Enhancing Self-directed Learning Readiness at Elementary Level; a Study from American Schools

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Abstract

Being continual and future-oriented in all its levels, the field of education is turning towards a student-centered approach. One of the trends to investigate in lifelong learners who keep pace with the fast and unpredictable changing world is enhancing self-directed learning which is considered to be one of the most prominent phenomena for the 21st century learners. This study investigates possible ways of enhancing self-directed learning readiness in American K-12 schools. The literature highlights a three-dimension model to study the students' self-directed learning readiness: learning resources and physical arrangements of the school dimension, diagnostic and evaluation dimension, and emotional and social environment dimension. This study aims to answer the research question of how to enhance self-directed learning readiness in American K-12 schools. For this purpose, semi-structured observations were conducted to observe a teacher with one group of third-grade students. An interview was conducted with the teacher as well in order to provide more perspective to the data. The study findings highlight the importance of all three dimensions in enhancing the students' self-directed learning readiness. It is concluded by stating the crucial role of society represented in guardians, families, and private sector in boosting students' self-directed learning readiness. In addition, it is found that to achieve an active and successful community partnership, the awareness of the role of society is to be raised. Consequently, the emotional and social dimension could impact on the other two dimensions positively. Finally, this study recommends the consideration of self-directed learning and its considerable implications on the Saudi context that could help in enhancing students' self-directed learning readiness which goes in line with the Saudi vision 2030.

Keywords: self-directed learning, lifelong learner, learning resource, 21st century skill

1. Introduction

Since the learner is the pivot of learning process, a considerable amount of research around the world focused on self-directed learning. This capstone project investigates this topic and focuses on factors affecting self-directed learning readiness at elementary level in the schools of the United States of America.   An empirical study by means of classroom observations, the project aims to bring some useful lessons related to self-directed learning readiness from the American context and relate them to the Saudi one. The first section of the project introduces the Saudi educational context; the discussion is then focused on teaching challenges and difficulties, and self-directed learning readiness is highlighted to be among these challenges. The research problem and question are also stated. The introductory section ends by shedding light on the study's objectives. Saudi Arabia, an Arab country, and a member of the Gulf Council Countries (GCC), has a population of more than 34 million people. Saudi Arabia's education system has gone through an astonishing transformation.

When the Kingdom was established in 1932, education was available to very few people, mostly the children of wealthy families living in the major cities. Today, Saudi Arabia's education system includes over fifty public and private universities, with more planned; some 30,000 schools; and a large number of colleges and other institutions. The system is open to all citizens, and provides students with free education, books and health services (Saudi embassy in USA, 2019). While the study of Islam remains at its core, the modern Saudi educational system also provides quality instruction in diverse fields of arts and sciences. This diversity helps the Kingdom prepare its citizens for life and work in a global economy. In addition, The Saudi educational system aims to ensure that

students are prepared for life and work in the modern world, while meeting the country's religious, social and economic needs. Thus, Saudi educational system boosts 2030 Saudi vision. General education in the Kingdom consists of kindergarten, six years of primary school and three years each of intermediate and secondary school. Moreover, Saudi government continues to improve educational standards by offering quality training programs for teachers such as teachers qualitative development program (Khebrat), improving standards for student evaluation, and increasing the use of educational technology.

In spite of the rapid progress of Saudi educational system, there are many upsetting issues and obstacles: poor motivation for both teachers and learners, curriculum redundancy, classroom and school design, inefficient pedagogy, and passive learner (Rabah et al, 2016). Teachers play a crucial role in in facing the challenges related to the learners. However, one of the issues consistently raised as an obstacle to effective education in Saudi Arabia is the use of passive learning pedagogies and the absence of self-directed learning in Saudi curriculum (Albedah et al, 2017). Subsequently, my capstone project research is promoted by the following research question: How does American education enhance self-directed learning readiness at the elementary level?

This research is highlighted by three main objectives. First of all, inspecting and researching this area has potential personal benefits which help me to enhance my understanding about this topic. As a result, this will impact on my professionalism. Furthermore, I will be able to maintain higher levels of learners' self-directedness during my classes. Moreover, this project acts as an agent of change; Neil Armstrong said once: "one small step for man, one large step for mankind". In other words, results and recommendations offered by this study will have potential benefits in helping other teachers in Saudi Arabia and may be in other countries to enhance their learners' self-directedness. Finally, and most importantly, results and recommendations of this study will help in improving the entire education in my country as it is focusing on an important skill for learners who are the pivot of the educational process. Consequently, fostering self-directed learners, who will nourish to be lifelong learners and 21st century skills commanders, will serve to fulfill Saudi vision 2030: a vibrant community, a thriving economy, and an ambitious nation.

2. Definition

Since defining key terms is crucial in establishing intense recognition to this project, this paper is defining associated terms to how to enhance self-directed learning readiness at elementary level. One of the issues consistently raised as an obstacle to effective learning process in Saudi Arabia is the use of passive learning pedagogies and the absence of self-directed learning in curriculum (Albedah et al,2017). Common sense seems to dictate that self-directed learning is one of the preeminent theories in the field of education. Many educators assume that education is turning towards a student-central approach; the students are the catalyst for their own knowledge gathering and through that their own performance. How can learners of direct their own learning outside of the formal classroom through the use of practices that potentially advance their proficiency?

The theory of self-directed learning is developed from active learning theory. Michael Prince explains, "Active learning is generally defined as any instructional method that engages students in the learning process. In short, active learning requires students to do meaningful learning activities and think about what they are doing" (Prince, 2004). Self-directed learning (SDL) is a "process in which individuals take the initiative, without the help of others" in planning, carrying out, and evaluating their own learning experiences (Knowles, 1975). Skiff and Beckendorf (2009) define self-directed learning as the process of identifying learning needs, planning learning goals, discovering learning resources, implementing required learning tactics and strategies, and subsequently evaluating learning outcomes. Self-directed learning thus revokes the idea of a passive learner, but instead focuses on reciprocal dialogue between learner and educator, with the learner actively involved in knowledge construction (Fischer and Sugimoto, 2006).

Practically, self-directed learning implies a shift of responsibility for learning planning from the educator to the learner, with the learner controlling the learning process. Self-directed learning is thus principally an instructional method, focused on the actions of planning, implementing and evaluating learning by the learners themselves whereas the teacher is tended to be a facilitator for the learning process while utilizing engaging techniques that harness the innate capabilities of the students' brains.

3. Significance

One of the frequent questions asked when discussing self-directed learning is about identifying the pivot in learning

process at schools. If learning process is all about students wanting to learn, then it is suggested to make a transfer of power over the learning from the teacher to the student. Self-directed learning is merged from this concept which increases the student's ability to make sound and intelligent choices. The more practice students have with making their own decisions, reading their own ideas, wants, feelings and needs, weighing them against available options when they are young, the more likely they are to grow into mature, healthy, and productive adults. The significance of self-directed learning strategy and its role in the field of education is rapidly increasing. Some of the many benefits are discussed in the following section.

First of all, Stone (2016) relates the use of self-directed learning strategy to the increase of students' motivation. He says that self-directed learning involves a line of questioning and developing processes, both of which belong to the individual student. The line of questioning is rooted in the interests and curiosity of the child and is, therefore, highly motivated. Self-directed learning strategy allows students the freedom to explore, create, adapt, modify, and play with ideas because the children are the owners and sponsors of the learning process. They begin to have greater self-determination and freedom over their learning. As a result, there seems to be a renewed and genuine passion for coming to school. Many students wake up looking forward to this time at school. Similarly, Self-Determination Theory proposes that individuals have three basic psychological needs: autonomy (independence and self-sufficiency), competence (mastering a concept or activity), and relatedness (internal and external belonging or connection) (Ryan & Deci, 2000). Satisfaction of these needs, which is the soul of self-directed learning strategy, is the basis of motivation process. Provided with a highly enjoyable experience, students are more motivated to work harder on academics. They are also more willing to work independently and on their own time. That is the true essence of a self-directed learner who masters towards twenty-first-century skills.

Secondly, self-directed learning has an important role in helping students develop twenty-first-century skills such as creativity, responsibility, and effective communication. Self-directedness (self-concept) is one of the three aspects of human character in Cloninger's model of personality (Cloninger et al., 1993). This character trait involves a person's sense of responsibility, hopeful purpose, self-acceptance, and resourcefulness (Cloninger 2004). Self-directed learning increases the amount of time students spend reading and writing. Wanting to learn more about their curiosities, students become more proficient in comprehending and creating non-fiction texts and visual modes. As a result, authentic and purposeful literacy development occurs. Self-directed learning broadens students' abilities to communicate with one another and the world. Consequently, students think more naturally about the purpose of their "product" and their intended audience, thereby becoming more effective communicators. In addition, Self-directed learning promotes creative problem-solving. Students do not always have immediate access to the resources they first predict, so they need to be flexible thinkers. They become more comfortable with meeting their goals with what they have and that leads them to be lifelong learners.

Thirdly, Self-directed learning strategy provides students with the opportunity to teach themselves the most essential skill to become lifelong learners: knowledge of how to learn. Self-directed learning teaches students how to learn, rather than what to learn. By allowing this, school gives them the gift of self-education which they can grow and nourish the rest of their lives. Self-directed learning gives students further independent practice in comprehension strategies: Students read with a question in mind; they connect to their background knowledge and schema; they determine the important parts of a text to help them focus on specific inquiries; and, they take everything they have understood and combine it into a summary of their new learning. Moreover, Students become highly proficient in a range of technological applications and media. They are often inspired by their peers, so when one student tries something new, others follow him. As a result, the amount of peer-to-peer upskilling in technology builds digital learning environment. The time they spend using technology increases with self-directed learning opportunities, so there is obvious growth in proficiency in this media.

Many scholars argue that the development of self-directed learning skills is essential to introduce interest in lifelong learning which is necessary in the contexts of a global economy and an information-centered society, and promote students' self-evaluation, motivation, and critical thinking skills (Bourner, 2003; Dynan, Cate, & Rhee, 2008; Patterson, Crooks, & Lunyk-Child, 2002). The upshot of all this is that the investment in the revolution of self-directed learning strategy and its obvious significance need to have priority in research in the education field.

4. Theory

Self-directed learning readiness is the core of a significant number of theories. Among these are attribution theory and personal causation (Marriam and Cafarella, 1999), reinforcement theory (Deci, 1971), and open classroom theory (Minuchin, 1976). Nevertheless, each of these theories focuses on discrete aspects when dealing with

enhancing self-directed learning readiness. To make a complete prospective about the topic of this research project why not make a conjunction for all of these theories? Enhancing self-directed learning readiness, in which the learner is the central component, should be affected by three factors: physical arrangements of the classroom factor, instruction, diagnostic, and evaluation factor, and social and emotional environment factor without neglecting the role of the teacher in all of the three factors (See figure 1).
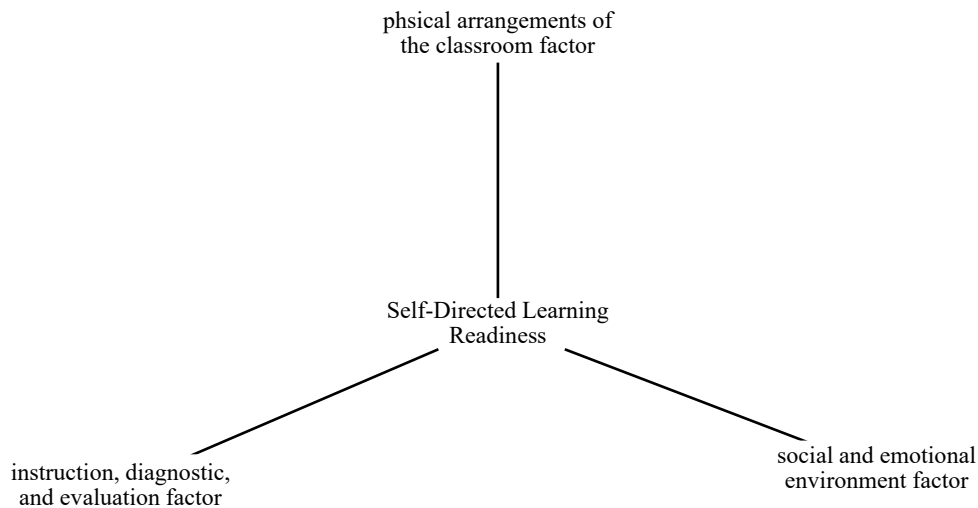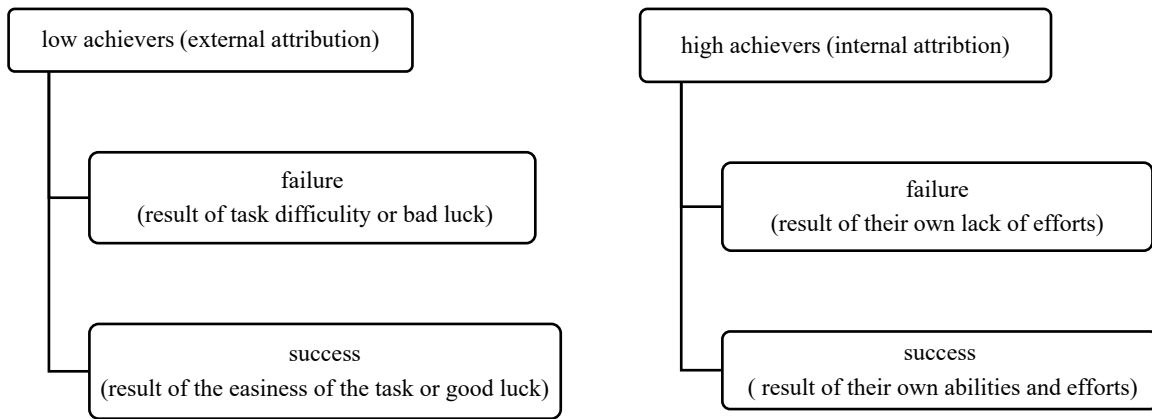

Figure 1. Factors Affecting Self-directed Learning Readiness

4.1 Physical Arrangements of the Classroom and the School Factor

The classroom, which is considered as the students' kingdom, plays a significant role when prepared well. Therefore, the classroom space and time should be flexibly arranged according to the learners' needs, materials should be allowed for different learning activities and experiences, and the teacher must be available as a guide for the learners. Consequently, as Minuchin (1976) and Wilson et al. (1972) found, the students have the opportunity to make choices, use the learning resources independently, and interact with each other and their teacher freely. As a result, learners show more self-directedness in open classrooms. Therefore, Ceylaner and Karakus, (2018) stated that physical arrangements of the classroom encourage students to make experiments and discoveries which reinforce the scientific and logical procedure of self-directed learning process; instruction, diagnostic and evaluation.

### 4.2 Instruction, Diagnostic, and Evaluation Factor

A significant amount of literature argues for the consequence of self-directed learning process and who is the pivot of this process. (critical aspects of open classroom) mentioned the learner as the predominant over the learning process. The learners take the responsibility to set goals, plan the strategies to achieve these goals, and finally evaluate this process and identify the factors that lead them to success or failure. It is recognized that low achievers who consider themselves "pawn" blame their failure on the task difficulty or bad luck (external attribution). In contrast, high achievers consider themselves as "the origin" of the learning process and attribute their failure or success to their own abilities and efforts (internal attribution) (Mariam and Cafarella, 1999). Such individuals resist against failure and deal with it as a result of effort rather than lack of ability. The teacher should give each individual in the classroom clear feedback throughout the learning process and he should develop an atmosphere in which students can take the personal responsibility for their actions (Knowles, 1975) and (Taugh, 1973). Consequently, self-directed learners search for alternative strategies to achieve their goals directed and evaluated by themselves (see figure 2) which emphasize the role of social and emotional environment on self-directed learning readiness.

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        │           failure               │        │           failure               │
        │ (result of task difficulty or bad luck) │        │ (result of their own lack of efforts) │
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        ┌─────────────────────────────────┐        ┌─────────────────────────────────┐
        │           success               │        │           success               │
        │ (result of the easiness of the task or good luck) │        │ ( result of their own abilities and efforts) │
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Figure 2. Attribution Differences between High Achievers and Low Achievers

4.3 Social and Emotional Environment Factor

Many assorted that there must be a strong emotional hook for the learners to notice something and start the learning process (Wolf, 2006) and (Zull, 2006). Social and emotional environment can be dealt with from another perspective; reinforcement which is classified into external reinforcement and internal reinforcement. On one hand, external reinforcement can be divided into verbal (social) reinforcement provided by the teacher and the other learners, and monetary (concrete rewards). Consequently, external reinforcement leads to extrinsic motivation. On the other hand, internal reinforcement leads to intrinsic motivation. When extrinsic motivation is employed professionally, it leads to intrinsic motivation. In self-directed learning, intrinsic motivation plays a crucial role because it is the engine of self-directedness which starts with intrinsic motivation, then self-monitoring and management, and finally self-evaluation (see figure 3). From what is mentioned, emotions are cited as an aspect of individual identity that plays a role in self-directed learning (Danis, 1992).

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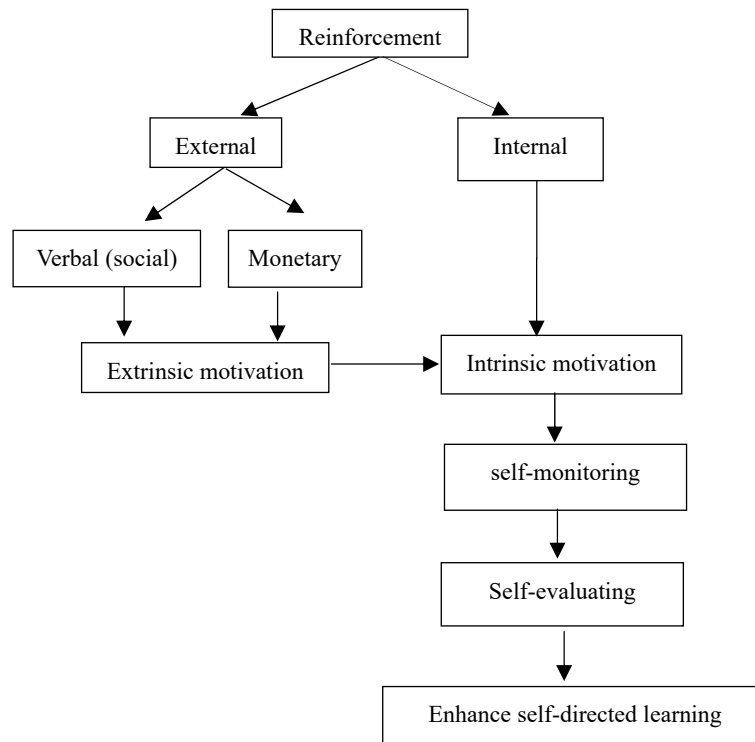
Figure 3. Effect of Reinforcement on Self-directed Learning Readiness

To conclude, it is obvious that self-directed learning readiness is affected and impacted by a number of factors. The following sections use these three factor groups (physical arrangements of the classroom, instruction, diagnostic and evaluation, and social and emotional environment) as a structure to investigate factors that affect self-directed learning readiness at elementary level.

5. Methodology

Change is an inevitable and continuous process in social situations. Therefore, action research methodology is used to overcome the limitations of traditional methodologies when researching changing situations (Somekh, 2005). This section discusses the methodological aspects of the capstone project and it starts by describing the prospective study site and participants. Proposed data collection tools are presented and discussed. The section also discusses data collection methods and concludes by shedding light on ethical considerations of the study.

This study takes place in an American elementary school (K-5) located in Southern California. The school is among the most prestigious ones in the area scoring 10 out of 10 according to a recent review conducted by Great School Organization (reference removed for confidentialities) the school services about 975 students and has about 85 members of faculty. The school offers three extracurriculars relating to PE, art, and music. Taking place in only one of the grades, the study observes one teacher instructing one group of 3rd grade students in all subjects except for PE, art, and music.

Data for this study is collected by means of classroom observations and teacher's interview. This enables me to observe, witness, and capture actual moments and relevant incidents in relation to the research topic and question. The nature of this study investigating factors affecting student self-directed learning readiness has encouraged using this research tools rather than surveys or any other research method. This study uses a semi-structured observation format in which a number of items under three distinct sections following the theoretical framework are recorded: physical arrangements of the classroom section, instruction, diagnostic, and evaluation section, and social and emotional environment section (see appendix 2 and 3 for observation and interviews schedule). Before I start observation, I used the observation schedule to observe one class and examine if the observation schedule fits and covers all aspects that I wanted to observe. Finding some gaps and miss order in the observation schedule (see appendix1), I edit it to make it more appropriate. Each of the items and sections allows space for further comments and notes to give the research tool flexibility in capturing emerging issues. In addition, this study uses the method of person-to-person semi-structure interview, in which one person elects information from another during a conversation that has a structure and a purpose (Tisdell, 2016). The items in the observation schedule and the Questions for the interview are empowered by the theoretical model discussed in the literature section (see figure 4). This study also collects some visual data, photos and video clips using phone functions, whenever appropriate to provide more vivid picture and understanding of the context of the study.

In relation to data analysis, a number of data analysis methods are considered. Since the semi-structural observation has generated systematic qualitative data (Taylor et al., 2016), the Miles and Huberman (1994) model of data analysis is used where data are (1) reduced to summary, (2) displayed and coded visually, and (3) made conclusions finally. Findings from the data analysis are presented in this research project following the three themes/aspects provided above, thereby offering the study more cohesion and structure. Although the data collected for this study is qualitative, some quantitative descriptive analyses is used, e.g. frequencies or counts. The analyses also make use of charts for ease of understanding and summarizing.

Regarding ethical considerations, the study respects common codes of ethics, e.g. voluntary participation in which none of the participants in this study is forced (or feel forced) to participate or provide information. All participants are informed about the purpose of the study. The study also respects participant confidentiality and welfare in which no harm is to results to participants, parents, teachers, administrators or schools from participating in this study. Moreover, all names used in this study are pseudonymous and anonymity of the participants are protected at all stages. All data collected is used exclusively for this study.

Results and Conclusions
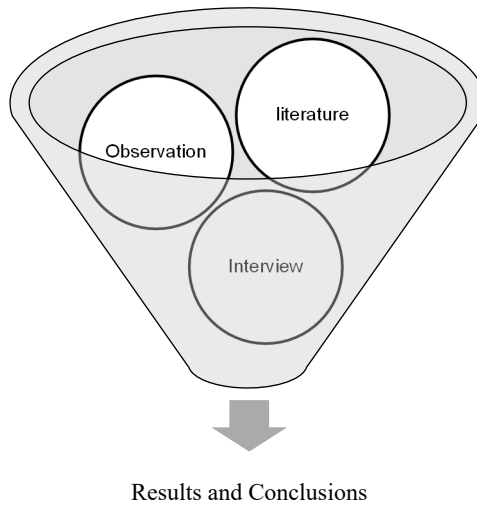
Figure 3. Factors Empowering the Items in the Observation Schedule and Interview Questions

6. Results and Discussions

Results from the data collected for this study on enhancing students self-directed learning readiness in American elementary schools by means of semi-structured observations and semi-structured interview are presented in this section supported with some visual data. As mentioned in the theory section, the analysis follows similar sections and sub-sections in which the theoretical model constructed the initial framework of data analysis.

6.1 Physical Arrangements of the Classroom and the School Factor

The theme of physical arrangements of the classroom and the school factor is presented and discussed in this section. The analysis from the data with the one teacher and eight classroom observations, two of them are online classes as the immersion phase was continued through virtual distance learning and home schooling because of the quarantine resulted from covid-19 pandemic, highlighted five sub-themes. The first of them was technological equipment such as computers, tablets, labs, etc., and technical application and software such as iRready, google classroom, school loop, freckle (see figure 5).
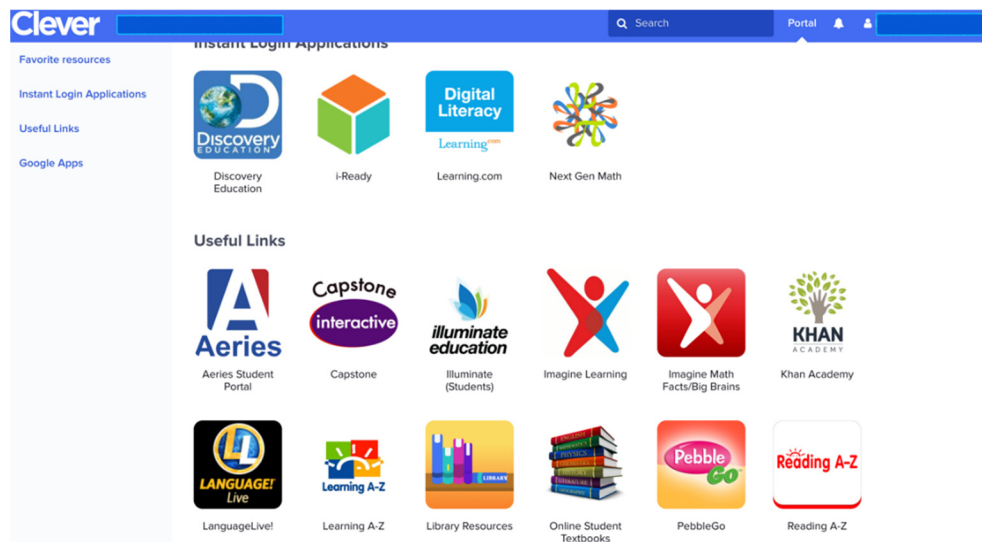
Figure 4. The Student's Page in the School Website

Throughout the observed sessions, it was noticed that technology is overwhelming the classroom environment. The classroom is equipped with an overhead projector, a document camera, a printer, and a PC for the teacher. Moreover, there were chrome books and headphones for every student in the class and there were tablets for non-native students to help them translating new words. Students used applications provided by the school district in 70% of the time of all sessions. The teacher started the session and show the students what to do then let the rest of learning process for them. Independently, the students work on the applications, do the experiences, and search for more content to understand what they did not completely get from teacher directed by themselves. They used the resources that fitted their personal needs and the usage of these technical instruments and application continued through the school closure and the home schooling which resulted from covid19 pandemic. Each student. Was given a chrome book to use at home and there was free internet access for those students who didn't have internet at their homes. I asked the teacher about the software and resources provided for the students and she said that they were tested, purchased, and observed by the school district to guarantee the content quality and the privacy of the students' personal information and security. She added, "we are so fortunate that iReady is allowing our school to have the iReady instruction tools. Typically, it is $40 per student to have these tools and iReady gifted this instruction tool to our school district during the school closure. The idea behind these tools is that each student progresses at their own pace. iReady diagnostic knows what the student's strengths and relative areas of struggle are and they work on those areas through specific lessons. During this time of Distance Learning, it would be great if the student was on iReady instruction for 45 minutes per subject, each week…this would help their continued education. ". The second sub-theme was self-independent workspace. In all observed sessions, the students had the chance to work in an isolated and private space either in an adjoint room or by using a kind of a carton isolator (see figure 6).

Figure 5. Students Using Carton Isolators to Protect Their Privacy and to Help Them to Concentrate

When investigated further with the teacher, she said this privacy and isolation give the students a better chance to be more creative and more versed problem solvers. The third sub-theme was the library wither it was the school library or the digital one which was provided by the school district. There were hundreds of topics, books, and audiobooks within the student's fingertip. The students visited the school library once a week and the library visits were fixed in the class schedule (see figure 7).

Figure 6. One of the Reading Corners in the School Library

Students had to borrow two books each week and return them back the next week to school library to pick another two books and so on. The teacher said, "reading for 20 or 40 minutes a day enhances the students' abilities of critical thinking and their comprehension which are crucial in self-directed learning." There were websites for reading comprehension such as i-Ready and AR in which the student was able to choose the book she or he wanted to read and answer the comprehension questions about it. The student had the freedom to choose the book and was able to read the next one as he finished answering the questions related to the previous book. So, the students didn't stick to their close level, but they were able to read on their own levels. This point reinforced the students self-directed learning readiness. The fourth sub-theme was the class time devoted for self-directed learning. It is believed in self-directed learning theory that 20% of the class time must be dictated for students self- directed learning. Surprisingly, the class time for self-directed learning was over 70% of the session time. The teacher clarified that they started with 20% in kindergarten and increased the time gradually as students moved to upper grades. In the observed online sessions, the time for self-directed learning increased to 90%. The students showed an amazing ability in mastering self-directed learning in distance learning and home schooling.

The fifth subtheme was the extra-activity and experience experiment kits. In all sessions observed, the students were allowed to use kits designed for the subject they were studying. When the student was done with his classwork, she or he was able to use a kit to play in or learn using it while the rest of the students were working on their class activities. Those kits were especially designed for kids whose levels were higher than their classmates. This way they wouldn't annoying their mates as they had done their work and had free time and at the same time, they learnt something new and increased their knowledge. The teacher said that those kits were not only used by high-level students but also, they were used by students who were beyond their class level to enhance their learning and to get the information and skills that they couldn't get from the teacher and learn them on their own way using those kits. Putting this factor in consideration, In my opinion, might help in overtaking the obstacles, mentioned by Rabah et al, 2016, that face Saudi educational system.

6.2 Instructional, Diagnostic, and Evaluation Factor

The analysis of the data in relation to instructional diagnostic and evaluation factor highlights seven practices that affect student's self-directed learning readiness. The first sub-theme of this factor was student's determination of what they need to learn at the beginning of all of the observed sessions. The teacher showed the students a to-do-list for what they had to do during the session. The teacher kept the to-do-list in front of the students until she made sure that all of them got what they had to do during the session. When I investigated the teacher about that, she commented; "this helps students to concentrate on what they have to do and not to be disturbed by nonimportant and non-related duties… this way, the students are able to manage their goals and consequently determine how to reach them… and this is the base of self-directed learning." The second sub-theme was students could choose learning method. In all observed sessions, the teacher chose the method to explain the lesson to the students for the first time, then the students could reinforce their own learning and choose the method suitable for them to get what they didn't

understand from the teacher. The teacher said that each body is the best one to determine the best ways and strategies to achieve his or her goals according to his or her own needs and own abilities. So, the teacher according to her experience chose the best method to apply on her students while keeping in mind the individual differences between students and that the students themselves could fill this gap. The third sub-theme relating to this factor was the students got clear feedback from the teacher and other students. The teacher gave a recent and clear feedback to most of the students. There were 24 students in the classroom and the teacher couldn't give them all feedback for every step. So, she depended on dividing students into groups and pairs. For example, shoulder partner, face partner…etc., and evaluated and gave feedback for the whole group or pair. Students also gave feedback to each other. This feedback was in a certain structure and process. For instance, in 'quiz-quiz-trade' or 'numbered heads together' in which students shared their work with their partners, they must coach and praise. That means when a student was coaching how he or she solved the math problem for instance, his or her partner should praise him or her and show appreciation to his or her efforts. This way students accepted the feedback from their mates and accepted their criticism and tried to improve themselves without being sensitive or afraid of making mistakes as the teacher clarified in the interview. The fourth sub-theme was that students practiced independent work.   Since most of the class time was dedicated for self-directed learning, there was apparent independence in students work. In most of the class time, students worked independently either on their computers or in reading and comprehending books. Either in groups or in pairs, students had to solve problems and answer questions by themselves, then they shared their work with their groups or their partners. In the interview, the teacher commented on this point and said that" if the learning process is all about the learner, making this individual the pivot of it is imperative." The fifth sub-theme was the students ask questions either to the teacher or to each other. It was observant how the students were given the opportunity to ask questions to which the teacher responded patiently. Students were not hesitance nor were shy about asking questions. Not only the students were allowed freely to ask questions to the teacher but also their classmates were involved in the questioning process and in discussing those questions. The interviewed teacher explained this point and emphasized its importance in enhancing the students self-directed learning readiness as the freedom in asking questions proved to students that they had the right to ask questions and to search for clarification if they were not convinced. This leaded to reinforcing the students critical thinking which is a crucial component of self-directed learning. The sixth sub-theme was that there were other learning resources for the students rather than the teacher. Even though the students were allowed to ask questions, the teacher did not give them the answer directly. In most of the observed sessions, the teacher guided the students to where they could find the answers disregarding the questions difficulty. In two of the sessions two students were crying to beg the teacher for help to find some information related to their writing project and all what the teacher did was to refer them to some websites which might contain that information. Sometimes the teacher pointed to some posters hanged on the classroom or told them which website or book could provide them with the information they wondered about. I asked the teacher in the interview about what I noticed, and she said" I don't serve the information in a platter for students!" and added, "teachers tend to bring up a lifelong learners who have to learn how to get the information from trusted resources as they will face problems need to be solved and questions need to be answered throughout their lives." This comment led to another sub-theme which was that students had to prove their answers with evidence and reference. In all observed sessions, students had to support their answers with how they got the answer and, in writing and reading assignments, what part of the text supported their claims. This requirement, as the teacher clarified in the interview, ensured the importance of being honest and logical in analyzing and judging when searching for the information. The last sub-theme in this factor was that the students self-evaluate themselves. As noticed in above sub-themes, students received feedback from their teacher and classmates. Consequently, students could use this feedback to self-evaluate themselves and to judge their own experience. In all assigned projects, the teacher passed the students a printed rubric to follow. This way, the students were able to evaluate their work and judge it according to the rubric before handling it to the teacher. In the interview, the teacher commented, "the students don't do their work hit or miss…, they must be aware of what is expected from them." In my point of view, this factor could play an important role in moving the educational system in Saudi Arabia from passive learners' pedagogies, mentioned by Abedah et al, 2017, into active and self-directed learners' curriculum.

6.3 Social and Emotional Environment Factor

Having presented and discussed the results regarding the first and the second themes in relation to self-directed learning readiness, the final theme which was social and emotional environment is presented and discussed here. The analysis of the data collected from the interview and the observation of classroom and online sessions together highlighted a number of sub-themes. The first of them was monetary reinforcement. It was noticed that the teacher did not over-reinforce her students with token rewards. In all observed sessions, the teacher did not give any concrete

rewards to the students except for one time when a student behaved well in a fire drill. This reward was a check of points which students collected to exchange them with products presented in an attractive cart. Those products varied in their value; some are for 5 points others are for ten or more. Students could exchange their checks as soon as they received them or keep them until they receive more checks and collect more points to exchange them for those more valuable products. The teacher explained that this method of collecting points train students not to expect a recent reward for their efforts. She added, as a teacher, I mean not to give too many token rewards for the students because if so, this will decrease the students' passion to learn and will attract their whole attention to the rewards. It is more than enough if they have one big reward each trimester. The long-term reward strategy helps students to be more patient and work harder to achieve their goals which are essential skills in self-directed learning in which students learn how to set long-term goals. As a kind of mandatory reinforcement, the school administration held an assembly at the end of each trimester for the students who achieved the task goals in AR which is comprehension reading website where students read books within their own comprehension level regardless to their class level and as much as the students read books and answer their comprehension questions, as much as they gain points. The second sub-theme which is social reinforcement obviously appeared in this occasion which was well managed and attended by other students and school staff. This big event attracted the students' concern and was such a successful social reinforcement for them. The interviewed teacher explained that the rewards were given to reinforce the self-directed learning skills and perseverance and no student was rewarded for being smart or having super intellectual skills. This social reinforcement which appeared in these occasions made students realize the high status of persevere and hard workers in the society. As a result, students were aware that success and knowledge are not only for gifted and smart people, but also for those self-directed learners who seek for information and work hard to get it. The third subtheme was the verbal reinforcement from the teacher and other students. As mentioned in one of the sub-themes of the second theme which was instructional, diagnostic, and evaluation factor, the students received verbal reinforcement and positive comments from their teacher and classmates when receiving feedback from them in activities like Quiz-Quiz Trade and numbered head together where students have to coach and praise. The emotional factor was one of the top priorities in the classroom. This appeared clearly when a student was coaching his or her partner, the partner must give compliments to the coach. When investigating the interviewed teacher about this, she explained that the student should feel safe and recognize that he or she is accepted by others. Consequently, the student would be more confident, would do his or her best, and would take advantage of his or her potentials which enhanced self-directed learning readiness. The fourth sub-theme was the internal reinforcement. In all observed sessions, the teacher asked students after they did hard tasks to give themselves 'a pat on the back'. The interviewed teacher commented on this, the students should love themselves and should appreciate their own efforts even if they did not succeed in the given task from the first time. They should have self-steam to face difficulties. Students should not be hard on themselves if they failed, and they had to try more and more until they succeed which is an essential characteristic in self-directed learners. The fifth sub-theme was social activities. In two of the observed classes, the teacher gave the students the opportunity to participate in some social activities in which the students could interact with the society inside and outside the school. One of those activities was the crazy hat day which occurred in literature week. The students had the opportunity to create their own hats. Any design and any material were accepted so the students were not afraid of being laughed at by others and realized that there were no limits for their imagination and creativity.

7. Conclusion

This study investigated issues related to student self-directed learning readiness and this was done through an empirical investigation conducted at an elementary school in the US. The study started by an introductory section which shed light on the Saudi context focusing on education and current challenges. The study was underpinned by the research question about factors affecting student self-directed learning readiness as a major challenge for educators in Saudi schools. The study also reviewed some of the current literature on the topic and a theoretical model was used. The study also discussed methodological aspects of the empirical investigation. Results were also discussed in relation to the topic and the research question. This concluding section provides a summary of key finds. It also presents some relevant recommendation and discusses some of the study limitations and challenges.

In relation to the study results and findings in light of the research question of what factors affect student self-directed learning readiness, it is highlighted that there are three groups of factors. The first group is highlighted to be related to the physical arrangements of the classroom and the school. A number of issues are discussed in this section and the most significant issue is technological equipment and applications used in the class. The results highlight the importance and relevance of using technology as this helps enhancing self-directed learning readiness.

The second most important issue is self-independent workspace, and it is found that it is an important aspect as it makes the students feel safe and free in navigating their learning journey. The third most significant issue is the school library in its two forms real and virtual. The library plays a crucial role in enhancing the students' self-directed learning readiness as they have the choice in picking title that fulfilled their passion. Other issues related to physical arrangements and the students' self-directed learning readiness that are evident in the study are those of the class time devoted for self-directed learning and the extra activity kits. The instructional, diagnostic and evaluation factors are the second group of factors affecting student self-directed learning readiness. The most important three factors are students' determination of what they need to learn at the beginning of the observed sessions, students practicing in independent work, and students' evaluation of themselves for their work. Some instructional, diagnostic and evaluation factors are found not to be evident in this context of this study, e.g., students receiving feedback from the teacher and each other. The third group of factors affecting student self-directed learning readiness relates to the social and emotional environment which is found to impact significantly on students' level of self-directed learning readiness. For the first factor, monetary reinforcement, it is evident that concrete rewards are aimed to be diminished and underestimated in observed sessions. So that, the motive for learning stemmed from the students' desire for learning aside from concrete rewards which enhance self-directed learning. The only concrete reward given to the students is cheques which are collected by student to be exchanged with monetary rewards at the end of each week or each trimester to build a long-term reward. As a result of that students might be more patient and more perseverant in achieving their goals which impact positively in self-directed learning. The second most significant factor is verbal reinforcement which caught the teacher attention to be done most of the time when giving feedback to students either from the teacher or from the other students and it appeared in the observed sessions in different forms. Based on the empirical study and the findings, the study provides several recommendations that could enhance student self-directed learning readiness in this context or other relevant contexts. The findings are also relevant in their impact on the Saudi context since a major objective of the study aims at reflection and improvement.

From the findings above, it is concluded that in maintaining students' self-directed learning readiness, no one of the three factors can be estimated as they are completing each other. Learning resources and the physical arrangement of the school are the setting in each the learning process takes place. So that, they should be well prepared and well equipped to support and facilitate students' self-directed learning. This suggests that the educational systems are advised to invest in developing learning resources including public and school libraries, educational software and database in a form of easily accessible applications, and schools' equipment. Examples of these are independent work supplies such as classroom self-isolators, experiment kits, and internet accessed computers. Moreover, there should be a large variety of titles and topics in the school library which should be available for students either at school or online. This should be available both, when students are at home or in vacations while schools are closed. This way, the information is available for students in anywhere and at any time. From my professional experience in educational field, the teacher plays a crucial role in the diagnostic, analysis, and evaluation factor especially in the students' early years at school. This could be improved and achieved in a high standard by training the teachers to be provisional facilitators for students and to guide them not only to discover their own gifts but also to decide what to learn and how to learn it while evaluating themselves according to their learning outcomes. Most importantly, students should be taught the scientific research methods. They should practice how to get the information from trustful resources and filter them using high standard restrictions.

Not being concrete and measurable, emotional and social factor should attract a special concern to make sure of reinforcing it. This factor is the engine which boosts students to be self-directed learners as it spurts their intrinsic motivation. Since it is observant that the society presented in guardians, families and community plays a vital part in this field, it is recommended to activate the community partnership properly to support the school efforts in reinforcing the students' self-directed learning readiness.

At the beginning of it on early spring of 2020, COVID-19 pandemic was considered to be one of the challenges as it switched the schooling into a distance online schooling. However, it turned to a privilege that revealed the valuable self-directed learning skills which students built during ordinary schooling. The importance of these skills in continuing the learning process in such challenges and circumstances. During the pandemic, the ball was in the learners' court to present their self-directed learning abilities and to integrate them with home schooling. For the challenges facing self-directed learning in Saudi elementary schools, most of them can be underestimated by professionally activating community partnership. Private sector could participate by providing the schools with educational supplies such as the library books, computers, and the classroom and labs equipment. Technological content and software could and improved by the private sector, too. However, all these initiatives must be under the umbrella of the ministry of education supervision in order to guarantee the quality. Another challenge which is

facing self-directed learning in Saudi Arabia is the assumption that the traditional schooling with the teacher considered as the main resource of information. Depending on my experience in teaching different K-12 grades and levels since 2001, most students and guardians in Saudi Arabia expect the teachers to carry out the learning process and provide the learners with information without investigating the information resources or searching how this information resulted. So, families and students should be educated about their active role in the learning process which is all about learners and should be directed by the learners themselves.

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Appendix 1: Classroom Observation Schedule

Self-directed Learning Readiness Classroom Observation Schedule			
Date: / /	Start:	End:	Number of Students:
Teacher observed:	Subject:	Grade:	Location:
Lesson Topic:		Observer:	

Physical Arrangements of The Classroom Factor			
Factors	Frequency	Notes	Reflections
Technological equipment (computers, tablets, document camera…etc.) and software			
Self-independent workspace library			
20% or more of Class Time is devoted for enhancing self-directedness			
Extra activities and experiments space and kits			
Other emerging issues			

Instruction, Diagnostic, and Evaluation Factor			
Factors	Frequency	Notes	Reflections
Determine what they need to learn			
Choose the method of learning			
Students have to prove their claims with evidence and references			
Clear feedback from the teacher and the other students			
Students practice independent work			
Students ask questions			
There are other learning resources rather than the teacher			
Students self-evaluate themselves			
Teacher guide students where to find the information when they ask rather than providing it directly			
Other emerging issues			

Social and Emotional Environment Factor			
Factors	Frequency	Notes	Reflections
Monetary reinforcement (Concrete rewards)			
Verbal reinforcement			
Internal reinforcement			
Students have a space for social activities			
Other emerging issues			

Appendix 2: Interview Questions

1. How do you teach students to learn what you don't know?

2. How do you teach students to become problem solvers?

3. What are your expectations for students to self-assess their work and publish it for a wider audience?

4. How do you give students an opportunity to contribute purposeful work to others?

5. How do you teach students to manage their own learning?

6. Do you use rubric?

7. What are the websites designed to support self-directed learning at elementary levels and under the district supervision?

8. Who design them? Is it a part of community cooperation?

9. How do you build critical Thinking, which is the base of self-directedness, for students?

10. How much class time is allowed for students to practice their self-directed learning?

11. How does curriculum support self-directed learning?

12. Is self-directed learning mentioned directly in the curriculum? clarify.

13. What is the family role in enhancing self-directed learning for their kids?

14. What is the role of community (public and private institutions)?

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