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# Teaching and Researching Language Learning Strategies

Self-Regulation in Context

Rebecca L. Oxford

Second Edition

Applied Linguistics in Action

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## Teaching and Researching Language Learning Strategies

“This inspiring, innovative volume will captivate both strategy experts and newcomers. Oxford’s profound theoretical explanations of strategic self-regulation are supported by real-life scenarios, comprehensive reviews of research, and beautifully painted mental images and metaphors. Oxford explains complex ideas in a clear, down-to-earth manner. Readers, prepare yourselves for lively excursions of the mind and plenty of ‘aha’ moments.”

Carmen M. Amerstorfer, Alpen-Adria-Universität Klagenfurt, Austria

Now in its second edition, *Teaching and Researching Language Learning Strategies: Self-Regulation in Context* charts the field systematically and coherently for the benefit of language learning practitioners, students, and researchers. This volume carries on the author’s tradition of linking theoretical insights with readability and practical utility and offers an enhanced Strategic Self-Regulation Model. It is enriched by many new features, such as the first-ever major content analysis of published learning strategy definitions, leading to a long-awaited, encompassing strategy definition that, to a significant degree, brings order out of chaos in the strategy field. Rebecca L. Oxford provides an intensive discussion of self-regulation, agency, and related factors as the “soul of learning strategies.” She ushers the strategy field into the twenty first century with the first in-depth treatment of strategies and complexity theory.

A major section is devoted to applications of learning strategies in all language skill areas and in grammar and vocabulary. The last chapter presents innovations for strategy instruction, such as ways to deepen and differentiate strategy instruction to meet individual needs; a useful, scenario-based emotion regulation questionnaire; insights on new research methods; and results of two strategy instruction meta-analyses. This revised edition includes in-depth questions, tasks, and projects for readers in every chapter. This is the ideal textbook for upper-level undergraduate and graduate courses in TESOL, ELT, education, linguistics, and psychology.

**Rebecca L. Oxford** is Professor Emerita and Distinguished Scholar-Teacher at the University of Maryland and Adjunct Professor and Program Evaluator at two branches of the University of Alabama. She currently co-edits two book series, *Transforming Education for the Future* and *Spirituality, Religion, and Education*.

“I welcome this masterly work from a renowned scholar. It is fresh, comprehensive, scholarly and readable. Oxford explores the quagmire of definitions of strategies leading to an integrated definition, and links strategies to self-regulation, autonomy and agency, giving us new ways of viewing this construct. Once again she moves the field forward.”

— Marion Williams

“This book advances our understanding of the complexities of language learning strategies, their diverse theoretical underpinnings, and the individual variations and shifting shapes that characterize them. Rebecca Oxford discusses how complexity theory relates to language learning strategies, develops her S<sup>2</sup>R Model, and provides numerous practical applications for language teachers.”

— Anna Uhl Chamot, The George Washington University, USA

“This long-awaited book presents an excellent linkage between theoretical insights with practical applications, and brings strategy research into a new era. A particular strength is the range of topics it covers: an enhanced Strategic Self-Regulation Model, complexity theory, agency, autonomy, skill-based strategies, and strategy instruction. It also provides an encompassing strategy definition. I commend this comprehensive book highly.”

— Osamu Takeuchi, Kansai University, Japan

“Rebecca Oxford’s new book takes language learning strategies to a new level. It enhances her 2011 S<sup>2</sup>R Model with a wealth of theoretical insights. Her freeing of strategies from rigid categories while assigning to them multiple roles creates a new perspective that revolutionises the strategy field. It is definitely a book for teachers, researchers and students looking for practical teaching and researching ideas, and up-to-date references.”

— Angeliki Psaltou-Joycey, Aristotle University of Thessaloniki, Greece

“I’m speechless at the breadth and depth of all that is included in Rebecca Oxford’s new strategy volume. This is the most in-depth, comprehensive, and original book ever written on L2 learning strategies. It looks at this important construct from affective, cognitive, and social perspectives; emphasizes the dynamism of strategies in context; and makes clear the power of strategies in learning and teaching. I love everything about the book – the way it is written, the references, and the wonderful questions in each chapter. It is a must-read for researchers and teachers all over the world.”

— Ana Maria F. Barcelos, Federal University of Viçosa, Brazil

### **A Note about the Cover Photo from the Author:**

In the cover photo, which I photographed in Nepal, the boats represent vehicles intended to take learners across the vast lake of language learning. Language learners without strategic self-regulation row unsound boats aimlessly and confusingly and sometimes capsize, but strategically self-regulated learners row sound boats effectively toward learning goals. Excellent strategy instruction and assessment can add to the power and direction of every boat on the lake.

(Color editing by Rebecca L. Oxford, Josephine E. Cox, and John Maloney at Routledge.)

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Rebecca L. Oxford

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I dedicate this book to my husband, Clifford Stocking, and to Rhea.

I also dedicate this book to the goal of peace and mutual understanding. That is the aim of my work in language learning and teaching.

Finally, I dedicate this volume to all language learners, especially those who are refugees and immigrants, and anyone else undergoing transition.

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I am grateful to three current strategy partners: Carmen Amerstorfer, co-editor of a strategy volume for Bloomsbury; Mirosław Pawlak, co-editor of a special issue on strategies for *Studies in Second Language Learning and Teaching*; and Christina Gkonou, chapter co-author for another book, as well as initiator, co-author and co-validator of a scenario-based, strategic emotion-regulation questionnaire. I offer gratitude to Pamela Gunning, Peter Gu, Ernesto Macaro, and Carol Griffiths (my 2014 *System* special issue co-editor), all of whom shared their ideas during my writing. Anna Chamot and Vee Harris deserve gratitude for orchestrating a major international sharing of ideas on strategy instruction. Many thanks, of course, to my friend Joan Rubin, who started the strategy movement in second language learning in 1975 and has been an active contributor and inspiration ever since. Though I do not personally know them, Heath Rose and Luke Plonsky have my admiration and thanks for significantly moving the field ahead.

I am also incredibly grateful to Kathrene Binag, who guided this project on behalf of Routledge. Without Kathrene's indefatigable efforts, this book would not be available to the public. Rebecca Novack of Routledge and John Hodgson of HWA also provided necessary support. Thanks to Laura Walker, who worked for months to find published resources for this book, and to family members and local friends who gave me mental and emotional support for this project, even when continually asking, "Is it done yet?"

No acknowledgments are ever complete, so I will simply end with words of gratitude for life itself: *Gracias a la vida, que me ha dado tanto* ("Thanks to life for giving me so much") from the song by Violeta Parra. I have a good lakeside friend who would applaud that.

Peace,  
Rebecca L. Oxford

## Series Editors' Preface

*Note from Routledge: Christopher Candlin and David Hall were founding editors of the Applied Linguistics in Action series when Pearson Education Limited was the series' publisher. After David passed away in February 2014, Christopher continued as general editor of the series for Routledge until his passing away in May 2015. To honor their invaluable work for and involvement in books that they commissioned for the series, we are retaining their original series preface for this volume.*

*Applied Linguistics in Action*, as its name suggests, is a series which focuses on the issues and challenges to teachers and researchers in a range of fields in Applied Linguistics and provides readers and users with the tools they need to carry out their own practice-related research.

The books in the series provide the reader with clear, up-to-date, accessible, and authoritative accounts of their chosen field within applied linguistics. Starting from a map of the landscape of the field, each book provides information on its main ideas and concepts, competing issues and unsolved questions. From there, readers can explore a range of practical applications of research into those issues and questions, and then take up the challenge of undertaking their own research, guided by the detailed and explicit research guides provided. Finally, each book has a section which provides a rich array of resources, information sources and further reading, as well as a key to the principal concepts of the field.

Questions the books in this innovative series ask are those familiar to all teachers and researchers, whether very experienced, or new to the fields of applied linguistics.

- What does research tell us, what doesn't it tell us, and what should it tell us about the field? How is the field mapped and landscaped? What is its geography?
- How has research been applied and what interesting research possibilities does practice raise? What are the issues we need to explore and explain?
- What are the key researchable topics that practitioners can undertake? How can the research be turned into practical action?
- Where are the important resources that teachers and researchers need? Who has the information? How can it be accessed?

Each book in the series has been carefully designed to be as accessible as possible, with built-in features to enable readers to find what they want quickly and to home in on the key issues and themes that concern them. The structure is to move from practice to theory and back to practice in a cycle of development of understanding of the field in question.

Each of the authors of books in the series is an acknowledged authority, able to bring broad knowledge and experience to engage teachers and researchers in following up their own ideas, working with them to build further on *their* own experience.

The first editions of books in this series have attracted widespread praise for their authorship, their design, and their content, and have been widely used to support practice and research. The success of the series, and the realization that it needs to stay relevant in a world where new research is being conducted and published at a rapid rate, have prompted the commissioning of this second edition. This new edition has been thoroughly updated, with accounts of research that has appeared since the previous edition and with the addition of other relevant material. We trust that students, teachers and researchers will continue to discover inspiration in these pages to underpin their own investigations.

*Chris Candlin  
David Hall*

## Preface

Perhaps the notion of strategies for language learning is as obvious as the notion that a carpenter needs tools. Yet the concept of strategies has been surprisingly controversial. In our book *Capitalizing on Language Learners' Individuality*, we describe the pursuit of a precise definition of strategies as “elusive” because the difficult work of harmonizing the many available definitions had not been done. With the present text, we are happy to say the work is done now.

This is Oxford's fourth book on learning strategies and arguably her best. It is comprehensive, fresh, exciting, and informative. This volume carries on the author's tradition of linking theoretical insights with readability and practical utility and offers an enhanced Strategic Self-Regulation Model. Oxford adds many new features, such as the first-ever major content analysis of published learning strategy definitions, leading to a long-awaited, encompassing strategy definition. This work represents some of the heavy lifting required to move forward with strategy research so that teachers and learners alike can benefit from knowing what strategies are, how to use them, and how to evaluate their effectiveness. Each chapter in the whole book has extensive questions, tasks, and activities that help make the ideas their own.

Oxford provides an intensive discussion of self-regulation, agency, and autonomy as the “soul of learning strategies.” She not only presents the information in a lively, narrative fashion, but she also presents her own mini-study with tables that compare various language learning theorists' ideas of self-regulation, agency, and autonomy and show how these connect with strategies. Intriguingly, she draws upon closely related themes such as mindsets and hope that have rarely, if ever, been the focus of learning strategy research; she clearly links them with strategies and calls for empirical studies.

Oxford brings the strategy field into the modern age with the first in-depth treatment of strategies and complexity theory. We find it amazing that the language learning strategy field and the field of complexity in language learning have not yet had an in-depth, joint treatment before this. Oxford has done the job. In several chapters Oxford tackles the complexity of strategies head-on. Oxford's discussion will undoubtedly assist teachers and learners in better understanding not only what they are doing when thinking strategically, but also in understanding why, in spite of best efforts, strategies sometimes do not work exactly as envisioned. Perhaps it is a sign of maturity when a person comes to realize that things are never as simple as they seem, or as predictable one might initially think. Along similar lines, Oxford uses a complexity perspective to show, in an engaging, approachable, and personal way, how complexity can be a guiding metaphor for the field of strategies and how it foster our understanding of self-regulation, agency, and autonomy in relation to strategies.

Two important chapters depict the “multiple self” of the learner in cognitive, motivational, social, and emotional domains. These chapters offer a background on the domains and also present expertly organized examples of self-regulation strategies in each of the domains. Oxford



is wisely averse to the idea of a strategy taxonomy because a given strategy can have multiple roles across domains, but she presents a fascinating, structured way to look at strategies while continually reminding readers about strategy flexibility.

A major section of this book is devoted to applications of learning strategies in all language skill areas and in grammar and vocabulary. Readers will find a highly contextualized presentation of the issues faced by teachers and learners as shown in representative research from around the world. Oxford's writing is delightful in this section, just as in the entire book. Grammar and vocabulary learning strategies can be a daunting subject, but Oxford makes them manageable and even entertaining. For instance, she says the "grammar learning strategy weather report" is "cloudy but clearing," and she uses humor and a light touch in describing a vocabulary study and presenting some of the end-of-chapter questions, tasks, and projects for readers. The chapter on strategies for reading and writing is masterful in conveying potentially difficult themes, theories, and studies in a straightforward and appealing way. Oxford's treatment of listening and speaking goes far beyond what might be expected. It treats not just the former "Cinderella" of strategies (listening strategies), but also presents an overview of strategy studies in phonology, phonetics, oral communication, and pragmatics. In this section, Oxford not only summarizes foundational research but makes sure to introduce some of the most recent studies, always in a meaningful and useful way. The quality of Oxford's current thinking emerges clearly in the writing.

The final chapter presents potential innovations for strategy instruction, such as ways to deepen and differentiate it to meet individual needs. That chapter additionally presents results of two meta-analyses on effects of strategy instruction, includes a new, scenario-based emotion-regulation questionnaire, and suggests promising strategy research methods.

This book is a serious move in a new direction for strategies, one that is centered on harmonizing the field and moving it forward. Oxford does not shy away from the issues and controversies that have emerged in the field over the years, but rather she deals with them in a principled manner. The result is a book that pushes the strategy field in new and valuable directions, even as this project itself reflects the complexity of the work. There is a great deal to recommend this book and we trust that readers will be as inspired by it as we are.

*Peter MacIntyre*  
*Cape Breton University*

*Tammy Gregersen*  
*University of Northern Iowa*

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# Introduction

This is the second edition of *Teaching and Researching Language Learning Strategies*, originally published in 2011. It offers new ways of understanding, teaching, and investigating second and foreign language (L2) strategies. Unlike other books on this topic, it integrates two diverse though complementary theories – self-regulated learning (SRL) theory and complexity theory – and systematically uses these important theories to shed light on the teaching and researching of L2 learning strategies.

## Who Are This Book's Readers?

This book will be valuable to L2 teachers who want to help K-12, university-level, and adult students learn more effectively by means of learning strategies. In addition, L2 learning theorists, researchers, and university teachers in various areas (L2 instructional methods, second language acquisition, learning strategies, cross-cultural studies, educational psychology, and other subjects) will gain much from this book. All readers are likely to be interested in the Strategic Self-Regulation (S<sup>2</sup>R) Model, as well as related concepts (agency, autonomy, hope, self-efficacy, resilience, and mindsets) included in this book. The discussion of strategies and complexity theory will capture the imagination of many readers due to the many L2 learning strategy examples that are included. Readers will want to know about different types of learning strategies contained in this book and will benefit from all-new information on strategy instruction, assessment, and research.

## What Are the Goals of the Second Edition, and How Is It Different from the First Edition?

This book is dramatically new and different. The goals of this second edition build on those of the prior edition, but new goals were added. Every chapter has been rewritten, and new chapters have been added. This book's goals and their descriptions are as follows.

### **Goal 1. Take Strong Leadership on Strategy Definitions**

*This volume aims toward clarity and strength in defining strategies.* There have historically been dozens of conflicting definitions of learning strategies, leading to chaos and to some condemnations of the field. This book presents the first-ever content analyses of these definitions, with the goal of bringing order out of chaos. The result is an encompassing, integrated strategy definition for the first time and a call for discussion and general consensus.

2 Introduction

**Goal 2. Highlight SRL and Related Themes**

*This volume makes SRL, agency, autonomy, and mindsets highly prominent.* The first edition highlighted the use of L2 learning strategies for self-regulation in cognitive, affective, and social areas and mentioned various approaches to self-regulated learning, but the second edition is much more systematic in carrying self-regulation into all parts of the volume.

**Goal 3: Emphasize Context**

*This book expands the definition of L2 learning strategies so as to emphasize context.* The first edition mentioned context numerous times but did not present it theoretically. This edition illuminates the important contextual base of L2 learning strategies in a theoretically and practically meaningful way.

**Goal 4: Interweave Strategies, Context, and Complexity Theory**

*This book introduces complexity theory, in which context plays a major role, and shows how its tenets can shed light on strategies.* Complexity theory, which highlights dynamism (change), nonlinear relationships, and context, helps explain many aspects of L2 learning. Complexity theory might well help us understand sociocultural identities and imbalances of power, misrecognition of the individual, and different trajectories of various strategy-using L2 learners. This book might start a new, complexity-related movement in strategy assessment, instruction, and research.

**Goal 5: Look at Strategies in New Ways**

*This book emphasizes that strategies are not bound by traditional categories.* For instance, a student employs a traditionally cognitive strategy, such as analyzing, to understand how to adjust his emotional state (see Arnold's story in Chapter 3). Reading strategies affect not only reading competence but also writing competence (see Chapter 8). Strategies for L2 learning cannot be divorced from strategies for L2 use (see Chapter 4). Many other examples are given.

**Goal 6: Seriously Synthesize Knowledge about Strategies for Specific Skills and Areas**

*This book provides intensive treatments of L2 learning strategy research related to various L2 skills and areas, e.g., reading, listening, writing, speaking, pragmatics, pronunciation, phonology, vocabulary, and grammar.* This is a major expansion as well as an update.

**Goal 7: Offer Powerful, New Ideas for Strategy Instruction, Assessment, and Research**

*This book presents innovations and potential innovations related to strategy instruction, assessment, and research.* One of these ideas is differentiation of strategy instruction, reflecting the fact that L2 learners are not all alike in their learning needs. Deepening strategy instruction to make it more personally valuable for autonomy could be transformative for learners. Scenario-based strategy assessment, such as the work led by Christina Gkonou and me, makes the measurement of strategies much more authentic, as does actual task-based assessment. A new scenario-based, emotion-regulation questionnaire is included. Complexity theory opens new doors for potentially important research methods, such as retrodictive qualitative modeling and the idiodynamic method, both of which could help us understand strategy change over time and in great detail and which enable us to grasp two-way influences. Parts of the book also

emphasize narrative methodology, which has been used for strategy research in the past and which coordinates well with the new complexity methods.

### How Is This Book Organized?

The book is organized as follows. **Section A, Focusing: Greater Clarity for Definitions and Theories**, contains Chapters 1 through 3. It brings order out of intellectual chaos concerning strategy definitions and features; emphasizes how strategies relate to self-regulation, agency, autonomy, and associated factors; and squarely addresses the crucial triad of context, complexity, and learning strategies.

**Section B, Flexibility and Function: Understanding L2 Learning Strategies According to Their Roles in Context**, includes Chapters 4 through 6. These chapters present strategies and metastrategies according to specific categories within four domains: cognitive, motivational, social, and affective (emotional). However, the chapters tell us – and this may be a new message to many readers – that strategies and metastrategies cannot be pinned down to any given category for all time; from moment to moment, strategies and metastrategies operate more fluidly than researchers in the past ever thought possible. Section B also uses extensive evidence to caution against the duality of language learning strategies and language use strategies.

Chapters 7, 8, and 9 in **Section C, Live Applications: Strategies in the Skill Areas and the Language Subsystems** draw on extensive research to present the state of the art in strategies for grammar, vocabulary, reading, writing, listening, phonology, pronunciation, speaking/oral communication, and pragmatics in context.

**Section D, Innovations: Strategy Instruction, Assessment, and Research**, contains one chapter, Chapter 10, which centers on innovations and potential innovations in the named realms (strategy instruction, strategy assessment, and strategy research). Although the whole book is innovative, this section and chapter are among the most eye-opening.

The not-to-be-missed postscript summarizes the entire S<sup>2</sup>R Model, elements of which have been included throughout the book. Terminology issues are addressed in Appendix A, while Appendix B provides sources of some quotations.

### How Can This Book Be Used?

Some readers, including those with a concrete-sequential learning style or those for whom the book's subject is very new, might like to start at the beginning of the book and work their way systematically to the end. Other readers, who come to the book with an intuitive-random learning style or with a strong background in the area, might start at the back, dip into the middle, jump to the front, then go to the back again, using a self-designed reading path that meets their interests.

I suggest that all readers should read the beginning and the summary of a given chapter and at least skim over the titles of the parts of a chapter. Each chapter contains a valuable set of annotated further readings. The questions, tasks, and projects at each chapter's close are rich activities that will extend readers' understanding of the chapter. Many of these options encourage holding discussions with others, because nascent ideas often become more developed when shared with others. These questions, tasks, and projects can be adapted for use with classes and discussion groups, although they are equally valuable to individuals working by themselves.

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## Section A

# Focusing

## Greater Clarity for Definitions and Theories

Section A presents the basics necessary for understanding foreign and second language (L2) learning strategies. Chapter 1 reports on a major content-analytic study of definitions of learning strategies and related terms, including those from the L2 field and from outside. The chapter also presents a new definition of language learning strategies and discusses factors in reaching (or failing to reach) consensus on strategy definitions. Because strategies are intimately involved with self-regulation, agency, autonomy, and associated concepts, Chapter 2 explores these relationships with a scope and a lucidity that have not been seen before in the L2 learning strategy field. Chapter 3 emphasizes that strategies cannot be understood outside of real contexts and that strategies reflect complexity. These three chapters form part of the theoretical base for the Strategic Self-Regulation (S<sup>2</sup>R) Model. The rest of the theoretical base is offered in Section B and elsewhere in the book. The postscript (pp. 339–340) contains a clear, succinct summary of the theory.



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# 1 Bringing Order out of Chaos

## Definitions and Features of Language Learning Strategies

Blessed rage ... to order words of the sea, ...  
And of ourselves and of our origins

Wallace Stevens

The quotation above speaks of a blessed rage to order the words of our very selves and our origins. I often think of this quotation when considering the vast number of definitions of *second and foreign language (L2) learning strategies* (also known by some as *L2 learner strategies*). Just as the poem describes a rage to bring order to the world and humankind, I long to bring order out of chaos regarding learning strategy definitions and learning strategies as a whole. I will do this through the Strategic Self-Regulation (S<sup>2</sup>R) Model, which originated in the first edition of this book (Oxford, 2011). The model insists on and provides a clear, encompassing strategy definition (Chapter 1). This definition mentions self-regulation, which is one of the key learner “strength factors” (Chapter 2). The definition also relates to context and complexity (Chapter 3). The S<sup>2</sup>R Model includes a set of interlocking but flexible strategy categories (Chapters 4 through 6). It includes strategies for language subsystems (e.g., grammar and vocabulary, Chapter 7) and language skill areas (reading, writing, listening, speaking, and related aspects, Chapters 8 and 9). Principles in the model can serve as a foundation for innovations in strategy instruction, strategy assessment, and strategy research (Chapter 10).

This chapter offers a much-needed definition based on an in-depth analysis of 33 existing strategy definitions. Before that discussion, however, I will introduce three learners who employ strategies to help them learn and use the new language. Why pay attention to the stories of these learners? Why notice the details of the situations, the people, and the strategies? Why not cut to the chase and jump right into abstract principles, theoretical disquisitions, and research summaries? The following comments by Grenfell and Harris (1999) offer a useful answer:

The key sense we wish to convey ... is not of a language learner learning a language in some decontextualized, idealized realm disconnected from the problems and processes of everyday life, but quite the opposite: of someone plunged into the maelstrom of the world with its demands and mixed messages. (p. 41)

In reading about the following three learners, consider potential evidence of their strategies.

**Scenario 1: Laura, a British Engineer Learning German**

Laura, a civil engineer in the city of Reading in the U.K., likes languages and family history. In the nineteenth century, her family came to England from Hamburg, Germany, so she has a personal interest in German language and culture. Unless she learns German, she feels the old family history will slip away, as it has for her parents. She studies German each night, except when she goes out with her boyfriend or has a family event. She enjoys contrasting German with her mother tongue, English. She keeps online files for analyzing German words, phrases, and sentences, and she digitally catalogues examples of the language in action. She has several German language textbooks at various difficulty levels and consults them as she tries to read German magazines and short stories. She sometimes watches YouTube clips in German and sees films in German with English subtitles but avoids depending on the subtitles. When driving long distances, she listens to audiobooks in German. Laura hears about an “online language exchange” program that would allow her to talk to a German language partner via synchronous video at any time the partners choose. The conversation would be half in English and half in German and would cover any topics the partners decide on. She would help her German partner with conversational English, and the partner would help her with German. She hopes to develop much better German grammatical competence, expand her vocabulary, learn to build those long German words, have communication practice, gain a better understanding of current German culture, and make a friend – all at the same time.<sup>1</sup> Laura especially hopes her learning partner will correct her German pronunciation, because she wants to pronounce German well when she eventually visits Germany to track her family roots. She eagerly signs up for the program.

**Scenario 2: Martin, an Austrian Soldier Helping Refugees**

Martin is an Austrian soldier from Vienna who is called upon to work with overstressed, exhausted, and underfed Arabic-speaking refugees at the border of his country. Quite often there is no translator available, and hand gestures and facial expressions are inadequate for communication. Though very few of his military mates take great pains to communicate in Arabic, Martin studies an Arabic language phrase book at night. The book helps somewhat but does not include phrases needed for medical emergencies and official situations. On duty he carries a smartphone in order to figure out Arabic words and phrases based on the pronunciation he hears or thinks he hears. He listens carefully when a refugee is speaking and tries to relate what he hears to his knowledge of the situation and his fledgling knowledge of Arabic. When he is home on leave, he goes to a bookstore to find a serious German–Arabic language dictionary and, if possible, locate some relevant picture magazines in Arabic. The alphabet is terribly hard for him, but he is very smart, and he figures that even minimal alphabetical skills might someday, with effort and help, morph into reading skills. Some ability is better than none, he tells himself. For specific language learning tips, he seeks out his friend Kaethe, who is a faculty member at the Universität Wien (University of Vienna) and who wrote a manuscript on “learning how to learn languages.” He also spends an hour with a surprised imam at a Viennese mosque, asking questions about how to interact with and help the refugees.

**Scenario 3: Luisa, a Mexican Immigrant Learning English in the U.S.**

Luisa is a teenage Mexican immigrant in a southeastern state in the U.S. She has lived there for only six months but hopes to stay. Her parents work at the local chicken processing plant and feel lucky to have jobs, especially with the difficult legal situation of undocumented workers.<sup>2</sup> Her family speaks only Spanish at home. There are only a few Mexicans in her new school, so

she feels quite shy, although she was popular and extroverted in her former city of Guadalajara, Mexico. She is in an algebra class composed primarily of students who have spoken English all their lives. Algebra is her favorite subject; she first encountered it in Mexico. At last a girl named Mary in the algebra class reaches out to Luisa, introduces her to several other girls, and invites her to church, which is often done in their small American town. Luisa is happy to have a friend. She loves to hear Mary's stories about school, boys, cheerleading, and twitter, and Mary helps her with English speaking and writing. Luisa, an instinctively good organizer and fine algebra student, helps Mary organize her school notebooks and, as time goes on, helps her friend better understand algebra.<sup>3</sup> In her backpack Luisa carries a small notebook to school, and she writes in it new words and phrases (sometimes in invented spelling). At home she transfers the information nightly to a second-hand laptop that she shares with her younger brother, Marco, and she uses the spellchecker. Sometimes she types in full sentences using the notes taken earlier in the day. She discovers the joys of YouTube songs in English and tries to get the family to stop watching Telemundo long enough for her to watch some English language programs. She dreams of having a smartphone someday to help her improve her English.

All these learners were engaged in learning languages and were using strategies to help them do it. What strategies did you find in their stories?

The term *L2 learning strategies* has dozens of shades of meaning and has sparked theoretical battles over several continents and on the pages of many journals. In this chapter I hope to alleviate some of this definitional conflict by carefully analyzing existing definitions and offering the best, most defensible, most convincing definition possible from my perspective. In this process, I will do my best to exhibit intellectual honesty, analytic skill, good judgment, and diplomacy.

### How This Chapter Is Organized

In the rest of the chapter, the first part describes the present status of L2 learning strategy definitions (the “unpruned garden syndrome”). The second and third parts offer a systematic, content-analytic study of 33 definitions of learning strategies and related terms, such as learner strategies, self-regulated learning strategies, and “strategic.” This is the first content-analytic, definitional study of its kind concerning L2 learning strategies, although academic pundits have publicly and repeatedly wrung their hands over the overabundance of strategy definitions. The subsequent part presents my own current definition of L2 learning strategies, which includes core/prototypical features and which serves as a foundation for the S<sup>2</sup>R Model. The final part calls for action toward a joint, field-wide understanding of L2 learning strategies and an agreement on a definition of these strategies. Although entrenched beliefs have prevented such a collaborative solution in the past, I hope this chapter and this book will change the situation. The chapter ends with further readings and questions, tasks, and projects for readers.

### The Unpruned Garden Syndrome

Like others, I have found a notable lack of consensus on strategy definitions to date. The concept of L2 learning strategies stimulated the rampant growth of definitions, as if reflecting the Chinese slogan, “Let a hundred flowers bloom, and a hundred schools of thought contend” (*Encyclopedia Britannica*, 2016).<sup>4</sup> A frenzy of L2 learning strategy definitions popped up everywhere, each containing a seed of a theory that was hidden and curled up, waiting to be found inside the flower petals or leaves. The blossoms were a riot of colors, sizes, shapes, and fragrances. Tall, heady sunflowers competed for space and attention with bright red roses, pink azaleas, purplish irises, bright-white daisies, prickly-pear cactus flowers, and blossoming thorn trees. These blooming strategy definitions, some of which might have been quite attractive

and convincing individually, tended to crowd, push, and fall all over each other when seen in as a group, choking out the possibility of a unifying, encompassing definition or theory of L2 learning strategies. Together all these burgeoning definitional blossoms, so potentially valuable separately, became a garden dizzying to the eye and mind.

The definitional tangle in the garden of L2 learning strategies has been a matter of record for decades (Cohen, 2007; Ellis, 1994; Grenfell & Macaro, 2007; Griffiths, 2013; Oxford, 2011; Oxford & Cohen, 1992; Wenden, 1991). Largely due to definitional confusion, Ellis (1994) portrayed the learning strategy concept as “fuzzy” (p. 529), an epithet further applied by Dörnyei (2005), Dörnyei and Ryan (2015), and others. Dörnyei and Skehan (2003, p. 610) discussed the “theoretical muddle” of strategies and further accused learning strategies of trying to be “superordinate magic tools” (p. 610), a statement described as “sarcastic” by Amerstorfer (2016, p. 73). “Lack of theoretical rigor” was Macaro’s (2006) general description of the strategy field as he knew it, although he and Cohen had enough faith, or at least sufficient ongoing interest, in the field to produce a major edited volume on strategies the next year (Cohen & Macaro, 2007).

### **Mowing Down the Garden (and Throwing out the Baby)**

The lack of definitional and conceptual consensus was one reason why Dörnyei (2005) called for cancelling L2 learning strategy research entirely and why he stated that learning strategies did not exist (although simultaneously remarking that strategies should be taught to students). The tone was polemical<sup>5</sup> and condescending at best; thankfully, this tone has changed somewhat in the last dozen years, although many of the arguments are largely the same as they were in 2005.

Dörnyei’s unusual approach in 2005 seemed to call for mowing down the whole garden so that no further strategy research could occur, perhaps because the best, healthiest, and most perfect flower had yet to be seen. This outright condemnation of a serious research area – any serious research area – would seem excessive, especially without any offer of personal discussion or positive assistance on the part of the critic. In contrast, Gu (2012) argued that an appeal to abandon the learning strategy concept “is not a healthy sign” (p. 330). He noted the rich vein of research and theory on learning strategies in educational psychology and commented on the fact that many names and definitions have been used for those strategies in that arena. He continued by saying that conceptual fuzziness should not be a difficulty so severe as to overthrow four decades of research on learning strategies in the language area. In addition, Gu intelligently wrote:

The argument is clear and straightforward: if not being able to agree on the definition of a Planet until 2006 does not in any way discredit the scientific nature of astronomy, or necessitate the removal of the concept of “planet” altogether, why should we throw away a whole line of research on language learning strategies?

(Gu, 2012, p. 331)

Pawlak (2011, p. 21) contended that Dörnyei’s criticism was based on many overgeneralizations, did not credit the many developments in the field, and did not recognize the fact that strategy researchers themselves had taken steps to ameliorate problems in the field. Rose (2012b), a relatively objective analyst, described Dörnyei’s conceptualization of self-regulation, as measured by a new questionnaire included in Tseng, Dörnyei, and Schmitt (2006), as just as fuzzy as the strategy concept. Rose also viewed the idea of scrapping the field of strategy research to be “throwing out the baby with the bathwater” – a sobering image.

Part of Dörnyei’s (2005) argument was that strategies were no longer of interest to educational psychologists, who had turned to self-regulation. I found that statement strange, even shocking, given that I (unlike the critics who wanted to mow down the strategy garden)

am a qualified educational psychologist<sup>6</sup>. Like many individuals who are trained in education, psychology, or educational psychology, I strongly support self-regulation and have never left strategies behind. Others like me include, for example, Gregersen and MacIntyre (2014); Graham and Harris (1996, 2000); Graham, Harris, and McKeown (2013); Graham, McKeown, Kiuahara, and Harris (2012); Graham and Perin (2007); Harris and Graham (1992, 2005); Harris, Graham, MacArthur, Reid, and Mason (2011); McCaslin and Hickey (2001); Schunk and Ertmer (2000); Zimmerman and Moylan (2009); and Zimmerman and Schunk (2011). As an educational psychologist I have long understood the compatibility of learning strategies and concepts such as self-direction and autonomy (Oxford, 1990) and the nexus of autonomy, self-regulation, and strategies (Oxford, 1999, 2011). (See Chapter 2 of the present book.) Dörnyei and Ryan (2015) withdrew Dörnyei's (2005) extreme credo that strategies do not exist. They provided a friendlier and more conciliatory discussion of strategies and encouraged the practical teaching of learning strategies. At the same time, they remained severely critical of strategy definitions as being scientifically unsuitable for research and implied that as a research field, learning strategies were still in significant trouble.

### Some Steps at Pruning the Strategy-Definition Garden

Cohen (2007) conducted a major definitional/conceptual survey of L2 strategy experts in order to make some sense of the field. He did not look systematically at existing definitions in print in the way I do in the current chapter, but his contribution was significant.

Several times (Oxford, 1990, 2011) I set out not only to provide strategy definitions but also to identify prototypical-definitional strategy features, which are presented in the “Content-Analytic Study of Strategy Definitions” later in this chapter. Gu (2012) did a groundbreaking job in identifying prototypical characteristics of strategies. Griffiths (2013) provided her own set of prototypical features.

Macaro (2006) gave up trying to delineate an encompassing definition (p. 320) but offered guidance for others to consider in coming up with prototypical features of strategies: (a) location of strategies; (b) size, abstractness, and relationship to other strategies; (c) explicitness of goal orientation; and (d) transferability. Macaro (2006) went on to suggest that a strategy (however defined) “... comprises a goal, a situation, and a *mental* action” (p. 332, emphasis added). One might say that Macaro, not seeing the value of messing with the definitional garden any longer, handed the definition-pruning shears to others but with important guidance for how to use them.

These meaningful efforts led in the direction of clearing up some of the tangles of strategy definitions. However, more massive pruning was still needed. The next sections are my effort to prune the garden and give some meaning to it.

### Introduction to the Content-Analytic Study of Strategy Definitions

Cohen (2017) called for clarity in strategy definitions: “My opinion ...: they should clarify, not obfuscate – it helps move the action along into the realm of practice to use definitions that lay language learners can understand.” I completely concur. In the interest of definitional clarity, I conducted a content-analytic study of existing strategy definitions.

### **Objective of the Study**

The objective was to identify a set of illustrative strategy definitions for the last quarter century, compare and contrast them, generate a list of the “common features” in strategy definitions (not necessarily “ideal” or “good” features), and contextualize these in terms of theory.

### **Questions**

- What definitions exist?
- What are the specific differences and similarities among them?
- What are the general patterns overall?
- What are the problems in the definitions?

### **Methods**

Data gathering and data analysis methods are shown below.

#### *Data Gathering*

I sought definitions mainly from the L2 field but also from outside.

*Finding definitions in the L2 field.* I searched for definitions inside and outside of the L2 learning field. I culled 27 strategy definitions from the L2 learning literature. To do this, I scoured my large library of books and journals on L2 topics. This search included not only publications covering research and theory but also highly practical works that are theoretically sound, such as those of Horwitz (2013) and Gregersen and MacIntyre (2014). I found a few sources (e.g., Cohen & Macaro, 2007; Ellis, 1994; Griffiths, 2013) that included strategy definitions from multiple researchers. I also looked on the Internet, although the definitions on the Internet were repeats of the ones I had already found.

Three of the definitions, including two of my own (Oxford, 1990, 2011) and one from Griffiths (2013), were accompanied by a list of prototypical-definitional strategy features. I included these features as part of the particular definition. If a certain prototypical-definitional feature was identical or similar to something in the definition, I did not count it twice for that definition. For example, if the 2015 definition of learning strategy from Dr. X included the word “action” and her prototypical-definitional feature list included the word “action,” “active,” or “activity,” I only counted the idea once.

I chose definitions that covered more than four decades, beginning with 1975, when Joan Rubin’s article started a steady stream of publications that has not stopped since. Thanks to researchers all over the world, the stream became a torrent for several decades.

I did not include definitions that focused only on communication strategies or that did not refer to learning. I did include definitions for L2-learning-related terms such as “learner strategies,” “learning strategies,” and “self-regulated learning strategies.” In one instance I included Dörnyei and Ryan’s (2015) definition of the word “strategic” because of its utility to the study.

*Finding definitions outside of the L2 field.* I included six strategy definitions from outside the L2 field. The earliest definition was from 1986, though I know of others from the 1960s. My goal for including these six was simply to allow some insights external to the L2 field, not to do an in-depth substudy.



The definitions from outside of the L2 field were chosen for specific reasons.

- Two of them (Weinstein, Husman, & Dierking, 2000; Weinstein & Mayer, 1986) are often quoted in the L2 field.
- I chose the definition by Pressley, Goodchild, Fleet, and Zajchowski (1989) because Pressley was, until his untimely death, a major figure in strategy research in multiple academic areas.
- I decided to include two learning strategy definitions because of their importance in self-regulation: that of Dembo and Seli (2014) and that of Donker, de Boer, Kostons, Dignath van Ewijk, and van der Werf (2014). The latter of these two definitions partly quoted Pintrich (2000), another well-known self-regulation scholar. Work by Dembo and Seli and by Donker et al. is also included elsewhere in this book.
- I added another learning strategy definition (#32 of the 33 definitions in the study) drawn from outside the L2 field. I personally crafted it because I felt the study deserved to have one definition that was as unbiased as possible, unconnected with any specific education theory, linguistically based, and founded on two highly respected sources: a standard dictionary (*Oxford Dictionaries*, 2016, from Oxford University Press) and the *Online Etymology Dictionary* (Harper, latest edition 2016), which I have used for many years as a trusted, historical source. The resulting definition of learning strategy is novel in one sense but not in another. The broad meaning of *strategy* is a plan of action to meet a major or overall aim (*Oxford Dictionaries*, 2016), although it comes from an earlier military definition, a plan of action of a general (Harper, 2016b; Oxford, 1990). The meaning of *strategy* as a plan of action toward a goal is widely accepted. The innovative definition of the word *learning* has two complementary parts: (a) “finding or following the track” (based on ancient Proto-Indo-European roots cited by Harper, 2016a<sup>7, 8</sup>), which suggests on ongoing movement in a desirable path; and (b) the development of “knowledge or skills through experience, study, or by being taught” (from the *Oxford Dictionaries*, 2016), thus via informal or formal means.<sup>9</sup> Putting these aspects of *strategy* and *learning* together, we have an unconventional yet possibly important definition: “A *learning strategy* is the learner’s plan of action for finding or following the desired track through experience, study, or by being taught.”

*Assembling the data.* I listed the definitions in chronological order starting with 1975. I integrated the 27 definitions from inside the L2 field and the six definitions from outside the field into one common list of 33 definitions. Table 1.1 (pp. 14–17) presents the complete, unanalyzed data.

#### *Data Analysis*

To conduct data analysis I employed open coding and axial coding procedures from the grounded theory approach. I examined each definition for explicit and implicit statements.

*Open coding and axial coding of the data.* The grounded theory approach does not allow pre-planned themes to be used. Instead, themes must arise based on iterative examinations of the data. The approach typically involves the constant-comparison technique, by which the analyst repeatedly goes over the data and compares newly arising themes with the whole set of data to see whether the themes are justifiable. Quite often it is necessary to adjust, expand, or reduce the themes to reflect the data realistically.

Table 1.1 The Data: Definitions of “Language Learning Strategies,” “Learner Strategies,” “Self-Regulated Learning Strategies,” “Strategies,” and “Strategic”

Number	Definition	Source (chronologically ordered) (Shaded authors are strategy experts from outside the L2 learning field)
1	Learning strategies: “the techniques or devices which a learner may use to acquire knowledge”	Rubin (1975, p. 43)
2	Learning strategies: “general tendencies or overall characteristics of the approach employed by the language learner, leaving techniques to refer to particular forms of observable learning behavior”	Stern (1983) in Ellis (1994, p. 531)
3	Learning strategies: “behaviors and thoughts that a learner engages in during learning that are intended to influence the learner’s encoding process”	Weinstein & Mayer (1986) in Ellis (1994, p. 531)
4	Learning strategies: “strategies which contribute to the development of the language system which the learner constructs and affect learning directly”	Rubin (1987) in Ellis (1994, p. 531)
5	Learning strategies: “techniques, approaches or deliberate actions that students take in order to facilitate the learning, recall of both linguistic and content area information”	Chamot (1987) in Ellis (1994, p. 531)
6	Learning strategies: “operation or steps used by the learner to facilitate acquisition, storage, or retrieval of information”	Chamot, Küpper, & Impink-Hernandez (1988, p. 2)
7	Learning strategies: “techniques which students use to comprehend, store, and remember new information and skills”	Chamot & Küpper (1989, p. 13)
8	Learning strategies: “processes (or sequences of processes) that, when matched to the requirements of tasks, facilitate performance”	Pressley, Goodchild, Fleet, & Zaichowski (1989, p. 303)
9	Learning strategies: “behaviors or actions which learners use to make language learning more successful, self-directed, and enjoyable”	Oxford (1989, p. 235)
10	Learning strategies: “specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, and more transferrable to new situations” (See prototypical-definitional features below.)	Oxford (1990, p. 8)
	<b>Prototypical-definitional features of learning strategies:</b>	
	1. Contribute to ... communicative competence	
	2. Allow learners to become more self-directed	
	3. Expand the role of teachers [to guide and facilitate]	
	4. Are problem-oriented, because learning involves problem-solving	
	5. Are specific actions taken by the learner	
	6. Involve many aspects of the learner, e.g., cognitive, emotional, social	
	7. Support learning both directly and indirectly	
	8. Are not always observable; some are purely mental and hence unobservable	
	9. Are often conscious [This was later changed to remove “often”]	
	10. Can be taught	
	11. Are flexible	
	12. Are influenced by a variety of factors, such as task requirements, teacher expectations, learning style, personality traits, motivation, culture, and others (pp. 13–14)	

Oxford (1990, p. 9, plus explanations of each feature on pp. 9–14)

- 11 Learning strategies: "special thoughts or behaviors that individuals use to help them comprehend, learn, or retain new information"
- 12 Learning strategies: "intentional behaviors and thoughts used by learners during learning so as to better help them understand, learn, or remember new information"
- 13 Learning strategies: "the often conscious steps or behaviors used by language learners to enhance their learning. These strategies help learners take in aspects of the language, store them in long-term memory, and use them when needed."
- 14 Learning strategies: "learning processes which are consciously selected by the learner"
- 15 Learning strategies: "any thoughts, behaviors, beliefs, or emotions that facilitate the acquisition, understanding, or later transfer of new knowledge and skills"
- 16 Learner strategies: "'steps' or 'actions' selected by learners either to improve the learning of a second language, or their use of it, or both"
- 17 Learner strategies: "the actions that learners take in order to decode, process, store, and retrieve information"
- 18 Learning strategies: "specific actions one takes and/or techniques one uses in order to learn." "Some are consciously employed, and others are automatic. ... [M]ost learning styles are expressed by observable learning strategy behaviors. In a nutshell, learning strategies are: things we do; relatively easy to change; different, depending on learning styles; effective or not effective for specific situations; and frequently under some level of conscious control."
- 19 Learning strategies: "activities consciously chosen by learners for the purpose of regulating their own learning"
- 20 Self-regulated learning strategies: "deliberate, goal-directed attempts to manage and control efforts to learn[.] ... teachable actions that learners choose from among alternatives and employ for L2 learning purposes (e.g., constructing, internalizing, storing, retrieving, and using information; completing short-term tasks; and/or developing L2 proficiency and self-efficacy in the long term)"  
Not to be confused with skills: "Skills are automatic and out of awareness, whereas strategies are intentional and deliberate" (See prototypical-definitional features below)
- Prototypical-definitional features of self-regulated learning strategies:**
1. "are employed consciously, involving four elements of consciousness (awareness, attention, intention, and effort, Schmidt, 1995) [Note: I would now say that the use of a given strategy requires at least one of these elements of consciousness, or it is not a strategy.]
  2. make learning easier, faster, more enjoyable, and more effective
  3. are manifested through specific tactics in different contexts and for different purposes
  4. reflect the whole, multidimensional learner, not just the learner's cognitive or metacognitive aspects
  5. are often combined into *strategy chains*, i.e., groups of strategies working together ...
  6. are applied in a given situation but can be transferred to other situations when relevant.
- Some strategies, such as Planning or Monitoring, are deployed for learning many subjects and for problem-solving in general throughout one's life. Other strategies ... are tied to language learning."

continued...

Table 1.1 continued...

Number	Definition	Source (chronologically ordered) (Shaded authors are strategy experts from outside the L2 learning field)
21	Learner strategies: “[t]houghts and actions, consciously chosen and operationalized by language learners, to assist them in carrying out a multiplicity of tasks from the very onset of learning to the most advanced levels of target-language (TL) performance’	Cohen (2011, p. 7; 2012, p. 136)
22	L2 strategies: ‘specific practices or techniques that can be employed autonomously to improve one’s L2 learning and/or use’	Plonsky (2011, p. 994)
23	Learning strategies: “activities consciously chosen by learners for the purpose of regulating their own language learning” (This definition is included again because it was accompanied this time by newly listed prototypical-definitional features below. It was not included again in the tabulations in subsequent tables, although the prototypical-definitional features were.)	Griffiths (2013, p. 15); also see Griffiths (2008 earlier)
<b>Prototypical-definitional features of learning strategies:</b>		Griffiths (2013, pp. 7ff)
Activity	Consciousness	
Choice	Goal-orientation	
Regulation	Learning focus	
Learning strategies: “activities or techniques that learners can use to improve or enhance their target language ability”		
Learning strategies: “the methods students use to acquire information. Higher achieving students use more learning strategies than do lower achieving students (Zimmerman & Martinez-Pons, 1988). ... Learning strategies serve different purposes.”		
24	Learning strategies: “activities or techniques that learners can use to improve or enhance their target language ability”	Horwitz (2013, p. 274)
25	Learning strategies: “the methods students use to acquire information. Higher achieving students use more learning strategies than do lower achieving students (Zimmerman & Martinez-Pons, 1988). ... Learning strategies serve different purposes.”	Dembo & Seli (2014, p. 12)
26	Learning strategies: “Strategies, either consciously or semi-consciously chosen by a language learner, operate somewhere on a continuum between being intentionally deliberate and fully automatic, are purposeful and goal-directed and can be enhanced through instruction.” “Using effective strategies, either alone or in combination (often called strategy chains) allows learners to perform specified tasks or to solve particular problems, and, as an end result, strategies can ‘... make learning easier, faster, and more enjoyable’ (Cohen, 2007: 39) ...”	Gregersen & MacIntyre (2014, pp. 148–149), partly quoting from Cohen (2007, p. 39) who quoted from Oxford (1990)
27	Learning strategies: “Most researchers agree that strategies are goal-directed, have a metacognitive component, involve learner responsibility, and require ‘some degree of consciousness whereby the learner consciously and intentionally attends selectively to a task ...’ (Cohen, 2007, p. 32)”	Gunning & Oxford (2014, p. 8, partly quoting Cohen, 2007, p. 32)
28	Learner strategy: “a thought or behavior used by learners to regulate SFL [second or foreign language] learning or use. ... [may be engaged either] consciously and deliberately or unconsciously and automatically to further learners’ processing while learning or while performing” language tasks	Purpura (2014, p. 533)

- 29 Self-regulated learning strategies: “domain-appropriate” actions] “purposefully” used in “an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features of the environment” (Pintrich, 2000, p. 453)”
- 30 Strategies: “Conscious actions that learners use to help them to learn or use a language.”
- 31 Strategic: “strategic in the strict sense, that is, ... involv[ing] appropriate and purposeful behavior to enhance the effectiveness of learning” [Note: This definition could be applied to learning strategies, though the authors of this definition only intended to define “strategic.”]
- 32 Learning strategy: “the learner’s plan of action for finding or following the desired track through experience, study, or by being taught”  
Note: Context is clearly implied.
- 33 Learning strategies: “actions chosen by learners (either deliberately or automatically) for the purpose of learning or regulating the learning of language”

Donker, de Boer, Kostons, Dignath van Ewijk, & van der Werf (2014, p. 2), partly quoting from Pintrich (2000, p. 453) Williams, Mercet, & Ryan (2015, p. 125) Dörnyei & Ryan (2015, p. 146)

Based on *Oxford Dictionaries* (2016a, 2016b) and derivation from Proto-Indo-European sources (Harper, 2016a, 2016b) Griffiths (2017)

The first phase of analysis, open coding, permits large numbers of themes to emerge. In this case, about 70 themes emerged, some containing just one word or phrase and others containing more than one. Some examples were: *techniques, tools, devices, beliefs, emotions, methods, actions, activities, processes, facilitate/make easier, make more enjoyable, regulate + regulation, success + successful, effective, purpose, aim, conscious + consciousness + consciously, unconscious + unconsciously, automatic + automatically, learn + learning, acquire + acquisition, knowledge, comprehend + comprehension, retain + retention, encoding, decode, store, retrieve, perform, use* (noun), *use* (verb) *context, and domain.*

The second analytic phase was “axial coding,” or intentionally bringing together themes into larger themes, reducing the total number of themes. This cross-walking of themes resulted in about 30 themes, which were then amalgamated into 19 themes. It should be pointed out again that in no instance was there any pre-ordained set of categories or any pre-established taxonomy of definitions; the data points spoke for themselves.

Across some of the final 19 themes there were instances of overlap. An example was *purpose/purposeful* (Theme I, Purpose), which was related to but not identical to *conscious/consciousness/consciously* (Theme J, Consciousness).

The *Emergent Theme Identification Guide for Strategy Definitions* is shown in Table 1.2 (p. 19). It shows the final 19 thematic categories and the typical words or phrases associated with them, according to open coding and axial coding. This guide was used to help me determine which thematic categories were represented in any specific definition.

Quite often at this point in grounded theory analysis there is a phase called “selective coding,” which involves identifying the single overarching theme, reflecting the central meaning of all the data. However, I did not want to combine themes to create a single theme, because there was so much relevant data to be studied.

*Making initial judgments.* The next analytic step was to create an electronic spreadsheet, as seen in Table 1.3 (pp. 22–23), with the 19 themes across the top (using the abbreviations shown above in the *Emergent Theme Identification Guide for Strategy Definitions: 19 Themes*, Table 1.2). Down the left side of Table 1.3. I listed, in short form, the authors and dates of each of the definitions.

*Identifying “explicit mentions” of each of the thematic categories for the 33 definitions overall and the two subsets (27 from the L2 field and 6 from outside).* I examined all 33 definitions and the two subsets (27 definitions from the L2 field and 6 from outside) to determine which definitions contained explicit references to any material in 19 themes. For example, Definition #12 by Richards and Platt (1992) explicitly included “thoughts,” a term in Theme B, Mental. Therefore, I gave Definition #12 an “X” for Theme B to indicate an explicit mention of “thoughts.” If Definition #12 had additionally included the term “emotions,” which is also found in Theme B, that would not have changed anything; only one X was given for each cell.<sup>10</sup>

*Identifying “implicit mentions” of each of the thematic categories for the 33 definitions and the two subsets.* For some of the 33 definitions and the two subsets of definitions, ideas from certain thematic categories were not mentioned overtly but were clearly implied. For example, although many definitions explicitly cited consciousness, many other definitions only implied consciousness, most often by indicating a strategy purpose that could probably only be manifested consciously. For example, Definition #17 by Macaro (2003) was: “the actions that learners take in order to decode, process, store, and retrieve information” (p. 109). Although Macaro’s definition did not expressly cite consciousness, it is likely that some degree of consciousness would be needed for the learner “to decode, process, store, and retrieve information.” In such a case, the coding was Impl for “implied.”<sup>11</sup>



Table 1.2 Emergent Theme Identification Guide for Strategy Definitions: 19 Themes

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*Emergent themes, abbreviation, and coding information:*

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A.	Tea = <u>T</u> eachable; teacher roles; can be enhanced through instruction.
B.	Men = <u>M</u> ental aspects, especially thoughts, cognition, cognitive, metacognitive; specifically mental aspects of learning, such as encoding, storing, or recalling/retrieving; study involving mental aspects; (in one definition) beliefs, emotions, self-efficacy; unobservable (either always unobservable or sometimes unobservable). Implicitly <u>Men</u> = anything involving learning. Can also be related to whole learner; see S, <u>Who</u> .
C.	Beh = <u>B</u> ehaviors: guided by the mind but generally considered to be observable.
D.	Tec = <u>T</u> echniques, devices, tools, methods (nouns focusing specifically on what is used by the learner; does not need to be observable).
E.	Act = <u>A</u> ctive: actions, acts, activities, steps, process/processes/sequences, operation(s), practice, follow the track (verbs or gerund; connotes movement, dynamism, often specificity).
F.	Bro = <u>B</u> road: general approaches, tendencies, overall characteristics (nonspecific).
G.	Reg = <u>R</u> egulated by the learner: self-regulated (sr), self-directed (sd), learner-managed (ma), autonomy/autonomous (au), responsibility (rs), match with task requirements (tr). Such matching is part of forethought, the first phase of self-regulation.
H.	Fac = <u>F</u> acilitate learning, make learning easier (ea), more successful/effective (su), more enjoyable (en), or faster (fa); or sometimes does this.
I.	Pur = <u>P</u> urposeful: purpose, goal-oriented, aim, choice, chosen, selected (from alternatives); "to/in order to" [+ verb] = for the purpose of. (In addition, all of these imply consciousness; see J.)
J.	Con = <u>C</u> onsciousness: explicitly mentions one or more of the following: (a) consciousness or semi-consciousness; (b) some degree of consciousness; or (c) particular components of consciousness (Schmidt, 1995), e.g., attention, awareness, intention/deliberateness, or control/effort.
K.	Unc = <u>U</u> nconsciousness: explicitly mentions that a strategy can be unconscious or automatic.
L.	Flx = <u>F</u> lexible: flexibly operationalized and employed; support learning both directly and indirectly; easy to change tactics may differ .
M.	Tas = <u>T</u> ask accomplishment, match with task requirements, transfer to new tasks/uses. (These imply context; see Q. Related to purpose, I, <u>Pur</u> , and to regulation, G, <u>Reg</u> .)
N.	Lea = <u>L</u> earning: enhance learning; knowledge, information acquisition, coding, comprehension, storage, construction, retention, recall, retrieval; development of learning system.
O.	PerU = Language <u>p</u> erformance and <u>u</u> se; using language information.
P.	Pro = Language <u>p</u> roficiency in a broad sense; relates to target language ability/communicative competence, which is built on both knowledge (from <u>Lea</u> ) and performance ( <u>PerU</u> ).
Q.	Cxt = <u>I</u> n <u>c</u> ontext, ready when needed; influenced by context factors outside of or within the learner (e.g., task reqs., learning style, culture); domain-appropriate.
R.	Gro = <u>G</u> rouping: sequences of processes, strategy chains or clusters.
S.	Who = <u>W</u> hole learner, i.e., multiple aspects of learner, not just cognitive. Can be related to mental, which for one definition included beliefs, emotions, etc.

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*Identifying "no mentions" of each of the thematic categories for the 33 definitions and the two subsets.* If a particular definitions made no mention, either explicit or implied, of anything in a specific theme, then I left the cell entirely blank. An example is Definition #24 (Horwitz, 2013), which did not mention Theme C, Behavior.

*A total of 1,881 judgments.* I made the identifications of explicit mentions, implicit mentions, or no mentions (three decisions) for each of the 19 themes in each of 33 separate definitions. This created 1,881 distinct judgments. I reviewed these judgments several times on four

different days in order to verify intra-rater reliability. I only had to alter ten judgments, or less than 0.5% of 1,881 judgments. To further assess reliability, I asked another strategy specialist to independently analyze a random segment of the definitions at the axial coding stage, and our judgments generally coincided. Specifics are available on request.

*Tabulating the data.* For each of the 19 themes, Theme A through S, I tabulated the frequencies of (a) total *explicit* mentions of that particular theme across all 33 definitions, (b) total *implicit* mentions of that theme, and (c) total *explicit + implicit* mentions of that theme. I did this for all 19 themes. I also tabulated the percentages based on the frequencies. To attain the percentages, I used 33 (representing all the definitions) as the denominator and divided this into the total mentions (explicit, implicit, and explicit + implicit) existing for a specific theme. I did the same thing for the two subsets but used the appropriate number for the denominator (27 in one case and 6 in the other).<sup>12</sup>

After doing all the tabulations and reviewing the data several times, I noticed that some themes naturally fell into eight **Master Themes**, which represented amalgams of the 19 themes. For example, the following appeared to represent diverse forms of strategies: mental aspects, actions, techniques, behaviors, and general tendencies/approaches. Together these became “Master Theme I: Diverse Forms of Strategies.”<sup>13</sup>

## Content-Analytic Study Results and Discussion

Table 1.3 presents the results in a quantitative form. Each cell indicates whether or not a given definition included a particular theme (characteristic) for a given definition. The end of the table indicates tabulated results for each theme for all 33 definitions as a group, then for the 27 definitions from the L2 field, and finally for the 6 definitions from outside the L2 field.

In this section I use the terms explicit, direct, and overt synonymously with references to the mentions of a theme within a definition. I employ the terms implied and indirect as synonyms.

Table 1.4 (p. 24) exhibits the eight master themes that emerged through many iterations of data examination. Note that the master themes are often related to each other. If this were a statistical factor analysis, these themes would appear to be oblique (i.e., associated with each other), as opposed to orthogonal or perpendicular (i.e., unrelated).

### **Master Theme I. Diverse Forms of Strategies**

Most definitions mentioned the “form” of strategies. The strategy forms included: IA, thoughts, cognitions, and other internal phenomena (primarily what learners think); IB, actions (what learners do); IC, techniques, devices, tools, and methods (what learners use); ID, behaviors (how learners act); and IE, general tendencies (how learners broadly approach learning). The results of this theme are captured in Figure 1.1 (p. 25).

#### *IA. Mental Aspects (Thoughts, Cognitions, etc.) as a Strategy Form (Primarily What Learners Think)*

##### RESULTS

This theme of strategy forms referred to mental aspects, almost all being thoughts and cognitions. However, one definition also included emotions and beliefs, along with thoughts, as strategies (Definition #15, Weinstein, Husman, & Dierking, 2000). An explicit mention of the mental theme was credited if a definition overtly employed terms such as *thoughts*, *cognitions*, *cognitive*, *metacognitive*, *consciousness/conscious*, or *study*, or referred to any specifically mental processes of learning, such as *encoding*, *storing*, or *recalling/retrieving*.



An implicit mention of this mental theme was logged if a definition did not mention terms such as the above but cited very general themes that could be understood as related to the mind, such as *acquire knowledge, improve learning, enhance ... learning, and even enhance ... target language ability*. No credit was given for this theme when the definition spoke only of *general tendencies ... of the approach employed by the language learner*, not mentioning anything about the mind (Definition #2, Stern, 1983).

A total of 97% of all 33 definitions included a mental component, with 73% doing so explicitly and 24% doing so implicitly. Among the 27 L2 strategy definitions, 96% had a mental element, including 74% explicit and 22% implicit. All six strategy definitions from outside the L2 field cited a mental component (67% explicitly, 33% implicitly).

#### DISCUSSION

It was striking that almost all definitions specifically mentioned or indirectly alluded to a mental/internal basis, such as thoughts, cognitions, knowledge acquisition, learning in general, or specific mental learning processes.

*Mental – but where located?* At this point I need to clarify something about “internalism” or “mentalism” of strategies. I totally agree with Macaro (2006) that strategies are mental in the sense that all strategies occur in the mind or are guided by the mind. Macaro (2006) went further, contending that learning strategies are “located” in working memory. He is certainly right in one major way. Implementing learning strategies does involve working memory. However, I note that mental storage of strategies occurs in schemata, which are defined as mental structures by which the learner organizes information. A schema (singular) contains the learner’s knowledge on a certain topic and the organized interrelationships among components of that knowledge (Chi, Glaser, & Rees, 1982). When a learner learns a new strategy (just as when he or she learns any new information), the strategy information is moved from short-term memory (STM) to long-term memory (LTM) for what could be called “storage.” One way to do this is to fit the new information into an existing schema (assimilation), but if the new information does not fit well into an existing schema, it is necessary to change an existing schema to accommodate the new information (accommodation), as metaphorically described by Piaget (1954). Then the information is available to be called upon for use later. To use information, including strategies, this information must be pulled from STM or LTM into working memory (Leaver, Ehrman, & Shekhtman 2005). All of these terms are metaphorical, not precise physical descriptions, but they are typically used by cognitive psychologists and educational psychologists.

Where might the schemata be physically “located”? It is impossible to say that a metaphorical construct is physically located in a certain part of the brain. However, we can say that higher cognitive processes, such as analyzing, comparing, synthesizing, and reasoning (which, when consciously and intentionally used, are viewed as cognitive strategies), operate in the prefrontal cortex (frontal lobe) but have linkages elsewhere in the brain, such as the deep, inner part known as the limbic system. General regulation or executive control processes, such as evaluating and planning (which, when consciously and intentionally deployed, are metacognitive strategies) also operate in the frontal lobe (prefrontal cortex) of the brain but again have associations with the limbic system: “The general assumption is that impaired metacognitive processes are related to frontal lobe damage ...” (Koriat, 2002, p. 266). Emotions and motivation are housed in the limbic system, but their regulation can be consciously aided through frontal lobe executive processes (which, when consciously and intentionally used, are strategies).

*Potential observability, in addition to the mental basis.* My only divergence from Macaro thus lies in the fact that, in addition to the purely mental form of strategies, I see a role for observable

Table 1.3 Analyzing Definitions by Emergent Themes (See Table 1.2 for complete codes.)

Source of the definition (see Table 1.1)		Emergent themes mentioned in the definition																			
		A Tea	B Men	C Beh	D Tec	E Act	F Bro	G Reg	H Fac	I Pur <sup>f</sup>	J Con	K Unc	L Flx	M Tas	N Lea	O PerU	P Pro	Q Cxt	R Gro	S Who	
1	Rub	1975	Impl		X					X	Impl				X						
2	Ste	1983		Not		X				Impl?					Impl						
3	WM	1986	X	X						X	Impl				X						
4	Rub	1987	X			X				X	Impl				X						
5	Cha	1987	X	X		X				X	Impl				X						
6	CKI	1988	X	X		X				X	Impl				X						
7	CK	1989	X			X				X	Impl			X							
8	PGFZ	1989	Impl			X				Impl					X						
9	Oxf	1989	Impl	X		X				X	Impl				X						
10	Oxf	1990	X	X		X				X	X		X	Impl	X						X
11	OC	1990	X	X						X	Impl				X						
12	RP	1992	X	X						X	X				X						
13	OOA	1996	X	X		X				X	X				X						
14	Coh	1998	X	X		X				Impl	X				X						
15	WHD	2000	X	X		X				Impl	Impl			Impl?	X						X
16	Gao*	2003	Impl			X				X	Impl				X						
17	Mac*	2003	X	X		X				X	Impl				X						
18	LES	2005	X	X		X				X	X				X						
19	Gri	2008	X	X		X				X	X				X						
20	Oxf	2011	X	X		X				X	X		Impl	X	X						X
21	Coh*	2011	X	X		X				X	X			X	X						
22	Plo**	2011	Impl		X	X				X	Impl			X	X						
23	Gri	2013	X	X		X				X	X				X						
24	Hor	2014	Impl	X		X				X	Impl				X						
25	DS	2014	Impl		X					X	Impl			X	X						
26	GM	2014	X	X						X	X			X	X						X
27	GO	2014	X	X		Impl				X	X		X	X	X						
28	Purpura*	2014	X	X		X				X	X			X	X						X
29	DDKDV	2014	X	X		X				X	Impl			X	X						X

30	WMR**	2015	X		X			X							X						
31	DR***	2015	Impl	X							X										
32	OPIE	2016	X		X														X		
33	Gri	2017	X		X														X		
	Total explicit (all defs)		3	24	9	7	21	2	11	10	29	14	4	2	6	29	8	3	5	3	4
	Total implied (all defs)		0	8	1	0	1	0	1	0	4	18	0	1	2	3	2	0	3	0	0
	Total explicit + implied (all defs)		3	32	10	7	22	2	12	10	33	32	4	3	8	32	10	3	8	3	4
	Percent explicit (all defs)		9	73	27	21	64	6	33	30	88	42	12	6	18	87	24	9	15	9	12
	Percent implied (all defs)		0	24	3	0	3	0	3	0	12	54	0	3	6	9	6	0	9	0	0
	Percent explicit + implied (all defs)		9	97	30	21	67	6	36	30	100	97	12	9	24	97	30	9	24	9	12
	Total explicit (L2 only)		3	20	7	6	17	2	9	8	25	14	4	2	5	24	7	3	3	2	2
	Total implied (L2 only)		0	6	0	1	0	0	0	0	2	12	0	1	1	3	1	0	1	0	0
	Total explicit + implied (L2 only)		3	26	7	7	18	2	9	8	27	26	4	3	6	27	8	3	4	2	2
	Percent explicit (L2 only)		11	74	26	22	63	7	33	30	93	52	15	7	19	89	26	11	11	7	7
	Percent implied (L2 only)		0	22	0	4	0	0	0	0	7	44	0	4	4	11	4	0	4	0	0
	Percent explicit + implied (L2 only)		11	96	26	26	67	7	33	30	100	96	15	11	22	100	30	11	15	7	7
	Total explicit (non-L2)		0	4	2	1	4	0	2	2	4	0	0	0	1	5	1	0	2	1	2
	Total implied (non-L2)		0	2	0	0	0	1	0	0	2	6	0	0	1	0	1	0	2	0	0
	Total explicit + implied (non-L2)		0	6	2	1	4	0	3	2	6	6	0	0	2	5	2	0	4	1	2
	Percent explicit (non-L2)		0	67	33	17	67	0	33	33	67	0	0	0	17	83	17	0	33	17	33
	Percent implied (non-L2)		0	33	0	0	0	0	17	0	33	100	0	0	17	0	17	0	33	0	0
	Percent explicit + implied (non-L2)		0	100	33	17	67	0	50	33	100	100	0	0	33	83	33	0	67	17	33

Key: X = explicit mention. Impl = implied. Blank = no mention. Not = definition specifically says this is not true. \* = "learner strategy", as opposed to "learning strategy." \*\* = "L2 strategy" or just "strategy" as opposed to "learning strategy;" "learner strategy," etc. \*\*\* = The word "strategic" only. Category G: self-regulated (sr), self-directed (sd), learner-managed (ma), autonomy/autonomous (au), responsibility (rs), match with task requirements (tr). Category H: make learning easier (ea), more successful/effective (su), more enjoyable (en), or faster (fa).

Important note:

Numbers are rounded up or down as required. † If purposefulness were equated with self-regulation, then 100% of the definitions would be coded as including self-regulation. This study was more conservative.

Table 1.4 Results for Master Themes across the 33 Definitions

Master Theme designation (not to be confused with the 19 themes)	Name of Master Theme	Aspects of the Master Theme as shown in the definitions	Percentage of the 33 definitions showing this Master Theme (incl. explicit and implicit mentions) High = 60% or over Moderate = 35–69% Low = Under 35%
I	Diverse Forms of Strategies	Mental aspects, such as thoughts, cognitions, encoding (primarily what learners <i>think</i> ) (IA)	97% (high)
		Actions/processes (what learners <i>do</i> ) (IB)	67% (high)
		<b>NOTE: Mental + actions/processes = mental actions/processes</b> (a central feature of many definitions)	
		Techniques, devices, tools, and methods (what learners <i>use</i> ) (IC)	21% (low)
		Behaviors (how learners observably <i>behave</i> ) (ID)	30% (low)
		General tendencies (how learners <i>broadly approach learning</i> ) (IE)	6% (low)
II	Purposefulness	Having purpose, aim, or goal	100% (high)
III	Particular Purposes of Strategies	Learning (IIIA)	97% (high)
		Self-regulation (IIIB)	36% (moderate)
		Task accomplishment (IIIC)	24% (low)
		Performance/use (IIID)	30% (low)
		Proficiency in general (IIIE)	9% (low)
		Facilitation (IIIF)	30% (low)
IV	Consciousness	Conscious (IVA)	97% (high)
		Can also be unconscious/automatic (IVB)	12% (low)
V	How Strategies Are Used	Flexibly (VA)	9% (low)
		Grouping (e.g., chains or clusters) (VB)	9% (low)
		Orchestration (VC)	0%
VI	Contextualization	Strategies occur in a context	24% (low)
VII	Teachability	Strategies are teachable	9% (low)
VIII	Focus in the Titles of the Strategies	Learning strategies (L2 field and beyond) (VIII A)	79% (high)
		Strategic (oriented to L2 learning) (VIII B)	3% (low)
		<b>Other foci occurring only in certain strategy titles within the L2 field:</b> L2 strategies (neither learning/learner strategies) (VIII C)	3% (low)
		Strategies (neither learning/learner strategies) (VIII D)	3% (low)
		Learner strategies (VIII E)	12% (low)

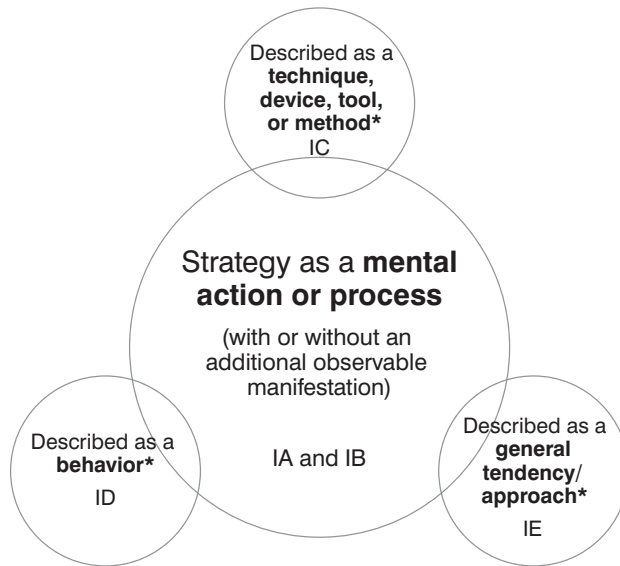


Figure 1.1 The Forms of Strategies Identified in the Definitions, Indicating Mental Action (Process) as the Central Feature for All Strategy Forms

Note: \* These aid the action. They are guided by the mind, rather than acting on their own.

action as an implementation feature of certain strategies. In other words, strategies always operate mentally or are guided mentally, but they sometimes additionally have visible manifestations. Observability does not diminish their mental basis. For example, analyzing is clearly an internal, mental strategy, but analyzing can also become visible when the learner uses the classical outline form with Roman numerals to analyze an argument, when he or she employs concept-mapping to analyze a newspaper article, or when he or she draws a plot diagram to analyze the plot of the *Die Verwandlung* (*The Metamorphosis* by Kafka) in German or the *Aeneid* in Latin. Analyzing becomes an observably collaborative strategy when two students jointly analyze a political speech. Note that in each situation several strategies are united synergistically and dynamically into a strategy cluster. The highly potent strategy of analyzing serves as the basis of the strategy cluster in each case.

*Seeking the mental aspect that guides the observable.* Cohen (1996, 2014) stated that some strategies (e.g., asking a question for clarification) are behavioral and thus observable, while other strategies (e.g., paraphrasing in instances when the production is not obviously a paraphrase) are both mental and behavioral but not easily observable, and still other strategies (e.g., making mental translations for clarification while reading) are just mental. In my view, it would be very difficult to classify all strategies into these three sets, but Cohen offered a useful start to an as yet unfinished discussion.

Griffiths (2013) stated "that although there is a considerable degree of consensus that strategies are active, not all writers agree on the nature of the activity" (p. 7). As an example, she mentioned a divergence between Macaro and me regarding whether strategies are mental. She stated, "Macaro (2006) insists that strategies are a mental activity. Oxford (for example, 1990), however, would include physical activities, such as writing in a notebook or physically acting out new words, as examples of strategic behavior" (Griffiths, 2013, p. 7). True enough, in 1990 I did not make clear my belief that observability can only exist if a strategy occurs first in the mind. For me at that time, the concept of "mental-before-observable" was merely tacit (intuitive, unstated) knowledge.

In general, my stance is close to Macaro's, but not identical. Macaro (personal communication, Feb. 8, 2016) stated, "I think it's important to distinguish between mental activity and observable motor activity," and his view is that observable motor activity is not a strategy, as is "visualizing a new word". He continued, "My problem with motor activity (such as note-taking) being a strategy is that it can mask all sorts of possible mental activity – used differently by different learners – so that it cannot be considered as a single unit of analysis. Currently I quite like the notion of there being 'opportunities for strategies to take place' – note-taking would be one such opportunity." In other words, rather than considering the observable behavior as strategic, Macaro averred that only the mental activities (strategies) behind the observable behavior are strategic.

- I agree with Macaro that there are many possible strategies lurking behind the overt physical behavior of *taking notes*. Note-taking offers an opportunity for strategies to be used, as he mentioned. A strategy behind effective note-taking is seeking the main idea and the supporting ideas while reading or listening. That strategy is directly related to the strategy of analysis in the sense of distinguishing between levels of importance. Another strategy is determining the level of detail needed, which takes us back to a more fundamental strategy, identifying the learning needs and goals. While note-taking is occurring, the learner monitors to see whether he or she has identified the important ideas, has sufficiently highlighted (e.g., through starring or underlining) key points, and has had major questions answered in the notes. An immense amount of strategic mental work occurs during the observable aspects of note-taking.
- In early strategy typologies, O'Malley and Chamot (1990) and Oxford (1990) identified as strategies the observable actions of *asking questions for clarification* and *asking questions for verification*. Self-regulated learning models encourage the strategy or process of asking questions. If we consider Macaro's (2006) idea that strategies only operate in the mind, the relevant strategies behind asking questions might be the following: identifying what one knows, identifying what one does not know, structuring questions to find out what one wants to know, and using analysis to figure out the best way to ask the questions in the sociocultural setting and the best time to ask. I believe that the mental and behavioral, observable aspects are strategic, with the mental having the upper hand.
- *Organizing a cooperative study group* to gain new information, share existing information, and offer social support is not itself a single strategy. For one thing, many overt actions are involved, such as deciding who should be invited; inviting people to the group; cooperatively deciding on the time, place, frequency, and agenda; and, as a group, undergoing the standard group-development stages of forming, storming, and norming. Each of these overt actions could relate to various unobservable strategies. Here are just a few purely mental behaviors a learner might perform while thinking about and planning a cooperative learning group (not to mention actually starting such a group): analyzing learning needs; listing possible goals related to those needs; evaluating possible goals on importance and feasibility; judging whether a cooperative learning group would help or hinder in relation to the needs and goals; if a cooperative learning group looks promising, listing options about group type, size, frequency, length of meetings, type of members, and other details; and evaluating those options. All this mental activity is very complex and occurs within complex sociocultural contexts. Some of this will probably become too much to keep in working memory and will require taking notes, which reduces the load on working memory. (Is taking notes a strategy? More likely it consists of a whole range of strategies. See earlier.) Before or during each group meeting, an analysis of immediate learning tasks would need to occur so that the group's time could be focused on key task demands and on strategies to address those requirements,

and this task analysis might occur in a cooperative discussion, as opposed to just in one person's mind. Then group members would use a variety of activities to practice within the group, monitor progress, and evaluate results. In sum, planning and organizing a study group would, in Macaro's (2006) words, offer "opportunities for strategies to take place." However, I think that it is the mental strategies that tend to guide the observable strategies, and that the observable ones are manifestations of the mental ones. That might be a slightly different perspective from Macaro's.

- *Organizing the environment for learning* is high on the list of self-regulated learning strategies (see Chapter 2), although this would not be a strategy from Macaro's (2006) viewpoint. Planning to organize the environment becomes visibly materialized when the learner actually moves papers into files, finds the textbook, puts the videos in order, and reorganizes the computer files. What fundamental strategies in the mind are behind this flurry of observable behavior? These might be possible: identifying learning needs and related goals; making a mental picture of what the environment would look like to meet those goals; identifying aspects of the environment that would have to be altered; doing a cost-benefit analysis of the time spent on the reorganization of the environment; identifying the amount of time and effort the learner has available; and, if a reorganization seems possible, considering when to do it for the best outcome. Although this seems like a long list, it can be done rapidly in the mind.

*Beliefs and emotions as strategies?* One definition (Weinstein et al., 2000, Definition #15) included beliefs and emotions as strategies. This was unusual. Many self-regulation theorists outside the L2 field (e.g., Gross, 2014), as well as some of us inside the L2 field (e.g., Oxford, 1990, 2011) have long contended that strategies can be used to regulate emotions and beliefs, but not that beliefs and emotions are themselves strategies.

### IB. Actions/Processes as a Strategy Form (What Learners Do)

#### RESULTS

The active aspect of strategies was popular in the definitions. A strong 67% of all the definitions (67% from the L2 field and 67% from outside) explicitly or implicitly depicted strategies in active forms as, for example, *actions*, *acts*, *activities*, *steps*, *process*, *processes*, *sequences of processes*, *operation(s)*, and *practices*, all of which involve movement and dynamism. One definition from the L2 field implied action.

#### DISCUSSION

Strategies in the form of actions have many key aspects to discuss, as seen below.

*Actions that are mental.* Mental components of definitions were discussed in IA. It became very clear that actions and mental elements often went together in strategy definitions. Definitions often pointed to mental actions. For example, Macaro (2003) defined strategies as "the actions that learners take in order to decode, process, store, and retrieve information" (p. 109). I categorized this definition as having an explicit mention of "action," but also as citing "mental" components (see above) and referring to "learning," which includes many mental actions (see later).

*Underscoring the active nature of strategies.* In addition to her most recent formal definition of strategies, Griffiths (2013) remarked that strategies are "what learners do" (p. 7, emphasis in



original). Griffiths (2013) stressed the active nature of learning strategies. In a well-known handbook for L2 learners, Rubin and Thompson (1994) suggested that strategies are active and cited strategies such as organizing to learn, making opportunities to practice, using mnemonics, employing contextual clues, making intelligent guesses, memorizing chunks of language and formalized routines, and others.

*What happened to the action plan?* It was curious that only one definition of the entire set explicitly mentioned a plan of action. That definition was the generic one I crafted based on strictly linguistic sources rather than educational ones (Definition #32, Oxford, 2016b). The term “plan of action” comes directly from the traditional meaning of strategy (plan of action of a general, as in Harper, 2016b; Oxford, 1990, 2011) and the more modern meaning of strategy (any plan of action to achieve a goal or aim; see *Oxford Dictionaries*, 2016). The word or concept of *planning* – so frequent in generic definitions or descriptions of “strategy” published in fields outside of education (e.g., business, industry, the military, and even fashion and the arts<sup>14</sup>) – was surprisingly absent in the strategy definitions that I found in education, including the L2 field. However, the “metacognitive aspect” included in the definition by Gunning and Oxford (2014, p. 82), while not overtly expressing an actual plan, implicitly suggested planning, which is part of metacognition. This was counted as an implicit citation of activity in the sense of an action plan.

All the definitions in the study either stated or implied that strategies have a *purpose*. Perhaps that implies an action plan and hence an action, though we cannot be sure.

*Activity theory in relation to strategies.* With regard to active nature of strategies, it is useful to mention Leontiev’s (1981) activity theory, in which actions are equivalent to strategies (Donato & McCormick, 1994). For Leontiev (1981), the unit of analysis is the *activity as a whole* (e.g., L2 learning). In the colorful words of Donato and McCormick (1994), “Activity ... is the who, what, when, where, and why, the small recurrent dramas of everyday life, played on the stage of home, school, community, and workplace” (p. 455). In Leontiev’s theory, an activity serves to satisfy a human *need*, is thus based on a  *motive*, and exists as action and action chains (Leontiev, 1974). An activity contains the following elements (Leontiev, 1978): a *subject* or person (in our case, the learner); an *object* or goal; the *actions*, i.e., strategies employed to move toward the goal (Donato & McCormick, 1994); the *conditions* of the situation, task, person, and sociocultural context; and *operations*, or specific ways by which the actions are carried out, manifested, or implemented, depending on the conditions in given situations. Allow me to repeat: In relation to activity theory, strategies are the actions taken to move toward the learning goal. For more on activity theory, see Chapter 5. See also page 57 of the current chapter.

*Activities: ordinary/normal and strategic.* Dörnyei (2005, p. 164) argued that L2 learning strategy literature failed to explain the difference between “engaging in an ordinary learning activity and a strategic learning activity.” This statement was repeated more recently when Dörnyei and Ryan (2015, p. 148) pointed out a continuing “failure to resolve the core issue of what separates strategic activity from normal learning activities ...” This ongoing charge was difficult to respond to because no definition of “ordinary” and “normal” learning activities was ever provided along with it. At any rate, strategy definitions do show many differences between strategic learning activities and what I might imagine ordinary/normal learning activities to be. In the first edition of this book (Oxford, 2011), I intentionally emphasized the ways learning strategies were special. I will now identify just a few special characteristics based on the 33 strategy definitions in Table 1.3 and will note some of the authors who explicitly named these strategy characteristics:



- *self-directed/self-regulated/autonomous/(self-)managed* (e.g., Griffiths, 2008, 2013; Gunning & Oxford, 2014; Oxford, 1989, 1990, 2011; Plonsky, 2011; Purpura, 2014),
- *purposeful/goal-oriented [/to/in order to + verb]* (e.g., Chamot, 1987; Cohen, 2011; Gao, 2003; Gregersen & MacIntyre, 2014; Griffiths, 2008, 2013, 2017; Macaro, 2003; O'Malley & Chamot, 1990; Oxford, 1989, 1990, 2011; Plonsky, 2011; Rubin, 1975, 1987),
- *definitely conscious, fully conscious or to some degree conscious* (e.g., Oxford, 1990; Cohen, 1998, 2011; Griffiths, 2008, 2013), and
- *related to specific aspects of the context* (e.g., Oxford, 1990, 2011; Leaver et al., 2005), *particularly including tasks* (Cohen, 2011; Gregersen & MacIntyre, 2014; Gunning & Oxford, 2014; Oxford, 2011; Purpura, 2014).

The features above, gleaned directly from strategy definitions that have been available via journals and books for years, are sufficient to show that strategic learning activities are not the same as ordinary/normal learning activities. Dörnyei and Ryan (2015) actually quoted several of the strategy definitions from Table 1.1 that would have answered their own question about how strategic learning activities are different from nonstrategic (ordinary/normal ones).

*Strategies are usually defined in education as actions/processes (connoting movement, dynamism, often specificity), never as “products.”* As noted earlier in this section, 67% of the 33 definitions identified strategies as active, as in actions, acts, activities, or processes. Dörnyei (2005) labelled learning strategies as “products” (think: noun, thing, object) rather than a “processes” or “actions” (think: verb, dynamism, doing). Literally speaking, a *product* is defined as something that is made or grown through a process in order to be sold or used, while a *process* is a systematic series of actions, changes, or functions directed to some end.<sup>15</sup> An unsupported premise (*strategy = product*) led to the questionable assumption that *self-regulation*, which is no doubt a *process*, has nothing to do with *strategies* – although strategies have long been largely defined as *actions/processes* (Table 1.1). As shown in the quotation from my first strategy book, the active, process nature of strategies has been known since 1990, and others before me (e.g., Chamot, 1987) stressed it as well.

Interest has been shifting from a limited focus on merely *what* students learn or acquire – the *product* or *outcome* of language learning and acquisition – to an expanded focus that also includes *how* students gain language – the *process* by which learning or acquisition occurs. ... [T]he process orientation ... implies a strong concern for the learner’s strategies for gaining language skills [such as reading, listening, speaking, and writing]...

(Oxford, 1990, pp. 1, 5, emphasis in original)

Even if a learner participates in strategy instruction and learns a new strategy, this strategy cannot be called simply a product of strategy instruction; it remains a process.

Strategies continue to be an integral, process-oriented part of self-regulated learning. Zimmerman (2000, p. 17) stated, “Self-regulative strategies are purposive personal *processes and actions* ... .” (emphasis added). Similarly, De Corte, Verschaffel, and Op ‘t Eynde (2000) commented that that “self-regulatory learning and problem-solving strategies” are “*processes*,” continuing, “Self-regulated learners in schools are able to manage and monitor their own *processes* of knowledge and skill acquisition; that is, they master and apply *self-regulatory learning and problem-solving strategies* on the basis of self-efficacy perceptions in view of attaining valued academic goals ...” (p. 690 emphasis added).

Dörnyei (2005) embedded his strategies-are-products assertion into a comment about researchers in educational psychology: “By shifting the focus from the *product* (strategies) to the *process* (self-regulation), researchers have created more leeway for themselves ...” (p. 191,

emphasis in original). In the garden story, I presented a long list of educational psychologists devoted to self-regulation who have not relinquished their interest in strategies. None of them has described strategies as a product.

Dörnyei and Ryan (2015) implicitly retracted the former's 2005 assertion that strategies are a "product" instead of a "process" by stating, "... [T]he concept of 'language learning strategy' has always sat uneasily within the ID [individual difference] taxonomy; after all, these strategies appear to constitute an aspect of the *learning process* rather than being learner attributes proper" (p. 140, emphasis in original). There was no explanation given for the mysterious change of mind that involved the dropping of an incorrect belief that strategies are products rather than being process- or action-oriented.

### *IC. Techniques, Devices, Tools, and Methods as a Strategy Form (What Learners Use)*

#### RESULTS

This form of strategies included *techniques, devices, tools, and methods* – nouns expressing what learner use. These utilities were mentioned in just about one of every five definitions: 21% of the definitions overall, 22% of those from the L2 field, and 17% from outside. All were explicit mentions.

#### DISCUSSION

The techniques and related phenomena that learners use might encompass purely internal/mental phenomena or, like actions (above) might be mental-cum-observable phenomena. See above comments regarding actions.

*When techniques, devices, tools, and methods are used observably, the mind is in charge.* The techniques and related phenomena that learners use for strategic purposes are always controlled by the mind, even if they have observable aspects. Whether observability is present or not, the mind is where the strategy originates, and the mind controls the use of the techniques or other strategy "instruments."

*These implements or instruments help action occur.* Techniques, devices, tools, and methods (as strategies) are all implements to aid learning. While terms such as active, act, and actions (see earlier) emphasize doing something, terms such as techniques and methods refer to instruments to help the person do something. With the nouns, the stress is on instrumental assistance that makes the action occur; however, ultimately the key is action.

*Measuring strategic learning via techniques without mentioning what those techniques are.* Almost the same terms as found in the strategy definitions were cited as evidence of "strategic learning" by Tseng, Dörnyei, and Schmitt (2006). These researchers used strategy-descriptive or strategy-definitional terms such as special techniques, ways, and methods and yet soundly rejected learning strategies in their attempt to assess "strategic learning." They argued that strategic learning could best be measured by asking learners whether they "had" or were "satisfied with" the unspecified techniques, ways, or methods for regulating their learning. They viewed a nebulous version of strategic learning (perhaps the shadows on the walls of Plato's cave?) to be more scientifically rigorous than the mention of any strategies. Measuring a general, self-regulatory, strategic tendency seemed to be the assessment aim. Despite this honorable aim, Rose (2012b) mentioned the resulting fuzziness of the effort by Tseng et al.