

# Design your own Learning to Become “an Adult”:

## A New Book for College Students to Master Instructional Design

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**Abstract:** This presentation will describe a new book (in Japanese) *Learning design manual: Instructional design to become “an adult,”* as a college textbook to learn how to learn in a college. The book consists of 19 chapters in 4 sections, each chapter has explanatory text, two reactions from readers, exercises, and feedback. At the end of each section, an end of section assignment is placed to help the readers summarize and reflect on their learning in the section. Some examples of utilizing the textbook are described, and some future research agendas are proposed.

**Keywords:** Learning strategy, Instructional design, College textbook

### INTRODUCTION

Because future is so unpredictable, people must be prepared to learn on their own, for their lifetime. Self-regulated learning (Zimmerman, et al., 2011) has been an issue everywhere in the world, from young adulthood to life-long education. It is especially true for college education, where transformation is expected from being taught by teachers in high school preparing for college entrance examination, to be prepared to learn new things that has no definite right answer in colleges and beyond. Several professional associations, such as College Reading & Learning Association (CRLA) and National Association for Developmental Education (NADE), have been organized in United States, where so-called universalization of higher education (Trow, 1970) had made colleges to prepare themselves to accommodate “un-prepared” students coming into colleges. Several textbooks (Nilson, 2013, Sellar, Dochen, & Hodges, 2015, Tamblin & Ward, 2006) have also been written to be used in the first-year classes to prepare incoming students for studying in colleges.

On the other hands, numerous models and theories have been proposed in the research field of instructional design (e.g., Gagne, et al, 1985, Keller, 2010, Merrill, 2002), to guide designers of education in various fields including colleges. However, the efforts to prepare college students seems to be not well informed by such models and theories. Instructional design models and theories can also be taught directly to the learners, who need to know how to learn, if the theories and models of instructional design is to facilitate learning, and if college students

should become designers of their own learning, in order to be self-regulated learners.

The purpose of this presentation is therefore to describe a new book (in Japanese) *Learning design manual: Instructional design to become “an adult,”* (Suzuki & Mima, 2018) as a college textbook to learn how to learn in a college. The aim of the textbook was to teach design know-how of educational providers to the learners directly, so that the reader would become “an adult,” who can take responsibility for his/her own learning.

### CONTENTS AND DESIGN OF *LEARNING DESIGN MANUAL*

#### Structure and contents of the book

An overview of the textbook, *Learning Design Manual*, is shown in Figure 1. The textbook consists of 19 chapters in 4 sections.

Section 1, *Face with your own learning*, asks to reflect on the status quo of readers’ learning in 5 chapters. Chapter 1, *Prepare your environment*, make the students aware of differences of learning in a college from that of a high school, where more independence is required in a college. It aims at making them realized why giving attention to how to learn become more critical when more freedom is given in a college. Chapter 2, *Grasp your learning style*, directs their attention to their childhood having shaped their style of life, using Alfred Adler’s classification of pleasing, control, comfort, and superiority (Kefir, & Corsini, 1974; Kogo, 2015). It then shifts their focus on learning style of VAKT (Visual, Auditory, Kinesthetic, and Tactile) learners

(Tamblin & Ward, 2006), so that they are introduced to the notion of classifying into categories to grasp their styles for learning. Chapter 3, *Reflect your way of learning*, introduces the notion of meta-learning (Nilson, 2013) and meta-cognition (Bruer, 1993), by which the students can reflect on what they have been doing as a learner to make their learning more effective. Chapter 4, *Think of the depth of learning*, tries to take the students away from the notion of learning being equal to remembering. It points out how the knowledge has been evolved and changed, introducing William Perry's framework of cognitive development (Evans, et al, 2010, Seller, Dochen, & Hodges, 2015). The last chapter of this section, *Confirm the nature of your discipline*, directs the students' attention to characteristics of natural and social sciences, to make them aware that there exist various ways of learning to better fit the nature of the given discipline (Heydorn, & Jesudason, 2013).

Section 2, *Create learning context*, deals with factors for learning together. Chapter 6, *Lay groundwork for learning together*, directs the students' attention to various people in their learning environment, as well as the quality of learning experiences (Parrish & Wilson, 2008). Chapter 7, *Brainstorm and put opinions together*, and Chapter 8, *Coordinate with your peers*, deals with collaborative learning. Various techniques for learning together are introduced and welcomes the students to try some and reflect on their experiences. Special attentions are given to Alex Osborn's brainstorming (Osborn, 1963) for divergent thinking and Jiro Kawakita's KJ Method (Kawakita, 2017) as an abduction technique. Chapter 9, *Manage your time*, introduces various techniques of time management (Lipsky, 2011), which is a critical skill to become a self-regulated learner, as well as John Carroll's model of school learning (Carroll, 1963) from both tutor's and learner's viewpoints.

Chapter 10, *Become stronger for failure*, prepares the students to become ready for failure, by introducing four steps of coping for a failure (Kaiho, 2004) and be resilient in learning.

Section 3, *Device how to learn*, introduces theories and models of instructional design from learners' perspective. Chapter 11, *Enhance your motivation to learn*, introduces Keller's ARCS motivation model (Keller, 2010), comparing what can be done by tutors and by learners. Chapter 12, *Facilitate your understanding*, deals with Gagne's 9 Events of Instruction (Gagne, et al, 1985) as a guide to structure tutoring processes as well as learning processes. Chapter 13, *Make entrance and exit clear*, introduces the gap analysis by comparing status-quos (entrance) and the goal of learning (exit). Chapter 14, *Adapt for learning tasks*, deals with Gagne's 5 learning outcomes (Gagne, et al, 1985) to match learning strategies with the nature of learning tasks. Chapter 15, *Make learning more practical*, introduces M. David Merrill's First Principle of Instruction (Merrill, 2002) to help the learner look for practical values of their learning in 5 points of view.

The last section, Section 4, *Think of future learning*, assists the students to foresee their future as a learner. Chapter 16, *Imagine learning of the future*, forecasts the future including decreasing birthrate and aging population, in which new skill sets, such as 21st century skills, design thinking, STEM education, maker's learning, and project learning, will be needed. Chapter 17, *Expand your learning style*, introduces Kolb's experiential learning (Kolb, 1984), and its 4 types of learning style to be expanded to become more matured. Chapter 18, *Become a self-regulated learner*, introduces 3 types and 3 steps of self-regulated learning (Zimmerman, et al., 2011), and helps to reflect on their behavior patterns as a self-regulated learner. Chapter 19, *Create your action plan*,

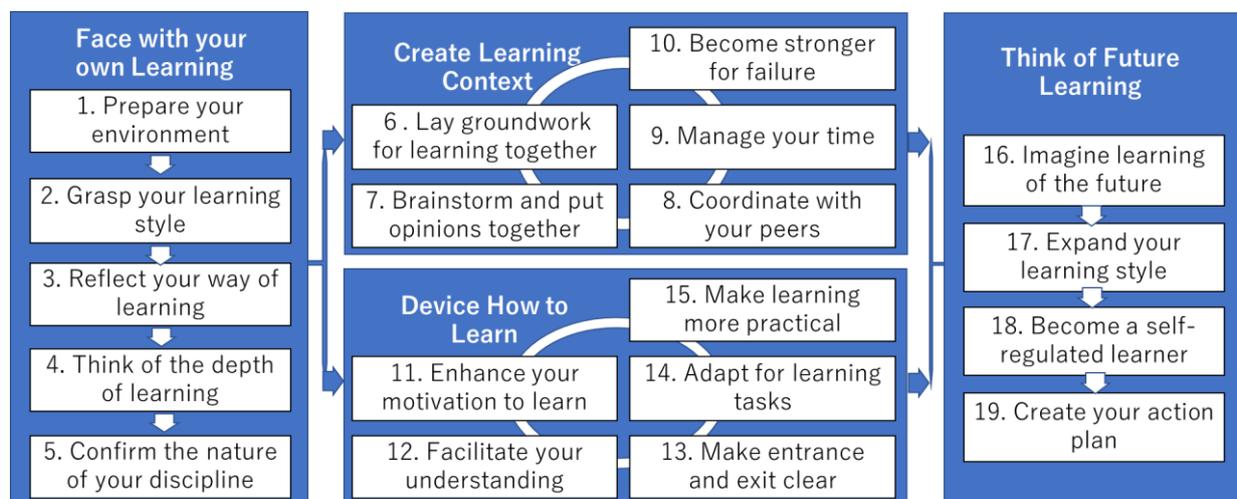


Figure 1. Overview of *Learning Design Manual* (Suzuki & Mima, 2018)

explaining the importance of designing their own careers, and invites them to create an action plan for making their future a reality, as the last activity.

### Design Elements of each chapter to help self-regulated learning

To help self-directed learning of the textbook, each chapter has the same format of explanatory text, two reactions from readers (See Figure 2), and exercises with feedback. This structure of having reactions from readers and end-of-chapter quizzes has been adopted to other textbooks in the past (Suzuki, 2002, Suzuki, 2015). In this textbook, two imaginary readers appear at the end of explanatory text in each chapter. Ms. Sato, a first-year student in College of Arts, reacts from the standpoint of a college learner, whereas Mr. Takahashi, a third-year student in College of Informatics, reacts as a tutor reflecting his past facilitation experiences in tutorial sessions.

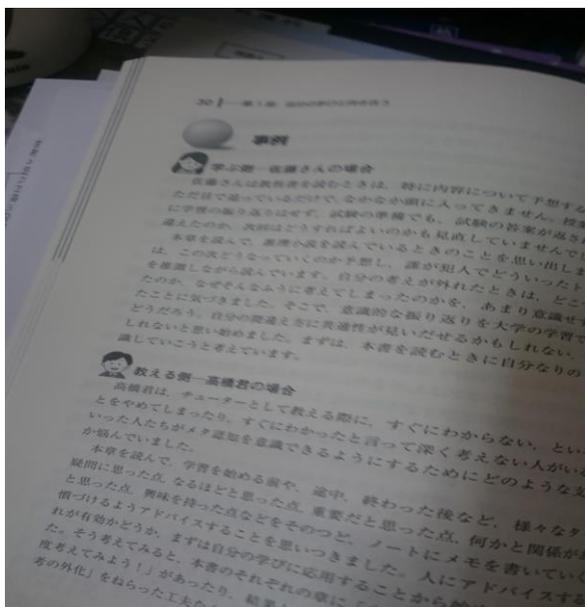


Figure 2. Sample Reactions from Readers

### Assignment Tasks for Each Section

Learning Design Manual consists of 19 chapters in 4 sections (See Figure 1). At the end of each section, assignment tasks are placed as follows, to sum up and reflect upon what is learned in the chapters within the section, before going on to the next section.

Assignment for Section 1, *Face with your own learning*, asks to describe current status of the students in 5 perspectives. (1) Characteristics of their own learning environment, (2) Characteristics of their life style and learning style, (3) Characteristics of their ways of learning (how they are leaning), Self-reflection of the depth of their learning, and (5) Self-reflection of their interest to their selected discipline. An additional task asks for a self-evaluation report in

500 words on their learning skills, from 1 to 7 in a scale of novice to professional in learning, with keywords learned in the five chapters as reasons why they think their current rank.

Assignment for Section 2, *Create learning context*, asks the students to write annotated list of at least three things of their thoughts for the following five elements: (1) Things they would like to challenge in applying assertion and active listening, (2) Themes they would like to apply techniques of brainstorming and KJ methods, (3) Self-constructed ground rules for engaging in groupwork, (4) Things they would like to do to manage their time, and (5) Things they would like to challenge to make them stronger for failure. An additional task asks for selecting one idea from the above list, actually conducting the selected item, and reporting on the results, including which context they tried, what were the outcomes of the initial trial, what they would like to improve for the next chance, and their reflection of the experience.

Assignment for Section 3, *Device how to learn*, also asks the students to write annotated list of at least three things of their thoughts for the following five elements: (1) Things they would like to challenge to enhance their motivation for learning, (2) Things they would like to try to learn more effectively, (3) Things they would like to try to make the entrance and exit of their learning clearer, (4) Things they would like to do to make their learning better adapted to the characteristics of learning tasks, and (5) Things they would like to challenge to make their learning more practical. An additional task also asks for selecting one idea from the above list, actually conducting the selected item, and reporting on the results with reflection.

Assignment for the last section, Section 4, *Think of future learning*, continues with the same format as previous sections, asking for annotated list: (1) Things they thought about possible changes in their future learning, (2) Things they would like to try to extend their learning style, (3) Things they would like to try to become a self-directed learner, and (4) Things they would like to do to think of their own careers. Two additional tasks are placed: (1) to create an action plan with things they would plan to engage in multiple time frames (e.g., one month, 1/2 year, by graduation), and (2) to write a self-evaluation report in 500 words on their learning skills, from 1 to 7 in a scale of novice to professional in learning, with keywords learned in the five chapters as reasons why they think their current rank. The last task aims to make comparison with their initial report written at the end of Section 1.

### HOW TO USE THE BOOK

This book was originally intended to be used as a college textbook, by having 14-15 chapters for a 14-15 week long semester. However, it was found in

formative evaluation phase, that some chapters were too long for college freshmen to keep motivated to finish reading the chapters. So, some divisions were made to make all the chapters manageable for the intended audience, resulting in 19 chapters.

As Figure 1 indicates, Sections 1 and 4 assume incremental learning, step by step, whereas Sections 2 and 3 can be learned by picking up interested chapters in a random fashion. Sections 1 and 4 are suitable by learning as a whole class, or by groups to keep the same pace, whereas Sections 2 and 3 can be learned by groups or individually and then bring together own learning to share with those who have not learned the particular chapter. Thus, it is feasible to spend the first 5 and last 4 weeks to deal with 5 and 4 chapters in Sections 1 and 5, respectively. The remaining weeks can be allocated for Sections 2 and 3, to study chapters of interest and bring the results of learning to the class to share. If you have 15 weeks, 6 weeks can be spent for studying and sharing the selected chapters in Sections 2 and 3. In this way, the textbook can be used, even if you have less than 19 weeks.

## DISCUSSION

Although it was originally intended that this textbook would be used in colleges, some examples are being created to use in the first year of *Kosen*, National Institute of Technology, with their 15-year old students. On the other hands, some companies have started their induction training of new employees using this textbook. Future research is called for, so we know how widely this textbook could be used effectively, and how we could make the textbook used more wisely. Translating the book to other languages could also be a task for the future, to test its cultural exportability.

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