

# Emerging Self-Directed Learning Strategies in the Digital Age

# Emerging Self-Directed Learning Strategies in the Digital Age

Currently, society is becoming increasingly involved in self-directed learning for both intellectual and professional development. As such, it is imperative that both researchers and educational professionals update themselves on the current research on self-directed learning and how it has created a new culture of independence.

**Emerging Self-Directed Learning Strategies in the Digital Age** is a key resource for the latest research on the role of self-directed learning and how it is impacting society, educational professionals, and researchers in their day-to-day work. Featuring broad coverage among a variety of relevant views and themes, such as project based learning (PBL), student goal setting, and self-efficacy theory, this book is ideally designed for educational professionals working in the fields of teacher pedagogy, theory, instructional technology, and adult education, as well as academics and upper-level students looking for innovative research on one-to-one programs and learning analytics.

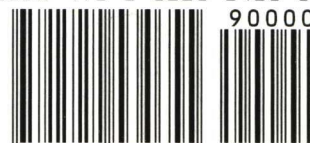
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- Blended Learning
- Case-Based Learning (CBL)
- Educational Technology
- E-Learning
- Project-Based Learning (PBL)
- Self-Efficacy Theory
- Student Goal-Setting



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**Giuseffi**

**Emerging Self-Directed Learning  
Strategies in the Digital Age**

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# Emerging Self-Directed Learning Strategies in the Digital Age

Frank G. Giuseffi  
*Lindenwood University, USA*

A volume in the Advances in  
Educational Technologies and  
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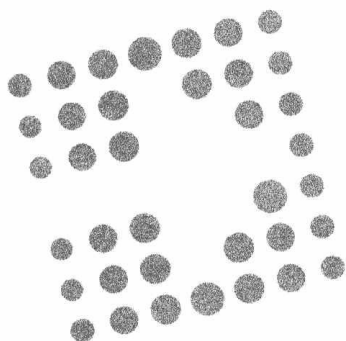
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Education has undergone, and continues to undergo, immense changes in the way it is enacted and distributed to both child and adult learners. From distance education, Massive-Open-Online-Courses (MOOCs), and electronic tablets in the classroom, technology is now an integral part of the educational experience and is also affecting the way educators communicate information to students.

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## Preface

There is a synergistic relationship between self-directed learning and our current digital (information) age. As will be discussed throughout this publication, self-directed learning is deeply intertwined with technologies that define the 21<sup>st</sup> century. To state it another way: Today's technologies require effective self-directed learning strategies and techniques. Definitions of both self-direction and the digital age are not static; they should be seen as ongoing processes that continue to be re-defined as new challenges emerge in the world. Self-directed learning is when the learner is responsible for his or her own learning – what he or she will learn and how he or she will learn it (Isenberg, 2007). There must be a clear understanding of the current and future skills and strategies needed in self-directed learning. I do not argue that self-directed learning is a new educational theory. Indeed, the concept of self-directed learning has always existed. Even in antiquity we find an example of self-directed learning when Meno approaches Socrates to ask if virtue can be taught. Meno is taking responsibility for his own learning by pro-actively asking Socrates a question (Plato, trans. 1997). Every successful educational encounter requires, at some point during the experience, self-direction from the learner(s).

We learn, work and live in digital environments. The use of social media, in all its various forms: Twitter, Facebook, Snapchat, LinkedIn, YouTube, Pinterest, Reddit and Instagram, to name just a few, are the regular tools we use for communication, knowledge acquisition, work production and social experiences. No longer is eLearning a special kind of educational experience; it is now a common and acceptable way for learners, especially those in higher education, to achieve their learning goals. This educational encounter creates a more interdependent relationship between teacher and student(s). Essentially, our encounters with technologies naturally lead us toward self-direction.

The impetus for this publication was to illumine to readers a renewed sense of the importance of self-directed learning in the 21<sup>st</sup> century. Learners must be more self-directed as they engage with others, master skills and navigate through their formal educational experiences. Adult learners are encountering work environments that are less linear in organizational structure and leadership (Wagner, 2006).



## ***Preface***

Consequently, the culture of work signals the skills of collegiality, asking probing questions, active listening, and an entrepreneurial spirit from individuals and teams. Various scholars in this book offer readers information on emerging self-directed learning strategies that will help navigate through the complexities and changing dynamics of this unique age of ours.

Dr. Maria Orlando of Lindenwood University and Dr. Linda Howard of Nerinx Hall High School, correctly point out in “Setting the Stage for Success in an Online Learning Environment” an increase in online learning and that specific requirements are needed in self-regulated learning. Yet, self-regulated learning is rarely practiced among students. In light of this, along with the many challenges students confront in online learning, various teaching strategies and techniques are explored and recommended.

In “Mobile CGPA Monitoring System: A Tool to Guide Self-Directed Learning,” Professors Muhammad Aminu Umar, Abdullahi Shuru, Aliyu Muhammad Kufena, Mohammed Yahaya Tanko, Ahmed Aminu Sambo and Sani Ahmad Hassan from Ahamdu Bello University in Nigeria, present information on how a mobile CGPA can assist students in determining and analyzing their cumulative grade point averages, adding to their experiences in self-assessment and self-regulation.

The chapter “MOOCs in TVET Sectors of Developing Countries: Benefits, Possibilities, and Challenges” by Dr. Shahadat Hossain Khan, Professor in the Department of Technical and Vocational Education at Islamic University of Technology in Bangladesh and Dr. Mutawalibi Nambobi, research graduate, and Dr. Sakawat Ali, Principal of Bangladesh-Korea Technical Training Center, present information on what they argue has not been fully investigated: the incorporation of MOOCs in TVET sectors of developing countries; they offer recommendations and suggestions as to how to effectively bring the two technologies together.

Senior Lecturer, Dr. Jayaranjani Sutha from Uva Wellassa University in Sri Lanka, investigates the effect of adult learning theory on professional training in her chapter, “Exploring the Role of Adult Learning Theory in Understanding Employees’ Participation in Non-Mandatory Training.” She argues that expectancy theory of motivation and perceived organizational support theory are not the only theories that have supported training, but that adult learning theory can be the foundation for employee non-mandatory training.

Dr. John Long, Chair of the Doctor of Education Program at Lindenwood University, presents a research study that looked at the connection between adult learning theory and dissertation writing in his chapter, “The Intersection of Andragogy and Dissertation Writing: How Andragogy Can Improve the Process.” He argues that principles of Andragogy can improve the challenging experience of dissertation writing and investigates key components to self-directed learning.

In “Self-Directed Language Learning, Asian Cultural Influences, and the Teacher’s Role,” Dr. Hong Shi of China University of Petroleum-Beijing and Dr. Maria Martinez Witte of Auburn University argue that culture impacts self-directed language learning. Time and support must be given to international students that are not familiar or experienced with autonomous learning and student- centered education. Strategies such as scaffolding, self-assessment and strategy-teaching are analyzed and recommended.

In “The Role of Metacognition and Knowledge Transfer in Self-Directed Learning,” Dr. Gina Mariano, Associate Professor of Educational Psychology at Troy University and Kirsten Batchelor, also from Troy University, address the issues of learning and knowledge acquisition by exploring how metacognitive learning strategies can positively influence learning; they also discuss the connections between metacognition, knowledge transfer, critical thinking and self-directed learning.

Digital technologies along with essential questions impact self-directed learning strategies and successful pedagogy according to Dr. Ronda Cypret-Mahach, Instructor at Lindewood University’s School of Education. She fully investigates this timely topic in her chapter entitled, “Transformational Shifts of Pedagogy Through Professional Development, Essential Questions, and Self-Directed Learning.”

It is my hope that this publication will inform educators, engender dialogue, improve learning, and add to the current research involving new and relevant self-directed learning strategies in our digital world.

*Frank Giuseffi*  
*Lindenwood University, USA*

## REFERENCES

- Cooper, J. M. (Ed.). (1997). *Plato: Complete Works*. Indianapolis, IN: Hackett Publishing Company, Inc.
- Isenberg, S. (2007). *Applying andragogial principles to internet learning*. Cambria Press.
- Wagner, T. (2006). *The global achievement gap*. New York: Basic Books.

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Setting the Stage for Success in an Online Learning Environment ..... 1  
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*Linda Howard, Nerinx Hall High School, USA*

Online learning in higher education has become increasingly popular because of the convenience and flexibility that it provides. Self-regulated learning, which requires students to plan, monitor, and assess their own learning, has been recognized as a key predictor of academic achievement and motivation in student learning. Few students, however, naturally do this. In order to guide students to become self-regulated learners and for these experiences to be successful for both the students and the instructor, instructors should use pedagogical strategies that differ slightly from those they have used in traditional classrooms. The purpose of this chapter is two-fold: to identify some of the challenges presented to students in an online learning environment and to give an overview of some possible solutions that an instructor can implement in order to address those challenges and give students tools to help them to become self-regulated learners.

**Chapter 2**  
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The digital age also referred to as information age is characterized with the ability to transfer information freely and quickly. This makes self-directed learning strategies



to gain ground. Self-directed learning facilitate students or learners to take ownership of their learning. Individual academic performance monitoring is an essential part of self-directed learning. In order to achieve this, certain performance measuring technique is required to guide learners in monitoring their performance such as Cumulative Grade point average (CGPA). Students' Academic performance of is characterized by the overall performance in both test, course work and examinations each year which culminates in a grade point average. This has help in determining the academic standing of students. Therefore, this chapter proposed a mobile CGPA calculator to help students monitor and measure their performance during the learning process. The system is proven to be effective against the required functionalities.

**Chapter 3**

MOOCs in TVET Sectors of Developing Countries: Benefits, Possibilities,  
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*Md. Shahadat Hossain Khan, Islamic University of Technology (IUT),  
Bangladesh*

*Mutwalibi Nambobi, Islamic University of Technology, Uganda*  
*Md. Sakawat Ali, Bangladesh-Korea Technical Training Centre  
(BKTTTC), Bangladesh*

This chapter discusses about the recent innovation in the area of educational technology, which is widely known as Massive Open Online Courses (MOOCs). Very few studies in the existing literature elaborated about the MOOCs in the developed countries, where the focus was on mainly asserting the nature of MOOCs platform and its possibilities. However, very less attention has been observed in relation to incorporate MOOCs in TVET sectors of developing countries. In order to fill this gap, this chapter has four main areas to discuss: provides general features of MOOCs platform; identifies benefits of incorporating MOOCs; presents emerging possibilities of using MOOCs; and identifies the challenges confronting TVET sectors for integrating MOOCs in any developing country. In order to improve the present constraints, this chapter further provides suggestions and recommendations that are useful for TVET stakeholders for formulating policies in relation to MOOCs.

**Chapter 4**

Exploring the Role of Adult Learning Theory in Understanding Employees'  
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*Jayaranjani Sutha, Uva Wellassa University of Sri Lanka, Sri Lanka*

The theme of employees' non-mandatory training participation intention has been viewed as being supported by limited theoretical foundations, specifically expectancy theory of motivation and perceived organizational support theory. Although contributions made by adult learning theory have long been acknowledged, it is important to recognize the unique role it has played by incorporating three theoretical

pillars and consequently providing a strong foundation for employees’ non-mandatory training participation intention. By identifying the relationship between employees’ non-mandatory training participation intention and one of its closely allied fields, viz. adult education, this article argues that it is actually adult learning theory that provides a foundation and linkage for both fields.

**Chapter 5**

The Intersection of Andragogy and Dissertation Writing: How Andragogy  
Can Improve the Process.....81  
*John D. Long, Lindenwood University, USA*

Andragogy is a theory that attempts to explain how adults learn in contrast with pedagogy which attempts to explain how children learn. In many universities, doctoral students struggle to complete the final requirement for graduation, the dissertation. Little research has been conducted on this issue. Two studies were conducted to assess the effectiveness of the ten-year-old doctoral program in education at the author’s university. The author believes that using andragogy theory it is possible to modify the doctoral program to allow a higher percentage of students to complete their dissertation and for all students to experience less frustration with the process. Both interviews and statistical analysis were used to better understand what was working, what was not, and to suggest potential modifications to the program. Certain variables such as dissertation advisor, emphasis area, and previous teachers proved to not be significant. A student’s reported self-motivation emerged as significant.

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*Hong Shi, China University of Petroleum – Beijing, China*  
*Maria Martinez Witte, Auburn University, USA*

The purpose of this chapter is to identify cultural influences on self-directed language learning. Self-directed language learning may take place in the classroom environment, but mainly goes on outside of the classroom, and how students regulate this aspect of learning is crucial to their language learning and academic success. Autonomy is a key characteristic of western education while some aspects of collectivist culture appear to be impediments to autonomous learning. Culture influences learners’ beliefs about the learner and teacher’s relationship and their perceived roles in language learning. Students accustomed to more teacher-centered classrooms need to be given time and support to make the transition to new forms of learning. Teachers are suggested to provide guidance and assistance for learners, such as scaffolding, strategy teaching and self-assessment to encourage independent and autonomous learning to promote learners’ self-confidence, motivation, abilities and skills for lifelong learning.

## Chapter 7

### The Role of Metacognition and Knowledge Transfer in Self-Directed

Learning ..... 141

*Gina J. Mariano, Troy University, USA*

*Kirsten Batchelor, Troy University, USA*

Education is what remains after one has forgotten everything he learned in school. This quote by Albert Einstein embodies the essence of the relationship between metacognition and self-directed learning. It is important for students to remember what they learn in school, but many forget the information because they have not been taught metacognitive learning strategies. The learning strategies we teach students supports them in their effort to become good learners. In this chapter, we discuss the relationships between metacognition and knowledge transfer, critical thinking and self-directed learning. It brings together multiple perspectives on metacognition and knowledge transfer and discusses instructor strategies to engage students in metacognitive learning strategies.

## Chapter 8

### Transformational Shifts of Pedagogy Through Professional Development,

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*Ronda Cypret-Mahach, Lindenwood University, USA*

This chapter describes transformational experiences of a faculty of teachers during a yearlong action-research case-study of professional development, infused with digital technologies intended to capitalize on self-directed learning strategies, in the use of essential questions specifically designed to target critical thinking in students. Teachers who began to adopt the essence of essential questioning into their teaching practice also began to seek ways to engage in personalized self-directed learning as they looked for avenues to continue development of successful practice. The ability to self-investigate and self-delineate pedagogy was critical for most of participant teachers. The faculty of teachers involved in the action-research case-study demonstrated statistically significant growth on the Measure of Questioning Skills, indicating the experience encouraged teacher growth in questioning abilities. Research data also reflected statistically significant student growth in STAR Reading and STAR Math scores, and an increase in student's Measure of Questioning Skills.

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