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LEARNING STYLES AND STRATEGIES

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Background

The concepts of learning styles and learning strategies are intuitively appealing, since they offer the potential to enhance learning and to make it more enjoyable and successful. Because of this, they both aroused a lot of interest in the second half of the last century, and this interest continues into the present. They have also, however, both kindled a lot of controversy. This chapter will attempt to provide background on the two topics, research evidence to date, recommendations for how the concepts might be applied in practice, and suggestions for how the issues might be dealt with in the future.

Definition

Although learning styles and strategies are often confused, and although they do indeed have similarities and they often overlap, they are different. Perhaps the most influential and enduring definition of learning style was provided by Reid (1995, p. viii), who described the concept as:

an individual’s natural, habitual and preferred way(s) of absorbing, processing, and retaining new information and skills.

Since learning styles are thought to describe how learners prefer to learn, they are usually expressed as adjectives (e.g., “auditory” and “reflective”) or as nouns (e.g., “accommodator” and “diverger”). This descriptive/nominative function helps to distinguish styles from strategies, which tend to be expressed as verbs: they are actions, they are what learners do (e.g., “I read for pleasure” or “writing a diary”). One definition is by the well-known strategy protagonist Andrew Cohen who wrote that strategies are:

Thoughts and actions, consciously chosen and operationalized by language learners, to assist them [foreign language learners] in carrying out a multiplicity of tasks from the very onset of learning to the most advanced levels of target language performance.

(2011, p. 7)

Another is by strategy expert Rebecca Oxford who wrote:

learning strategies are complex, dynamic thoughts and actions, selected and used by learners with some degree of consciousness in specific contexts in order to regulate
multiple aspects of themselves (such as cognitive, emotional, and social) for the purpose of (a) accomplishing language tasks; (b) improving language performance or use; and/or (c) enhancing long-term proficiency. Strategies are mentally guided but may also have physical and therefore observable manifestations. Learners often use strategies flexibly and creatively; combine them in various ways, such as strategy clusters or strategy chains; and orchestrate them to meet learning needs. Strategies are teachable. Learners in their contexts decide which strategies to use. Appropriateness of strategies depends on multiple personal and contextual factors.

(2017, p. 48)

Oxford’s definition quoted here is, of course, very comprehensive but, while by no means disagreeing with it, we might also argue that it goes well beyond merely defining, as noted also by Thomas et al., 2021.

Unlike Oxford’s definitions, which have become more expansive over time, Griffiths’ definitions have become more and more minimal, the most recent being: “actions chosen by learners for the purpose of learning language” (Griffiths, 2018, p. 19). In addition, however, to the four basic ingredients of this definition (action, choice, purpose, and language learning), Griffiths (2018) also discusses the possibility of including other elements to accommodate “dimensions of variation” (Gu, 2012, p. 330). These might include:

- The issue of consciousness, which deals with the question of whether learners are always aware of their strategy choices (e.g., Cohen, 2011; Oxford, 2017) or whether strategy choice operates on a continuum between deliberate and automatic (Griffiths, 2018; Wenden, 1991).
- The question of whether strategies are purely mental (Macaro, 2006) or whether physical activities such as highlighting or making flashcards can also be included (Oxford, 2017).
- The question of whether other kinds of strategies, such as the “Compensation” group in the Strategy Inventory for Language Learning (SILL) should be included as language learning strategies, as Oxford (1990) argues, or whether these other kinds of strategies are used for different purposes which makes them distinct from learning strategies (Ellis, 1994; Cohen & Dörnyei, 2002).

As can be seen from the above, there is still a lack of consensus about exactly how to define language learning strategies. However, as Griffiths (2018) concludes, the really important issue is, perhaps, not so much that there may or may not be a definitive definition, but that for each study the definition should be clearly stated and theoretically justified.

Although learning styles and learning strategies are different, they often overlap and interact (e.g., Cohen, 2012; Wong & Nunan, 2011). We might expect, for instance, a student identified with an auditory style would benefit from strategies that utilize hearing (such as listening to CDs or lectures), a visual learner would profit from reading books or watching movies, a learner with a kinaesthetic style would be likely to employ strategies which involve moving around and being active, and so on.

**Concept Development**

Historically, although there had been previous work on learning styles (e.g., Witkin, 1962), a keen interest in the concept developed around the mid-1970s. This resulted in numerous learning style instruments aimed at measuring the concept (see the Research section for more details of some of these). However, although interest in learning styles was at one time keen, in more recent years, the concept has been criticized for failing to produce the hoped-for results in terms of student achievement (Pashler et al., 2009; Willingham, Hughes, & Dobolyi, 2015). Concerns have also been
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expressed that identification of a learner’s style might become a self-fulfilling prophecy (Vasquez, 2009). For instance, a student who was told that s/he was a visual, auditory, or kinaesthetic learner might accept that as a fixed reality and not attempt to gain the benefits of stylistic flexibility. Although in the past, learning style has tended to be regarded as a relatively stable individual characteristic (e.g., Nel, 2008), increasingly the concept of style-stretching (that is, maintaining stylistic flexibility) has been gaining recognition. Cohen and Dörnyei (2002), for instance, suggest that learners should be encouraged to engage in style-stretching, and Oxford (2011) asserts that styles “are not set in stone” (p. 40). Stylistic flexibility is also included by Wong and Nunan (2011) as one of the characteristics of effective learners, and Gregersen and MacIntyre (2014) recommend style-stretching as a way of coping when students “find themselves outside their comfort zones” (p. 174). According to Griffiths and Inçeçay (2016), the top-scoring students in their study were much more stylistically eclectic than the lower-scoring students.

Like learning styles, interest in learning strategies also gathered momentum in the 1970s. Rubin (1975) identified seven strategies characteristic of good language learners: guessing/inferring, communicating, managing inhibitions, attending to form, practicing, monitoring one’s own and the speech of others, and attending to meaning. These strategies were divided by Rubin (1981) into two types: those that contribute directly to learning and those that contribute indirectly to learning.

At around the same time as Rubin (1975) published her “good learner” study, Stern (1975) produced a list of ten language learning strategies used by good language learners. He believed that good language learners are characterized by positive learning strategies, among which he included experimenting, planning, developing the new language into an ordered system, revising progressively, searching for meaning, practicing, using the language in real communication, self-monitoring, developing the target language into a separate reference system, and learning to think in the target language.

A decade later, O’Malley et al. (1985) identified 26 strategies which they divided into three categories: metacognitive (knowing about learning), cognitive (involving mental engagement with the target material), and social (relating to interaction with others). The metacognitive and cognitive categories correspond approximately to Rubin’s indirect and direct strategies. However, the addition of the social mediation category was an important step in the direction of acknowledging the importance of interactional strategies in language learning and reflected the growing interest in socioculturalism at the time.

Oxford (1990) took this process a step further. From an extensive review of the literature, she identified a large number of strategic activities which she divided into six groups in the frequently used instrument known as SILL: memory, cognitive, compensation, metacognitive, affective, and social. Unlike the essentially psycho-social classification systems adopted by previous inventories, Cohen et al. (2003) adopted a somewhat different approach and classified strategies according to skills (listening, speaking, reading, writing, vocabulary, and translation). In addition, rather than asking students to rate strategies according to how frequently they used them, they asked students to reflect on their own strategy use.

By the turn of the millennium, however, the strategy field had attracted serious criticism for being atheoretical (e.g., Ellis, 1994), resulting in Dörnyei and Skehan (2003) and Dörnyei (2005) recommending the abandonment of the strategy concept in favor of self-regulation, a concept favored by psychologists. This prompted Gao (2007) to ask the somewhat desperate question: “Has language learning strategy research come to an end?” (p. 615). However, according to well-known psychologists (e.g., Winne, 1995; Boekaerts et al., 2000; Zimmerman & Schunk, 2011), in order to self-regulate, students need strategies, which brings the argument more-or-less full-circle. Rose (2012) argued that the strategy and self-regulation concepts are not incompatible, and Dörnyei and Ryan (2015) conceded that language learning strategies remain “alive and kicking” (p. 141). Strategies have therefore continued to be a fertile area of research and publication up until the present, as noted by Griffiths (2020).
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Theory

There has not been a great deal written about learning styles from a theoretical perspective, but, given the emphasis on the individual which the concept of learning style assumes, we can, perhaps, suggest that the underlying theory is essentially humanistic, a theoretical approach which was attracting the attention of the language teaching profession as interest in behaviorism and cognitivism was beginning to fade (Maslow & Rogers, 1979). Learning style theory suggests that learners’ stylistic choices will vary according to individual human factors such as their age, gender, personality, culture, degree of autonomy, affective characteristics, strategy preferences, aptitude, beliefs, motivation, and so on (Griffiths & Soruç, 2020).

Style preference may also vary according to the prevailing social and ecological context with which the learner must interact, as well as in response to the demands of specific learning tasks. In other words, rather than being a fixed individual characteristic as it was once assumed to be, learning style is now accepted as dynamic and dependent on a complex interaction among numerous other factors such as individual differences, context, and task (Nel, 2008; Griffiths, 2012).

As for strategies, from the beginning, strategy theory tended to emphasize the cognitive aspects of language learning (Bialystok, 1978; Rubin, 1981; Chamot & O’Malley, 1986). In other words, strategies were seen as a way for learners to engage cognitively with their learning and also to take metacognitive control (O’Malley et al., 1985). As noted above, the taxonomy developed by O’Malley et al. (1985) also introduced sociocultural theory to the strategy field. Behaviorism can be found in strategies that involve repetition, structuralism in actions such as looking for rules, self-regulation in metacognitive strategies such as monitoring one’s progress, and humanism in affective strategies such as rewarding oneself (Oxford, 1990). This theoretical eclecticism leads, in turn, to the idea that strategies are complex and dynamic, therefore fitting into complex/dynamic systems theory (Amerstorfer, 2020). This theoretical eclecticism does not have to be seen as a weakness, however. On the contrary, it might be seen as a major strength: strategy theory has avoided dogmatic theoretical positions and drawn on the best of what is available to date to facilitate effective language learning for as broad as possible a spectrum of learners.

Research

Evidence

Although there have been multiple attempts to develop instruments to adequately conceptualize and measure learning style, actual empirical research into language learning is surprisingly scarce, perhaps reflecting the more “applied” appeal of the style construct. Such studies as there are can be difficult to compare because of the divergent nature of the very way the studies were carried out and the instruments used. Let us, nevertheless, attempt an overview of some of the language learning style research to date.

Using her own Perceptual Learning Style Preference Questionnaire (PLSPQ), Reid (1987) found a general preference for tactile, individual, and kinesthetic styles, but according to her results, learning style was not significantly related to proficiency. Ehrman and Oxford (1995) similarly found no correlation between proficiency and learning style among Foreign Service Institute (FSI) students as measured by the Learning Style Profile (LSP) (Keefe & Monk, 1989). Using the Productivity Environmental Preference Survey (Dunn et al., 1991), Bailey et al. (2000) found only a “modest proportion of variance” (p. 126) could be accounted for by learning style. A similarly guarded conclusion was reached by Andreou, Andreou, and Vlachos (2008) using Kolb’s (1985) Learning Style Inventory who concluded that: “It cannot be assumed that learning styles determine … performance in every case” (p. 672). Limited significance was also found by Griffiths and Inceçay (2016) when they surveyed students using the Inventory of Language Learning Styles (ILLS) the ratings of which were correlated with the exam results; of the 18 items in the inventory, only
three were found to correlate significantly with exam scores, and the effect sizes were all relatively small.

An overview of the studies noted above leads to the conclusion that learning style was not a major factor in successful language learning in most cases. This conclusion is echoed in mainstream education, for instance by Pashler et al. (2009), who found “virtually no evidence for validating the educational applications of learning styles” (p. 105). Landrum and McDuffie (2010) similarly conclude that “there is insufficient evidence … to support learning styles as an instructionally useful concept” (p. 6), and Husmann and McLoughlin (2019) found no correlation between course results and learning style. Evidence to date, therefore, has failed to show consistently that there are any particular styles that can be identified to guide student and teacher decision making regarding which learning styles should be adopted or promoted to facilitate more successful learning. Nevertheless, in spite of these negative conclusions, interest in the learning style concept continues, especially in the form of what has come to be called “differentiated instruction” (Bondie & Zusho, 2018; Koppers, 2019; Tomlinson, 2017).

As for language learning strategies, most of the research has revolved around the fundamental question of the relationship between strategy use and proficiency, and the answer to this question has not always been positive. For instance, when Porte (1988) interviewed under-achieving adolescent learners in private language schools in London, he concluded that the “poor” learners were using very similar strategies to those reported by “good” learners. A similar observation was made by Vann and Abraham (1990) during a think-aloud study of two low-level Saudi Arabian women who made slow progress in spite of being active strategy users. Other studies have produced somewhat ambiguous results. For instance, studies by Bialystok (1981), O’Malley et al. (1985), Huang and Van Naerssen (1987), and Ehrman and Oxford (1995) all failed to find a significant relationship between overall frequency of language learning strategy use and successful learning, although they managed to show relationships between effective learning and various types of strategies (e.g., metacognitive, functional practice, or cognitive).

For yet other studies, results for the relationship between strategy use and proficiency have been positive. Green and Oxford (1995), for instance, discovered a “significantly greater overall use of language learning strategies among more successful learners” (p. 285). Dreyer and Oxford (1996) also reported a positive relationship between frequency of strategy use and successful learning. Likewise, Griffiths (2003) found that the higher-level students reported using more strategies more frequently than the lower-level students. Zhang and Xiao (2006) also found a relationship between language learning strategies and proficiency levels, and according to the results of a study reported in Griffiths (2018), the higher-level students reported significantly higher levels of agreement for a number of the strategy items in the survey.

In addition to looking at the relationship between strategy use and proficiency, strategy use has also been investigated in relation to various other factors in an attempt to explain disparate findings. However, although strategies have been found to vary according to context (e.g., Takeuchi et al., 2007; Gao, 2010; Grenfell & Harris, 2017), task (e.g., Pinter, 2006; Uhrig, 2015; Cohen & Wang, 2018), and other individual differences (e.g., Pawlak, 2012; Oxford & Amerstorfer, 2018; Griffiths & Soruç, 2020), there is much room for further research in these areas.

**Data Elicitation**

As noted by Rose et al. (2018) in their systematic review, a great deal of language learning strategy research to date has depended on self-report questionnaires. This also applies to the learning style concept. Over the years, numerous attempts have been made to develop questionnaires to measure styles and strategies. One of the earliest learning style instruments was the five-stage *Learning Style Inventory* by Dunn et al. (1975). Other learning style surveys employed a quadrant model, including the *Learning Style Inventory* (Kolb, 1976), the *Style Delineator* (Gregorc, 1979), the *Learning Styles
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Questionnaire (Honey and Mumford, 1982), and the VARK (which stands for visual, auditory, reading/writing, and kinaesthetic; Fleming and Mills, 1992).

The instruments noted above were not designed exclusively for language learning, although over the years some of them have been used for that purpose (see examples in the Research section of this chapter). The first well-known language learning style survey was the PLSPQ (Reid, 1987) which was based on five modalities. Other learning style instruments specific to language learning followed, for instance, the Style Analysis Survey (Oxford, 1993), the Learning Style Survey (Cohen et al., 2002), and the Learning Style Questionnaire (Ehrman and Leaver, 2003). Many of the instruments noted above have also had updated versions published over the years.

Although questionnaires such as the PLSPQ (Reid, 1987) and SILL (Oxford, 1990) can be very useful for gathering large quantities of data quickly and relatively cheaply (e.g., Nunan, 1992; Dikilitaş and Griffiths, 2017), they also have limitations. For instance, Turner (1993) suggested that “limitations in language ability may prevent [students] from responding in a manner that accurately reflects their true opinion or attitude” (p. 736). Gu et al. (1995) also questioned the degree to which student self-report ratings can be relied on to be an accurate reflection of actual use, for example what is “often” to one respondent may be rated quite differently by another; however, they acknowledged that questionnaires can be useful if administered and interpreted with care.

Woodrow (2005) is another who questioned the value of pre-validated questionnaires on the grounds that it is not possible for any one instrument to be applicable for all possible learners in all possible contexts; she therefore concluded that “there is a need for richer descriptions of LLS use [which] can be achieved by using more qualitative methods” (p. 96). Qualitative methods have become more popular in recent years and include interviews, observations, think-aloud protocols, learning logs, diaries, or journals (Dikilitaş & Griffiths, 2017). Also gaining popularity is a tradition of narrative inquiry (Barkhuizen, 2011), which, according to Barcelos (2008, p. 37), is “an excellent method to capture the essence of human experience and of human learning and change”. A mixed methodology achieved by combining qualitative and quantitative approaches is capable of achieving triangulation by looking at particular issues from different perspectives (e.g., Griffiths & Oxford, 2014).

In addition to the issue of data collection, yet more controversy has been generated from the way style and strategy research has been analyzed. Although it has been common to analyze styles and strategies questionnaire data using parametric tests (e.g., Pearson), and although this is sometimes appropriate (e.g., with test results, which are numerical), Jamieson (2004), for instance, argued that Likert scales (which are frequently used in styles and strategies studies) are often abused since, by their nature, such scales produce ordinal data for which non-parametric tests are appropriate, as also acknowledged by Dörnyei (2007) and Cohen et al. (2018). Furthermore, it has been argued (e.g., by Dörnyei, 2005; Dörnyei and Ryan, 2015) that Likert scales, since they commonly consist of discrete and independent items, are often not cumulative (that is, the ratings cannot be added together and averaged). The appropriateness of relying exclusively on probability and significance ($p$-values) has also been questioned (e.g., Gass et al., 2021; Ellis, 2000; Lazaraton, 1991; Norris & Ortega, 2000; Plonsky & Oswald, 2014), since such statistics are dependent on sample size. They argue that the effect size, which represents the magnitude of an effect or strength of a relationship, is a much more useful unit of measurement. When it comes to data analysis, the important issue would seem to be that, in order to avoid misinterpretation of results, appropriate procedures should be employed (e.g., Lazaraton, 2000). As Loewen et al. (2014) put it: “If theoretical insights and pedagogical recommendations are to be trusted, they must come as the result of the accurate use of appropriate methods” (p. 379).

When it comes to analyzing qualitative data, perhaps the most commonly employed method has been what is known as grounded theory (Glaser & Strauss, 1967; Strauss & Corbin, 1998). This typically involves a three-stage process of examining the data recursively for emerging themes, grouping the themes around common axes, and drawing conclusions from the material thus obtained.
This kind of methodology produces rich, personal insights which can be especially valuable when triangulated with quantitative methods using a mixed-method paradigm.

**Practical Applications**

Although learning style is not “set in stone” (Oxford, 2011), and stylistic flexibility has been found to be typical of more successful students (e.g., Wong & Nunan, 2011; Griffiths & İnceçay, 2016), it is a common observation that learners do tend to have a preferred learning style with which they feel most comfortable (Nel, 2008). The conclusion which follows logically from this is that students should be allowed “to equitably develop their individual learning styles” (Kinsella, 1995, p. 193) as much as may be practically possible within such constraints as may exist within a given environment, such as regarding space or noise level.

Flexibility is also important when it comes to strategies, and in order to raise students’ awareness of the strategy options available, teachers need to provide strategy instruction (e.g., Chamot & Harris, 2018). The principle of the teachability of language learning strategies, however, is by no means universally accepted. According to Rees-Miller (1993) for instance, attempts at strategy training have produced “only qualified success” (p. 679). Examples of less-than-successful strategy programs include the one described by Wenden (1987) who found that less than 50% of the students thought that the strategy training had been useful, leading Wenden to conclude that “learner training was not considered relevant in its own right” (p. 164).

Other results are more mixed. For instance, when O’Malley (1987) randomly assigned students to one of three instructional groups, a significant difference was discovered in favor of the treatment groups for speaking, but not for listening, while the control group actually scored slightly higher than the treatment groups for vocabulary. Another study by Ikeda and Takeuchi (2003) in Japan divided students of mixed proficiency levels into two groups for reading instruction; they found no increase in the frequency of strategy use among the low-proficiency students but increased frequency among the high-proficiency learners.

However, other studies have reported successful results for strategy instruction. For instance, when Carrell et al. (1989) investigated the effects of metacognitive strategy training on ESL reading, they concluded that the training was effective in enhancing reading ability. The effects of strategy instruction on vocabulary acquisition were studied by Esami Rasekh and Ranjbar (2003) who found that the treatment group showed significantly higher gains in vocabulary than the control group; similar results were found by Mizumoto and Takeuchi (2009). When the effectiveness of listening strategy instruction was investigated by Vandergrift and Tafaghodatari (2010), they found the experimental group significantly outperformed the control group in the final assessment.

In spite of this rather mixed bag of results relating to the effectiveness of strategy instruction, evidence nevertheless seems to be mounting that strategy instruction can be useful. Following a systematic review of available research, Hassan et al. (2005) reported that “there is sufficient research evidence to support claims that training language learners to use strategies is effective” (p. 2). A meta-analysis by Plonsky (2011) also concluded that there was a “small to medium overall effect of SI [strategy instruction]” (p. 993).

The literature provides several important principles underlying effective strategy instruction:

- **An important element of strategy instruction is the raising of students’ awareness of language learning strategy options** (Rubin, 1987). If students know the alternatives available, they are in a better position to make informed choices.

- **Practice** is another important element of strategy training (Oxford, 1990). If new strategies are rehearsed, they will become automatic and stored in a student’s individual strategy repertoire to be called on as needed.
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- Strategy training needs to be **explicit** (e.g., Wenden, 1991), otherwise students will not transfer the new strategies beyond the immediate task to new ones.
- Strategy instruction should also be **implicit** (e.g., Cohen, 1998; Harris, 2001). That is, strategy instruction needs to be embedded into regular classroom activities so that it is not seen as just a waste of time and a distraction from the real task of learning a new language.
- Another important dimension of strategy instruction is **evaluation** (Tang & Griffiths, 2014). This is important so that students can reflect on their strategy use and make adjustments as necessary.
- The effects of strategy instruction are at least partly due to other aspects of the intervention, such as increased motivation, heightened attention to the target structure, and increased engagement in learning activities.

Effective strategy instruction should also consider the fact that strategies are not used in isolation: effective learners know how to orchestrate their strategies, that is to combine them in clusters or sequences to achieve the best outcome (e.g., Anderson, 2008). Also, strategy development may not always proceed in a straight line. Other models include curvilinear development: Green and Oxford (1995), for instance, found that their intermediate students reported more frequent strategy use than either the beginners or the advanced students. Griffiths (2003, 2018) suggests a spiral model, where the development of one strategy supports the development of another, which in turn supports the development of yet more sophisticated strategies in an ever-expanding spiral, which was dubbed the tornado hypothesis.

**Future Directions**

As noted above, although initially greeted with enthusiasm for its potential to enhance learning (e.g., Reid, 1987, 1995), learning styles have suffered from relative neglect in more recent years. This coincides more broadly with their falling out of favor in research in the learning sciences and educational psychology. This may, however, be a pity, since learning style is an observable phenomenon operating in real-life classrooms, at least at the surface level of learning behavior (e.g., Nel, 2008), suggesting that it retains its potential to facilitate more effective learning if well managed, and flexibility is maintained by both students and teachers. Research remains to be done, however, on how best to maximize the potential benefits, perhaps in relation to context, task, and other individual differences such as personality, motivation, and so on.

Research also remains to be done in the strategy area, especially in regard to the relationship between strategies and situational, task, and human variables. Strategy instruction is also in urgent need of further research. Although language learning strategy issues are rarely dealt with at the teacher education stage (e.g., Chamot & Harris, 2018), pre-service teachers need to be informed of the current research on the topic so that they have the background knowledge to deal with the issue in their classes. They also need to learn techniques for developing awareness and integrating language-learning-strategy instruction into the fabric of their lessons so that strategy instruction is both explicit and embedded, and they should learn how to provide practice and encourage students to self-evaluate their own strategy use.

As for research methodology, although questions have been raised about the reliability of self-report questionnaires (Turner, 1993; Gu et al., 1995; Woodrow, 2005), we should, perhaps, remember that questionnaires can be useful when trying to research phenomena which are difficult to investigate any other way (Nunan, 1992; Dörnyei, 2007; Dikilitaş & Griffiths, 2017). In addition, qualitative methods can be added to questionnaires to achieve triangulation from a mixed-method perspective (Zhang et al., 2019). As technology develops, other interesting methods are also emerging, such as eye tracking and brain scans, which have the potential to add valuable new insights to our existing knowledge (Latif, 2019).
A major unresolved debate in the styles and strategies area relates to quantitative data analysis. Although parametric tests have been the default, increasingly their use for the type of ordinal data produced by the kinds of instruments common in styles and strategies studies (Likert scales) is being questioned (Dörnyei, 2007; Plonsky & Oswald, 2014; Cohen et al., 2018). Also being questioned is the exclusive reliance on the p-value (which is dependent on sample size) as the ultimate indicator of a factor’s importance. As previously noted, effect size, which provides a measure of the strength of the effect of one variable on another, independent of sample size, is a much more useful statistic. Effect sizes remain rare in styles and strategies research, however, although their use is increasing. Resolution of these differences is urgently needed, as the ongoing controversies mean that results are often difficult to compare across studies, thereby weakening the overall impact of research in this area.

From a theoretical perspective, it is important to recognize the increasing interest in a complex/dynamic view (Chapter X). Originally introduced into the language learning field by Larsen-Freeman (1997), it has been taken up by many since (Mercer, 2014; Dörnyei, et al., 2015; Ushioda, 2015; Larsen-Freeman, 2019; Griffiths and Soruç, 2020). Essentially, this theory acknowledges the reality that language learning and language learners are not simple; on the contrary, they consist of a complex amalgamation of a vast array of dynamically interacting factors, including the socio-ecological context, task demands, and the learners’ own individual characteristics. As Amerstorfer (2020) comments: “a complexity perspective can generate new, profound information” (p. 21), and this suggests a very useful direction for future styles and strategies research.

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