للمدارس الخاصة لتكون جزءًا من الدراسة التي ستشمل ٩ مدارس أخرى من بيروت وجبل لبنان. هل لديك وقت إذا كنت بحاجة إلى شرح الدراسة لك؟ **إذا كانت الإجابة بنعم ، فسأقول**: في هذه الدراسة ، سيُطلب منك ومن طلّاب الصفوف العاشر، الحادي عشر، والثاني عشر ملء استبيان كجزء من دراسة بعنوان "التعلم الذاتي بين طلاب المدارس الثانوية في لبنان."
الوقت المقدر لإكمال هذه الدراسة حوالي ١٥ دقيقة.
يتم إجراء البحث بهدف إتمام أطروحة لبرنامج الدراسات العليا ويمكن نشره في المجلات الأكاديمية وربما تقديمه في المؤتمرات الأكاديمية.
سيتم بذل الجهود للحفاظ على سرية معلومات مدرستك و تلاميذك المتعلقة بالدراسة. سيتم الإبلاغ عن البيانات بشكل إجمالي فقط. لن يتم الكشف عن أسماء التلاميذ الفرديين أو المدرسة في أي تقارير أو عروض تقديمية لهذا البحث.
بعد الانتهاء من الدراسة ، سيحتفظ الباحث الرئيسي بجميع بيانات الدراسة الأصلية في مكان آمن لمدة ثلاث سنوات على الأقل لتلبية متطلبات الأرشفة المؤسسية. بعد هذه الفترة ، سيتم تدمير البيانات بشكل مسؤول.
لا تتضمن الدراسة أي مخاطر جسدية أو عاطفية عليك أو على طلاب المدرسة. يمكن أن تقدم هذه الدراسة بعض الأفكار لتمكيننا من فهم الاستعداد للتعلم الموجه ذاتيًا وكيف يمكن أن تكون البيئة المدرسية داعمة له. **إذا سأل مدير المدرسة عن التعلم الموجه ذاتيًا ، فيمكنني عندئذٍ تقديم شرح موجز عن المفهوم.**

المشاركة في هذه الدراسة طوعية. أنت حر في ترك الدراسة في أي وقت دون عقوبة. لا يؤثر قرارك بعدم المشاركة بأي شكل من الأشكال على علاقتك بالجامعة الأميركية في بيروت.
هل لديك اسئلة؟ هل ترغب في المشاركة في هذه الدراسة؟

شكرًا لك على وقتك وتعاونك سيد/ة ... سأتصل بك لإبلاغك بالوقت الذي سأحضر فيه إلى مدرستك.

APPENDIX E

ADULT CONSENT FORM

AUB
Department of Education
Dr. Karma El Hassan and Osama Salha
Consent document

We are asking you to participate in a research study. Please read the information below and feel free to ask any questions that you may have.

A. **Project Description**

1. In this study, you will be asked to fill a survey as part of a study titled "Self-directed learning among high school students in Lebanon".
2. The estimated time to complete this study is approximately 15 minutes.
3. The research is being conducted with the goal of finalizing a thesis for a graduate program and might be published in academic journal and possibly presentation at academic conferences.
4. All data from this study will be maintained in a secure locked drawer in a locked office or on a password protected computer. Data will only be reported in the aggregate. No names of individual children will be disclosed in any reports or presentations of this research.

After the conclusion of the study, the Principal Investigator will retain all original study data in a secure location for at least three years to meet institutional archiving requirements. After this period, data will be responsibly destroyed.

B. **Risks and Benefits**

Your participation in this study does not involve any physical risk or emotional risk to you beyond the risks of daily life. You have the right to withdraw your consent or discontinue participation at any time for any reason. Your decision to withdraw will not involve any penalty or loss of benefits to which you are entitled. Discontinuing participation in no way affects your relationship with AUB.

You receive no direct benefits from participating in this research; however, your participation does help researchers better understand the readiness and support for self-directed learning among high school students.

C. **Confidentiality**

To secure the confidentiality of your responses, your name and other identifying information will never be attached to your answers. All codes and data are kept in a locked drawer in a locker room or in a password protected computer that is kept secure. Data access is limited to the Principal Investigator and researchers working directly on this project. All data will be destroyed responsibly after the required retention period (usually three years.) Your privacy will be maintained in all published and written data resulting from this study. Your name or other identifying information will not be used in our reports or published papers.

D. **Contact Information**

1) If you have any questions or concerns about the research you may contact: Dr. Karma El Hassan, kelhasan@aub.edu.lb, 01350000 ext:3076 or Osama Salha, ohs08@mail.aub.edu, 03503875

2) If you have any questions, concerns or complains about your rights as a participant in this research, you can contact the following office at AUB:
Social & Behavioral Sciences Institutional Review Board
[ACC Building 3rd floor, +961-1-738024 or +961-1-350000]

E. **Participant rights**
Participation in this study is voluntary. You are free to leave the study at any time without penalty. Your decision not to participate is no way influences your relationship with AUB. Do you have any questions about the above information? Do you wish to participate in this study?

I have read and understand the above information. I agree to participate in the research study.

Tick the box if you are willing to participate in the study ☐ Date: _____

الجامعة الأميركية في بيروت
قسم التربية
د. كرمى الحسن وأسامة صالحة
وثيقة الموافقة

نطلب منك المشاركة في دراسة بحثية. يرجى قراءة المعلومات الواردة أدناه ولا تتردد في طرح أي أسئلة قد تكون لديك.

أ. وصف الدراسة

١ .في هذه الدراسة ، سيُطلب منك ملء استبيان كجزء من دراسة بعنوان "التعلم الذاتي بين طلاب المدارس الثانوية في لبنان."

٢ .الوقت المقدر لإكمال هذه الدراسة حوالي ١٥ دقيقة.

٣ .يتم إجراء البحث بهدف وضع اللمسات الأخيرة على أطروحة لبرنامج الدراسات العليا ويمكن نشرها في المجلات الأكاديمية وربما عرضها في المؤتمرات الأكاديمية.

٤ .سيتم بذل الجهود للحفاظ على سرية المعلومات المتعلقة بالدراسة. سيتم الاحتفاظ بجميع البيانات من هذه الدراسة في درج مغلق مؤمن في مكتب مغلق أو على جهاز كمبيوتر محمي بكلمة مرور. سيتم الإبلاغ عن البيانات بشكل إجمالي فقط. لن يتم الكشف عن أسماء الأطفال الفرديين في أي تقارير أو عروض تقديمية لهذا البحث.

بعد الانتهاء من الدراسة ، سيحتفظ الباحث الرئيسي بجميع بيانات الدراسة الأصلية في مكان آمن لمدة ثلاث سنوات على الأقل لتلبية متطلبات الأرشفة المؤسسية. بعد هذه الفترة ، سيتم تدمير البيانات بشكل مسؤول.

ب. المخاطر والفوائد

لا تنطوي مشاركتك في هذه الدراسة على أي مخاطر جسدية أو عاطفية عليك بخلاف مخاطر الحياة اليومية. يحق لك سحب موافقتك أو التوقف عن المشاركة في أي وقت ولأي سبب. لن ينطوي قرارك بالانسحاب على أي عقوبة أو خسارة في المزايا التي يحق لك الحصول عليها. لا يؤثر وقف المشاركة بأي شكل من الأشكال على علاقتك مع الجامعة الأمريكية في بيروت.

لا تتلقى أي فوائد مباشرة من المشاركة في هذا البحث ؛ ومع ذلك ، فإن مشاركتك تساعد الباحثين على فهم أفضل للاستعداد والدعم للتعلم الذاتي بين طلاب المدارس الثانوية.

ج. السرية

لتأمين سرية ردودك ، لن يتم إرفاق اسمك ومعلومات التعريف الأخرى بإجاباتك. يتم الاحتفاظ بجميع الرموز والبيانات في درج مغلق في مكتب مغلق أو في جهاز كمبيوتر محمي بكلمة مرور يتم الاحتفاظ به آمنًا. يقتصر الوصول إلى البيانات على الباحث الرئيسي والباحثين الذين يعملون مباشرة في هذا المشروع. سيتم تدمير جميع البيانات بشكل مسؤول بعد فترة الاحتفاظ المطلوبة (عادة ثلاث سنوات.) سيتم الحفاظ على خصوصيتك في جميع البيانات المنشورة والمكتوبة الناتجة عن هذه الدراسة. لن يتم استخدام اسمك أو أي معلومات تعريفية أخرى في تقاريرنا أو أوراقنا المنشورة.

د. معلومات الاتصال

١ إذا كان لديك أي أسئلة أو استفسارات حول البحث يمكنك التواصل مع: د. كرمى الحسن kelhasan@aub.edu.lb 01350000تحويلة ٣٠٧٦ أو أسامة صالحة03503875 ohs08@mail.aub.edu

٢ إذا كانت لديك أي أسئلة أو مخاوف أو شكوى بشأن حقوقك كمشارك في هذا البحث ، يمكنك الاتصال بالمكتب التالي في الجامعة الأمريكية في بيروت على 961-1-738024 أو ٠١٣٥٠٠٠٠

هـ. حقوق المشتركين

المشاركة في هذه الدراسة طوعية. أنت حر في ترك الدراسة في أي وقت دون عقوبة. لا يؤثر قرارك بعدم المشاركة بأي شكل من الأشكال على علاقتك بالجامعة الأميركية في بيروت.

هل لديك أي أسئلة حول المعلومات المذكورة أعلاه؟ هل ترغب في المشاركة في هذه الدراسة؟

لقد قرأت وفهمت المعلومات الواردة أعلاه. أوافق على المشاركة في الدراسة البحثية.

إذا كنت راغبًا في المشاركة، الرجاء ضع إشارة في المربّع التالي ☐ التاريخ:

_____

APPENDIX F

PARENTAL CONSENT FORM

AUB Social & Behavioral Sciences Parental Permission
Permission for Child to Participate in Research

Study Title: Self-directed learning among high school students in Lebanon
Researcher: Dr. Karma El Hassan and Osama Salha

This is a permission form for your child/child for whom you are legal guardian to participate in a research study. It contains important information about this study and what to expect if you decide to permit your child/child for whom you are legal guardian to participate.
Your child's participation is voluntary.
Please consider the information carefully before you decide to allow your child to participate. If you decide to permit participation, you will be asked to sign this form and will receive a copy of the form.

Purpose: We are conducting a study as part of the thesis for Osama Salha's graduate degree that is about the readiness of self-directed learning among high school students.

Procedures/Tasks: The students will be asked to fill out a survey about readiness for self-directed learning and the tool will not include any name or code that might expose the name of the student. Data will be collected and stored securely and after the conclusion of the study, the Principal Investigator will retain all original study data in a secure location for at least three years to meet institutional archiving requirements. After this period, data will be responsibly destroyed.

Duration:
The expected time of the survey is around 15 minutes.
Your child may leave the study at any time. If you decide to stop your child's participation in the study, there will be no penalty to you, or your child and you will not lose any benefits to which you are otherwise entitled. Your decision will not affect your future relationship, or that of your child, with AUB.

Risks and Benefits: There are no risks in filling this survey and benefits can be at the educational system level where the study might help enhancing the educational system in Lebanon.

Confidentiality:
Efforts will be made to keep your child's study-related information confidential. All data from this study will be maintained in a secure locked drawer in a locked office or on a password protected computer. Data will only be reported in the aggregate. No names of individual children will be disclosed in any reports or presentations of this research.
After the conclusion of the study, the Principal Investigator will retain all original study data in a secure location for at least three years to meet institutional archiving requirements. After this period, data will be responsibly destroyed.

Participant Rights:
You may refuse to allow your child to participate in this study without penalty or loss of benefits to which you are otherwise entitled. If you are a student or employee at AUB, your decision about whether or not you allow your child to participate in this research will not affect your grades or employment status.
If you choose to allow your child to participate in the study, you may discontinue his/her participation at any time without penalty or loss of benefits. By signing this form, you do not give up any personal legal rights you or your child may have as a participant in this study.
The Social & Behavioral Institutional Review Board responsible for human subjects research at AUB has reviewed this research project and found it to be acceptable, according to applicable Lebanese and U.S. federal regulations and AUB policies designed to protect the rights and welfare of participants in research.

Contacts and Questions:
For questions, concerns, or complaints about the study you may contact: Dr. Karma El Hassan; kelhasan@aub.edu.lb or Osama Salha ohs08@mail.aub.edu

For questions about your child's rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact the AUB Social & Behavioral Science Institutional Review Board [+961-1-738024 or +961-1-350000]

Signing the consent form

I have read (or someone has read to me) this form, and I am aware that I am being asked to give permission for my minor child (or child under my guardianship) to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to give permission for my child/child under my guardianship to participate in this study.
I am not giving up any legal rights by signing this form. I will be given a copy of this form**.**

Printed name of subject	
Printed name of person authorized to give permission for minor subject/participant	**Signature of person authorized to give permission for minor subject/participant (when applicable)**
	AM/PM
Relationship to the subject	**Date and time**

Investigator/Research Staff
I have explained the research to the parent or legal guardian of the child subject/participant before requesting the signature(s) above. There are no blanks in this document. A copy of this form has been given to the parent/legal guardian of the child participant/subject.

Printed name of person obtaining permission	**Signature of person obtaining permission**
	AM/PM
Date and time	

العلوم الاجتماعية والسلوكية في الجامعة الأميركية في بيروت- موافقة الأهل على المشاركة في الأبحاث
إذن للطفل للمشاركة في البحث

عنوان الدراسة: التعلم الذاتي بين طلاب المدارس الثانوية في لبنان
الباحث: د. كرمى الحسن وأسامة صالحة

هذا نموذج إذن لطفلك الذي أنت وصي قانوني عليه للمشاركة في دراسة بحثية. يحتوي هذا النموذج على معلومات مهمة حول هذه الدراسة وما يمكن توقّعه إذا قرّرت السماح لطفلك الذي أنت وصي قانوني عليه بالمشاركة.
إنّ مشاركة طفلك طوعية.
يرجى النظر في المعلومات بعناية قبل أن تقرر السماح لطفلك بالمشاركة. إذا قررت السماح بالمشاركة ، فسيُطلب منك التوقيع على هذا النموذج وستتلقى نسخة من النموذج.

الهدف: نجري دراسة كجزء من أطروحة التخرج لأسامة صالحة والتي تدور حول الاستعداد للتعلم الذاتي بين طلاب المدارس الثانوية.

الإجراءات / المهام: سيُطلب من الطلاب ملء استبيان حول الاستعداد للتعلم الموجه ذاتيًا ولن تتضمن الأداة أي اسم أو رمز قد يكشف عن اسم الطالب. سيتم جمع البيانات وتخزينها بشكل آمن وبعد الانتهاء من الدراسة ، سيحتفظ الباحث الرئيسي بجميع بيانات الدراسة الأصلية في مكان آمن لمدة ثلاث سنوات على الأقل لتلبية متطلبات الأرشفة المؤسسيّة. بعد هذه الفترة ، سيتم تدمير البيانات بشكل مسؤول.
المدة:
الوقت المتوقع للإستبيان حوالي ١٥ دقيقة.
قد يترك طفلك الدراسة في أي وقت. إذا قررت إيقاف مشاركة طفلك في الدراسة ، فلن تكون هناك عقوبة عليك أو على طفلك ولن تفقد أي مزايا يحق لك الحصول عليها بخلاف ذلك. لن يؤثر قرارك على علاقتك المستقبلية أو علاقة طفلك بالجامعة الأمريكية في بيروت.
المخاطر والفوائد: لا توجد مخاطر في ملء هذا الاستبيان ويمكن أن تكون الفوائد على مستوى النظام التعليمي حيث قد تساعد الدراسة في تعزيز النظام التعليمي في لبنان.
السريّة:
سيتم بذل الجهود للحفاظ على سرية معلومات طفلك المتعلقة بالدراسة. سيتم الاحتفاظ بجميع البيانات من هذه الدراسة في درج مغلق مؤمن في مكتب مغلق أو على جهاز كمبيوتر محمي بكلمة مرور. سيتم الإبلاغ عن البيانات بشكل إجمالي فقط. لن يتم الكشف عن أسماء الأطفال الفرديين في أي تقارير أو عروض تقديمية لهذا البحث.
بعد الانتهاء من الدراسة ، سيحتفظ الباحث الرئيسي بجميع بيانات الدراسة الأصلية في مكان آمن لمدة ثلاث سنوات على الأقل لتلبية متطلبات الأرشفة المؤسسية. بعد هذه الفترة ، سيتم تدمير البيانات بشكل مسؤول.

حقوق المشترك:
يمكنك رفض السماح لطفلك بالمشاركة في هذه الدراسة دون عقوبة أو فقدان المزايا التي يحق لك الحصول عليها بخلاف ذلك. إذا كنت طالبًا أو موظفًا في الجامعة الأميركية في بيروت ، فإن قرارك بشأن السماح لطفلك بالمشاركة في هذا البحث أم لا لن يؤثر على درجاتك أو حالتك الوظيفية.
إذا اخترت السماح لطفلك بالمشاركة في الدراسة ، فيمكنك التوقف عن مشاركته / مشاركتها في أي وقت دون عقوبة أو فقدان المزايا. من خلال التوقيع على هذا النموذج ، فإنك لا تتنازل عن أي حقوق قانونية شخصية قد تكون لك أو لطفلك كمشارك في هذه الدراسة.
راجع مجلس المراجعة المؤسسية الاجتماعية والسلوكية المسؤول عن أبحاث المواد البشرية في الجامعة الأميركية في بيروت هذا المشروع البحثي ووجد أنه مقبول ، وفقًا للوائح الفيدرالية اللبنانية والأمريكية المعمول بها وسياسات الجامعة الأميركية في بيروت المصممة لحماية حقوق ورفاهية المشاركين في البحث.

جهات الاتصال والأسئلة:
للأسئلة أو الاستفسارات أو الشكاوى حول الدراسة ، يمكنك الاتصال بـ: د. كرمى الحسن ؛ د .
kelhasan@aub.edu.lbاو اسامة صالحةohs08@mail.aub.edu

لمناقشة الأسئلة الأخرى المتعلقة بالدراسة مع شخص ليس جزءًا من فريق البحث ، يمكنك الاتصال بمجلس مراجعة مؤسسة العلوم الاجتماعية والسلوكية في الجامعة الأمريكية في بيروت على 961-1-738024 أو ٠١٣٥٠٠٠٠ تحويلة: ٥٤٤٥/٥٤٥٤ ، le08@aub.edu.lb

التوقيع على استمارة الموافقة

لقد قرأت (أو قرأ لي شخص ما) هذا النموذج ، وأدرك أنني مطالب بإعطاء إذن لطفلي القاصر (أو طفلي الخاضع لوصايتي) للمشاركة في دراسة بحثية. لقد أتيحت لي الفرصة لطرح الأسئلة وتلقّي الإجابة عليها. أوافق طواعية على منح الإذن لطفلي / طفلي الخاضع لوصايتي للمشاركة في هذه الدراسة.
أنا لا أتخلى عن أي حقوق قانونية من خلال التوقيع على هذا النموذج. سأحصل على نسخة من هذا النموذج.

إسم التلميذ	
لاسم المطبوع للشخص المخوّل لمنح الإذن للتلميذ القاصر المشارك	**توقيع الشخص المخوّل لمنح الإذن للتلميذ القاصر المشارك**
	صباحًا/ مساءًا
علاقة القرابة مع التلميذ	**التاريخ و الوقت**

الباحث
لقد شرحت البحث للوالد أو الوصي القانوني للطفل الموضوع / المشارك قبل طلب التوقيع (التوقيعات) أعلاه. لا توجد فراغات في هذا المستند. تم تسليم نسخة من هذا النموذج إلى الوالد / الوصي القانوني للطفل المشارك.

الاسم المطبوع للشخص الحاصل على الموافقة **توقيع الشخص الحاصل على الموافقة**

صباحًا/ مساءًا

التاريخ و الوقت

APPENDIX G

CHILD ASSENT FORM

SBS Child Assent Form Template
AUB Social & Behavioral Sciences Assent to Participate in Research

Study Title: Self-directed learning among high school students in Lebanon
Researcher: Dr. Karma El Hassan and Osama Salha

- **You are being asked to be in a research study. Studies are done to find better ways to treat people or to better understand how kids think about things or how kids and adults may behave at different times.**
- **This form will tell you about the study to help you decide whether or not you want to participate.**
- **You should ask any questions you have before making up your mind. You can think about it and discuss it with your family or friends before you decide.**
- **It is okay to say "No" if you don't want to be in the study. If you say "Yes" you can change your mind and quit being in the study at any time without getting in trouble.**
- **If you decide you want to be in the study, an adult (usually a parent) will also need to give permission for you to be in the study.**

1. **What is this study about?**
   The study is measuring self-directed learning readiness among high school students.

2. **What will I need to do if I am in this study?**
   You have to fill a survey.

3. **How long will I be in the study?**
   Around 15 minutes.

4. **Can I stop being in the study?**
   You may stop being in the study at any time. You may discontinue completing the test/survey at any time, but you must remain at your desk in this room until the survey period ends.

5. **What bad things might happen to me if I am in the study?**
   There is no risk present in the study.

6. **What good things might happen to me if I am in the study?**
   There is no direct benefit from the study.

7. **Will I be given anything for being in this study?**
   No

8. Who can I talk to about the study?

For questions about the study you may contact ***Osama Salha 03503875, ohs08@mail.aub.edu***.
To discuss other study-related questions with someone who is not part of the research team, you may contact the AUB Social & Behavioral Science Institution Review Board at [+961-1-738024 or +961-1-350000]

Signing the assent form

I have read (or someone has read to me) this form. I have had a chance to ask questions before making up my mind. I want to be in this research study.

Tick the box if you are willing to participate in the study ☐ Date: _____

Investigator/Research Staff

I have explained the research to the participant before requesting the signature above. There are no blanks in this document. A copy of this form has been given to the participant or his/her representative.

Printed name of person obtaining assent **Signature of person obtaining assent**

Date and time **AM/PM**

This form must be accompanied by an IRB approved parental permission form signed by a parent/guardian.

نموذج موافقة الطفلSBS
العلوم الاجتماعية والسلوكية في الجامعة الأميركية في بيروت- موافقة على المشاركة في الأبحاث

عنوان الدراسة: التعلم الذاتي بين طلاب المدارس الثانوية في لبنان
الباحث: د. كرمى الحسن وأسامة صالحة

•يُطلب منك أن تكون في دراسة بحثية. تُجرى الدراسات لإيجاد طرق أفضل لمعاملة الناس أو لفهم أفضل لكيفية تفكير الأطفال في الأشياء أو كيف يتصرف الأطفال والبالغون في أوقات مختلفة.
•سيخبرك هذا النموذج عن الدراسة لمساعدتك على تحديد ما إذا كنت ترغب في المشاركة أم لا.
•يجب أن تسأل أي أسئلة لديك قبل أن تتخذ قرارك. يمكنك التفكير في الأمر ومناقشته مع عائلتك أو أصدقائك قبل أن تقرر.
•من المقبول أن تقول "لا" إذا كنت لا تريد أن تكون في الدراسة. إذا قلت "نعم" ، يمكنك تغيير رأيك والإقلاع عن المشاركة في الدراسة في أي وقت دون الوقوع في مشاكل.
•إذا قررت أنك تريد أن تكون في الدراسة ، فسيحتاج الشخص البالغ (عادة أحد الوالدين) إلى منحك الإذن للمشاركة في الدراسة.

١. ما هي هذه الدراسة؟

تقيس الدراسة الاستعداد للتعلم الذاتي بين طلاب المدارس الثانوية.

٢. ماذا علي أن أفعل إذا كنت مشاركًا في هذه الدراسة؟

يجب عليك ملء الاستبيان.

٣. إلى متى سأبقى في الدراسة؟

حوالي ١٥ دقيقة.

٤. هل يمكنني التوقف عن المشاركة في الدراسة؟

يمكنك التوقف عن المشاركة في الدراسة في أي وقت. يمكنك التوقف عن إكمال الاختبار / الاستطلاع في أي وقت ، ولكن يجب عليك البقاء في مقعدك في هذه الغرفة حتى انتهاء فترة المسح.

٥. ما هي الأشياء السيئة التي قد تحدث لي إذا كنت في الدراسة؟

لا توجد مخاطر موجودة في الدراسة.

٦. ما الأشياء الجيدة التي قد تحدث لي إذا كنت مشاركًا في الدراسة؟

لا توجد فائدة مباشرة من الدراسة.

٧. هل سأحصل على أي شيء مقابل مشاركتي في هذه الدراسة؟

لا

٨. مع من يمكنني التحدث عن الدراسة؟

للأسئلة حول الدراسة يمكنك التواصل مع أسامة صالحة ٠٣٥٠٣٨٧٥ ، ohs08@mail.aub.edu.

لمناقشة الأسئلة الأخرى المتعلقة بالدراسة مع شخص ليس جزءًا من فريق البحث ، يمكنك الاتصال بمجلس مراجعة مؤسسة العلوم الاجتماعية والسلوكية في الجامعة الأمريكية في بيروت على 961-1-738024 أو ٠١٣٥٠٠٠٠

التوقيع على استمارة الموافقة

لقد قرأت (أو قرأ لي أحدهم) هذا النموذج. لقد أتيحت لي الفرصة لطرح الأسئلة قبل اتخاذ قرار. أريد أن أكون في هذه الدراسة البحثية.

إذا كنت راغبًا في المشاركة، الرجاء ضع إشارة في المربّع التالي ☐ التاريخ: _____

الباحث

لقد شرحت البحث للمشارك قبل طلب التوقيع أعلاه. لا توجد فراغات في هذا المستند. تم تسليم نسخة من هذا النموذج إلى المشارك أو ممثله.

الاسم المطبوع للشخص الحاصل على الموافقة **توقيع الشخص الحاصل على الموافقة**

صباحًا/ مساءًا

التاريخ و الوقت

يجب أن يكون هذا النموذج مصحوبًا بنموذج إذن الوالدين المعتمد من IRB والموقع من أحد الوالدين / الوصي

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