A Review of the Key Pedagogical Factors in Second Language Acquisition

Abstract

This research looks at the theory and practice behind acquiring a second language and determines what the key pedagogical factors are behind second language acquisition (SLA). These pedagogical factors are examined in terms of their relevance and priority in overall SLA as well as in the key skills of reading, writing, speaking and listening in SLA. Primary research is completed using interviews with second language experts and a focus group with second language instructors.

The findings highlight that a number of general learning and second language acquisition theories are relevant in practice today with Vygotksy's sociocultural theory the most prominent. The following eight pedagogical factors are found to be the most important in second language acquisition; 'active learning', 'autonomy', 'scaffolded learning', 'critical thinking', 'Learner collaboration', 'context', 'authentic communication' and 'practice'. The findings of this research provide a guide for SLA practitioners in higher education to bridge the gap between theory and practice in the development of curriculum and instruction plans. They also provide direction to industry by highlighting the key areas that require research and development.

Keywords

1. Introduction and Motivation

The second language learning industry has evolved and increased with the impact of globalisation, technology and worldwide economic recession. The industry is set to continue to grow as worldwide economics and connectivity evolve. Two billion people will be learning English as a second language (ESL) by 2016. The second language industry was worth $82.6 billion globally in 2011 (Adkins, 2012). As the second language industry continues to grow and evolve this research could prove a valuable tool in guiding the development of Second Language Acquisition (SLA) programs toward best practice pedagogical design and consequently improved performance in SLA. This would be of value to both SLA practitioners in the education sector, and organisations developing resources, products and services for both SLA practitioners and learners.

The focus of this research is on the underlying pedagogy (method and practice of teaching) in SLA. Other factors which also effect SLA, including environmental (teacher's personality, physical environment, resources, staff training), individual issues (literacy, learning difficulties, socio-economic, intellectual ability) and learner personality (motivation, desire, attitude, engagement), are not directly examined here.

The following sections outline the context of second language learning by reviewing the research and theories underpinning general learning as well as SLA. An outline of the research questions and methods follows. Primary research findings are subsequently analysed and compared to published research. Conclusions and recommendations are presented based on findings and analysis. For the purposes of this research, the terms 'second language acquisition' and 'second language learning' refer to when an individual learns a language after they have learned their native language(s). It does not include children who learn multiple languages together.

2. Literature Review

Second language education has evolved significantly in the last century. In this literature review, traditional and contemporary thought and practice in education, specifically second language education, are explored. This exploration leads to the identification of a number of pedagogical factors that are seen as important in SLA.

Second Language Acquisition (SLA)

Pinker describes language as the core of what it means to be human and explains language processing as the main manner by which we can know about other people's

thoughts (Pinker, 1995). Ellis (1997, p.3) defines SLA as "the way in which people learn a language other than their mother tongue, inside or outside of a classroom". As with first language acquisition, there is debate between those who believe that second language is learned through innate capabilities (nativists) and those who believe it is learned through interaction with the environment (behaviourists). Some others emphasise the importance of social interaction in second language learning (socioculturalists) while others lie in the cognitivist and connectionist camps where SLA is seen as a build up of knowledge (Lightbown and Spada, 2006).

Theories that Influence Second Language Practice

Theories on how second language learning happens, popular in theory and practice from the 1940s to present, are rooted in philosophies that go as far back as the seventeenth century. Some contemporary theories and practices in second language learning are rooted in general learning theories. The main theories are summarised in Table 2.1. While there is no one commonly held theory explaining SLA, all theories do attempt to explain the ability of humans to acquire language within social and instructional environments (Coleman and Klapper, 2005).

Theory Name	Popular	Brief Explanation	Relevant Theorists	Linked with
Behaviourism	1940-1970	Learning is habit forming as a result of stimulus response conditioning.	Sampson	
Nativism	1970s	There is a language module in the brain which enables us to learn languages.	Chomsky Pinker	
Krashen's Model	1980s – present	SLA requires natural communication and interaction focusing on meaning and understanding rather than form.	Krashen	Nativism Socioculturalism
Cognitivism	1990s - present	There is not a specific language module in the brain and second language learning is a conscious and reasoned thinking process with deliberate learning strategies.	Vygotsky	Behaviourism Connectionism Socioculturalism
Connectionism	2000s – present	Learners build up knowledge through exposure to linguistic cues which strengthen neuron connections.	Ellis	Behaviourism Cognitivism
Noticing	2000s – present	Learners only begin to acquire a language when they are aware of its input and notice ways in which structures differ between first and second languages.	Schmidt	Cognitivism
Constructivism	2000s-present	Learning is social and interactive. It should involve two-way communication, build on prior knowledge, be interesting,	Dewey Vygotsky	Behaviourism Socioculturalism Cognitivism

		be challenging, practical and involve action, experience and reflection.		
Socioculturalism	2000s – present	All cognitive development is as a result of social interaction – learning is first socially mediated then internalised.	Vygotsky	Behaviourism Constructivism
Scaffolding Theory	2000s – present	A learner reaches greater learning with an expert in support with timely interventions than they could without.	Bruner Ross	Socioculturalism
Visible Learning	2000s – present	Learning is dependent on the teacher and requires goal setting, active participation, context, support, practice, challenging activities and continuous visual feedback.	Hattie	Cognitivism Socioculturalism

Table 2.1 Outline of main theories of second language learning (Dewey, 2011; Hattie, 2009; Rau, et al, 2008; Lightbown and Spada, 2006; Schmidt, 2001; Sampson, 1997; Ellis, 1997; Pinker, 1995; Vygotsky, 1965, 1981; Chomsky, 1959)

Review of Contemporary Research

Contemporary research findings on learning call for flexible, active, contextual, learner-centred, autonomous learning with authentic communication and collaboration and that has challenging activities which relate to prior knowledge as well as timely, specific feedback with social interaction (Murray, 2008; Bloch, 2007; Jensen 2007; Christison, 2002; Guest, 2001; Debski and Levy, 1999; Jensen, 1998; Holt, 1995).

Language learning is seen as "skill building; the native speaker or teacher provides scaffolding for the learning to take place, and the feedback provided by the native speaker or teacher becomes an opportunity for the learner to move towards self-regulation" (Harris, 2011, p.14). Neuroscience research has provided guiding principles for creating a rich environment for learning. Learners need to be challenged with activities that are scaffolded, engaging, relevant and involve critical thinking; to be active participants in their own learning with autonomy; a stimulating socially interactive environment; specific and timely feedback; support when needed (Murray, 2008; Jensen 2007; Christison, 2002; Jensen, 1998).

Summary

In practice today, second language teaching draws from many theories of language learning and theories of general learning. There is no consensus on one catch-all theory on how second languages can be optimally taught or learned and emphasis is on certain factors that follow from these theories. Table 2.2 summarises the main factors drawn from this secondary research.

Research Question

The research question for primary research for this review was: "What are the learning theories and subsequent key pedagogical factors needed for second language acquisition?" The objective of the research was to devise guidelines for practitioners in second language education for the design and delivery of curriculum.

Pedagogical Factors	Related Theories							Current Research Authors
	Behaviourism	Cognitivism	Visible Learning	Nativism	Socio culturalism	Constructivism	Contemporary Research	
Active learning			✓			✓	✓	Murray, Jensen, Christison, Guest
Autonomy					✓		✓	Murray, Jensen, Christison
Critical thinking			✓			✓	✓	Murray, Jensen, Christison
Learner collaboration		✓		✓	✓	✓	✓	Murray, Jensen, Christison, Bloch, Debski, Levy
Context				✓		✓	✓	Holt, Murray
Flexible learning options							✓	Guest, Holt, Rau
Negotiation of meaning		✓		✓			✓	Harris
Measures of success set out			✓				✓	Hattie
Authentic communication		✓			✓	✓	✓	Murray, Bloch, Debski, Levy, Harris
Ownership							✓	Harris, Rau, Guest
Personalisation							✓	Guest, Rau
Practice	✓	✓	✓			✓	✓	Oddone
Support when needed		✓	✓				✓	Murray, Jensen, Christison, Harris
Scaffolded learning	✓	✓			✓	✓	✓	Murray, Jensen, Christison, Harris
Timely, specific feedback			✓		✓		✓	Murray, Jensen, Christison, Harris

Table 1.2 Pedagogical Factors and Theories of SLA

3. Methodology

The pedagogical factors drawn from the secondary research form the basis for the primary research in this investigation. The following sections demonstrate what research methods were used, why they were chosen and how they were applied.

Qualitative vs. Quantitative

Both quantitative and qualitative methods were considered for this research. Qualitative research methods were more appropriate they lend themselves to finding

answers to open-ended broad questions, understanding in-depth information, identifying patterns and trends and gaining insight into an area (Bryman and Bell 2011). Qualitative research methods however, have limitations as findings are generally subjective, small-scale and contextual and lead to difficulties in creating solid statistics (Bryman and Bell 2011). To counteract some of these limitations, triangulated research methods were adopted (Cohen et al, 2007).

Sampling and Research Methods

In order to gather data for analysis and to triangulate findings within academia and practitioners, a sample of five academic and industry experts were interviewed using the semi-structured interview technique and a focus group with second language practitioners was completed using the Cafe Conversation focus group technique (Winston, 2012). Questions for these research methods were designed to incorporate findings from the secondary research completed with particular reference to the key pedagogical factors influencing SLA. As both groups were also asked similar questions, results could be triangulated. The sample size, while small, allowed for greater depth of analysis and richer conclusions. However, the limitations of the sample size include lack of statistical significance and applicability to the real world.

Academic and Industry Experts

Interviewees included second language academic and industry experts from three different higher education institutes in Ireland (one University and two ITs) and from one organisation that specialises in the delivery of language education to primary school children. This sampling allowed for in-depth data collection from a range of perspectives. The interviews focused on identifying the interviewee's opinion on optimal SLA methods, theories of SLA and the priority of key pedagogical factors that emerged from the literature review.

Practitioner Focus Group

A focus group with six practicing second language teachers of adult learners was completed using the 'Cafe Conversation' method (Winston, 2012). Focus group questions were both structured and open-ended based on the pedagogical factors identified in the literature review.

Risk Mitigation

To mitigate against the risk of commercial bias from the author an objective academic outsider who was not associated with the research and from outside of the industry

was commissioned to vet all interview and focus group questions, guarding against leading or biased questions; review findings from both the interviews and focus group to ensure that accurate and objective findings were presented and facilitate the focus group, mitigating against commercial bias and leading questions or prompts.

4. Analysis

Most Effective Way to Learn a Language

There was consensus between all participants that immersion was the ideal method as the learner benefits from constant exposure to the language as well as contact and interaction with other speakers of the language. Participants commented that immersion enables meaningful, regular practice in real engaging communication situations. However, it was acknowledged that immersion or naturalistic acquisition was not always possible or practical for learners and that most learners learn through instructive acquisition. While there was no consensus on the best methods to use in instructive acquisition, the broad theme that emerged was that instructive acquisition should emulate immersion settings as much as possible.

Theories that Contribute Most to SLA

There was consensus between all interviewees that no one theory sufficiently explains the SLA process but that all theories are relevant in certain scenarios. There was agreement that a catch-all theory would involve communicative, student-centred, sociocultural approaches. Even though all theories were deemed significant, *Vygotsky's sociocultural theory,* where learning is "mediated through social contact with others" (Interviewee D) stood out as the main theory which respondents see as useful in practice in instructive SLA. Therefore both primary and secondary research completed indicated that both SLA theories and general learning theories were relevant in current thought and practice in SLA.

Distinction was drawn between immersion and classroom settings where "language kicks in a different way" (Interviewee A). In an immersion setting, where input is constantly available and there is ongoing contact and communication in the target language, the *noticing hypothesis* and *scaffolding theory* were seen as crucial. In a classroom setting, Cognitivist theories were seen as key where learners develop learning strategies and build up competencies.

These findings are aligned with contemporary research findings that relate to general learning and second language learning theories such as Harris (2011) who highlights the importance of learners noticing input, learning being scaffolded, practice and the social nature of learning with feedback and expert intervention and Murray (2008), who emphasises the importance of scaffolded learning, authentic communication opportunities and autonomy. Jensen, Christison and Murray stress the significance of a socially interactive environment, feedback, support and active learning (Murray, 2008; Jensen, 2007; Christison, 2002; Jensen, 1998) Findings also align with research from Bloch, Debski and Levy and Oddone who highlight the need for practice in second language learning (Oddone, 2012; Bloch, 2007; Debski and Levy, 1999).

Key Pedagogical Factors in SLA

The priority of the pedagogical factors was investigated in the interviews and focus group and responses were analysed for key words and patterns. Data was subsequently organised into three tier rankings for each skill. Table 4.1 indicates the highest ranked factors for each of the four skills. These findings align with contemporary research and highlight the relevance of all theories discussed (SLA and general learning theories), in particular Constructivism, Cognitivism, Socioculturalism, Visible Learning and Scaffolding theories as well as Krashen's Model (see Table 2.2 for full details).

Pedagogical Factor	Reading	Writing	Listening	Speaking	Overall SLA
Active learning	✓	✓	✓	✓	✓
Context	✓	✓	✓	✓	✓
Authentic communication	✓	✓	✓	✓	✓
Scaffolded learning	✓	✓	✓		✓
Practice		✓	✓	✓	✓
Critical thinking		✓	✓		✓
Autonomy	✓	✓			✓
Support when needed	✓			✓	
Ownership		✓			
Negotiation of meaning				✓	
Learner collaboration					✓

Table 4.1 Top Rated Pedagogical Factors for SLA Skills

Summary

Although not always unanimous, eight factors did emerge from both the interviews and focus group as being of highest importance in SLA. These were 'active learning', 'autonomy', 'scaffolded learning', 'critical thinking', 'learner collaboration', 'context', 'authentic communication' and 'practice'. These findings indicate that a blend of SLA and general learning theories Constructivist, Socioculturalist and Cognitivist (particularly Connectionism, Information Processing and Noticing theory) as well as contemporary research are most relevant today in practice with influence from Krashen's Model and Visible Learning as well as Scaffolding theory and Behaviourist theories (see Table 2.1 and Table 2.2). This analysis corresponds with findings from the literature review and from primary research where expert interviewees indicated that a mix of all theories are relevant today in practice.

5. Conclusions and Future Work

The aim of this research was to investigate what pedagogical factors are key in SLA. Findings from this research provide guidelines for education practitioners in the development and delivery of SLA programmes. The best SLA acquisition method was clearly found to be immersion with all other methods ideally emulating immersion. Secondary and primary research into the main theories relevant in SLA found that all theories were relevant in different scenarios but that Sociocultural theories, Bruner's scaffolding theory, Constructivism and Cognitivist theories such as the Noticing theory were prominent in contemporary writing and practice. Upon closer inspection of these theories it became clear that pedagogical factors associated with them and applicable in practice were key to SLA and would bring about more practical and specific conclusions. A group of eight factors were found to be key in overall SLA; 'active learning', 'autonomy', 'scaffolded learning', 'critical thinking', 'learner collaboration', 'context', 'authentic communication' and 'practice', highlighting that a blend of both general learning theories and SLA theories apply in practice to SLA. Upon deeper investigation of the four skills of language learning, speaking, reading, writing, and listening five factors emerged as the most significant across all skills. These were 'active learning', 'context', 'authentic communication', 'scaffolded learning' and 'practice'. These findings highlight the need for instructive language settings to be highly communicative and interactive learning environments with

access to other speakers of the language, learning that is relevant to the learner and instructors who cater the learning and interventions to the needs of the learner.

Guidelines for SLA Programme Development

Table 4.1 provides general guidelines and direction for SLA education practitioners for designing general and skill specific activities in instructive settings in SLA. These guidelines are based on the primary and secondary research completed and highlight the most important pedagogical factors found for each second language skill as well as SLA overall. These findings provide a guide for practitioners of SLA at higher education level in Ireland to bridge the gap between theories of SLA and practice by applying the key pedagogical factors in their curriculum design and delivery.

Research Limitations

The research was limited in that the sample size used in interviews and focus group was small and hence findings can be deemed to be relevant in the context of the experiences and knowledge of those involved only. While participants were not all Irish, they were all, bar on, based in Ireland rendering their experiences and knowledge geographically limited. As qualitative research methods were used, findings are subjective. The research was also limited to the amount of secondary research completed.

Practical Model for SLA

This research highlights the most important pedagogical factors for SLA relevant to a number of different language learning theories as well as general learning theories. It is therefore recommended that a new practical model of SLA be developed using pedagogical factors rather than theories. This model would be useful to SLA curriculum designers, teachers and language resource developers. The guidelines developed in this research could form the basis for this model.

Further Research

The findings from this research could be further validated through additional primary research with more academic and industry experts as well as practitioners across a broader geographical, experiential and language range. There were some differences between the findings in this research between the interviews and focus group indicating that general SLA pedagogy has differences with skill-based pedagogy which warrants further research.

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