

《研究ノート》

Universal Design for Learning and Expert Learners Principles and Suggestions for Application

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〈Abstract〉 Since the 1970s an increasing amount of research in second language acquisition has demonstrated the benefits of fostering students' learner autonomy through raising their awareness of learning processes and developing their ability to use learning strategies that match their individual learning styles, context and circumstances. Universal Design for Learning (UDL) is an alternative, empowering framework for learners and educators that gives both greater choice and autonomy in the classroom. By giving learners greater access to their own individual learning styles, the principles of UDL help to alleviate the struggle to learn many students experience because their personal learning styles do not suit traditional text-centric classrooms. For these learners, disillusionment instead of empowerment in the classroom is the norm, and they often give up on, or drift away from formal education. Educators frequently compound the issue by restricting themselves to traditional pedagogies and assessment methods, unintentionally excluding many students from the learning process. This paper will explain the basic concepts of Universal Design for Learning and offer some suggestions as to how they may be applied in the language classroom to develop expert, autonomous language learners.

Keywords : Universal Design for Learning, Expert Learners, learner autonomy, learning strategies, learning styles

Introduction

Since the publication of the “*Good Language Learner*” research in the 1970s (Nainan et. al., 1978), language acquisition scholars and language teachers around the world have become increasingly aware of the roles that learning processes, styles, and autonomy play in language acquisition. Accordingly, in order to help students become successful language learners, these scholar-teachers (e.g. O'Malley & Chamot, 1988, 1990; Oxford, 1990, 1993, 2003; Chamot & Rubin, 1994; Nunan, 1997, 2003; Grenfell & Harris, 1999; Benson, 2011) have developed a wide variety of procedures and activities that foster autonomous use of learning strategies and raise awareness of the processes involved in learning a language. These methodologies and activities are often labelled ‘Learner Training’ in the literature (Wenden, 1991; Hedge, 2000).

Concurrently, rapid developments in information technology have forced change in all aspects of modern life, including education. The ability to retrieve whatever information we need from an online search has eliminated the need to memorize large quantities of facts and has freed the learner to use and analyse that information in ways they previously could not. They have gone from passive recipients of knowledge to active agents in its pursuit and utilization. Learners now need to be able to do more than docilely follow preprogramed learning paths designed for them by authority figures (Rodriguez, 2017). Life-long learning has become a necessity rather than an option, and it is impractical to think that learners will always have access to educators and classrooms. The ability to recognize one's own learning style and design one's own learning path has become essential. Both educators and learners need to 'learn how to learn' (Rodriguez, 2017). The principles of Universal Design for Learning are designed to help both parties do that.

The Aims of Universal Design for Learning

As its name implies, Universal Design for Learning is an approach to designing curriculum with the aim of benefitting all people and their learning styles. It is designed with all learners in mind, regardless of ability, disability, age, gender, cultural or linguistic background (Ohio State University, 2016). UDL is essentially a blueprint for the designing of goals, methods, materials and assessments for all students. UDL assumes from the start that learner diversity is the norm not a deviation.

Initially pioneered by researchers at the Center for Applied Special Technology (CAST) in the mid 1990's, UDL originated from work with computer technology and children with significant learning needs. Researchers working with these learners found that while they struggled in a traditional educational setting, they could succeed if provided with the right tools and resources. This led to the conclusion that the barriers these learners faced were imbedded in the learning environment, rather than the learners themselves (Nelson, 2014, cited in Dickinson, 2016). This marked a significant shift in ideology, from 'fixing' the learner to making the learning environment accessible to all (Ralabate, 2010).

Addressing this problem, CAST expanded their research to tackle the question of how educators could teach in a way that allowed all learners to access the curriculum (CAST, 2014). To do this, they turned to educational and neuroscientific research, in particular work on brain-based learning and learner variability (CAST, 2011).

The result was the principles and guidelines for Universal Design for Learning. These are not step by step instructions, rather a guiding framework to help educators make learning more accessible for all students. In essence, these guidelines encourage educators to explore and use varied and flexible methods for the following three purposes presented by TEAL (2010:1):

1. Present or access information, concepts, and ideas through the recognition networks (the 'what' of learning).
2. Plan and execute learning tasks via the strategic networks (the 'how' of learning).

3. Get and stay engaged in learning through the affective networks (the ‘why’ of learning).

With these key concepts in mind, educators begin by identifying student strengths and needs, deciding on a potential curriculum and envisioning potential obstacles. Planning goals are to minimize barriers and maximize accessibility and challenge for all learners (CAST, 2011). This is not to say that with UDL educators must anticipate every barrier every day and offer perfect solutions. Rather, by encouraging learner autonomy and participation in the planning process, UDL promotes shared responsibility for problem solving within the classroom. Inside this framework, barriers can be dealt with collectively as a class as they arise, reducing the burden on the teacher and promoting skills development in the learners.

Instruction in UDL is grounded in three principles:

1. Multiple means of representation- using a variety of methods to present information and provide a range of means to support learning. Background knowledge is first activated and then patterns, critical features and major concepts are highlighted. Information is presented in ways that allow for customization and visual or auditory alternatives.
2. Multiple means of action and expression- providing learners with alternative ways to act skillfully and demonstrate what they know. Access to tools and assistive technologies is optimized with the aim of providing options for task composition and presentation. Emphasis is placed on strengthening executive functioning in learners via strategy and planning development.
3. Multiple means of engagement- tapping into learners’ interests by offering choices of content and tools, and motivating learners by offering adjustable levels of challenge. Individual goals, objectives, choice and autonomy are emphasized to optimize motivation. Mastery-oriented feedback is increased, while self-regulation is promoted via self-assessment and reflection.

(CAST, 2018).

These principles are designed to provide equal access to learning, not simply equal access to information. They allow the learner to control the method of accessing and outputting knowledge while the teacher designs and monitors the learning process (Ohio State University, 2010). They can be applied to any subject and situation and are only constricted by the imagination and energy of the educator and learners. They are designed to ‘end in learning outcomes resulting in authentic communication to real audiences’ (November, 2012).

The Relationship of UDL to Expert Learners

For many people, UDL as a concept is synonymous with the principles of equity and access to learning for all. What is often overlooked is its other primary objective - the development of expert learners. According to the guidelines, ‘The goal of education in the 21st century is not simply the mastery of content knowledge or use of new technologies. It is the mastery of the learning process. Education should help turn novice learners into *expert* learners—individuals who want to learn, who know how to learn

strategically, and who, in their own highly individual and flexible ways, are well prepared for a lifetime of learning' (CAST 2011).

Universal Design moves toward this goal by placing decision and choice making at the centre of the learning process. These key factors in the development of learner autonomy reshape the roles of teacher and learner, shifting responsibility from teachers to learners via a change in the distribution of power and authority (Horvatha, 2012).

This does not mean that the teacher becomes redundant in a UDL classroom. Their role changes from source of information to advisor, co-learner and manager of learning resources. They gain the freedom to concentrate more fully on the needs of the learner, by relinquishing the need to control and direct the flow of information and learner behaviour in the classroom.

From the UDL perspective expert learners are described as resourceful, goal oriented, strategic and motivated. They can activate and connect their prior knowledge to new knowledge, formulate plans for learning and organize and assimilate new information. Ineffective learning strategies are abandoned, strengths are maximized, and progress monitored. Expert learners are also able to recognize and utilize the tools and resources they need to transform information into meaningful, useable knowledge (CAST, 2012).

Implementation of the UDL approach and principles will not instantly result in a class full of ideal expert learners. The process of becoming an expert learner is a gradual one that evolves throughout the learner's lifetime and may be initially confusing and uncomfortable to educators and learners accustomed to teacher-centred approaches.

According to Nunan (1997: 200) learner autonomy develops and evolves on a personal level through 5 stages:

1. awareness- the learner as the recipient of information
2. involvement- the learner as reviewer and selector among given options
3. intervention- the learner adapts official goals
4. creation- the learner as inventor, originator and creator of their own goals
5. transcendence- learners identify their own interests and create goals relevant to those.

(Based on this model of learner autonomy,) Nunan (1997: 200) identified five levels of 'learner action' for language instructors to consider when designing and sequencing tasks aimed at fostering learner autonomy. This model is presented in **Table 1**.

Table 1

Table 1: Nunan's 5 levels of task design to encourage learner autonomy (reproduced from Nunan, 1997: 200)	
Level 1: 'Awareness':	'The most superficial level. Learners are made aware of the pedagogical goals of the task and are encouraged to identify appropriate strategies for its completion.'
Level 2: 'Involvement':	'Learners are involved in making choices from a variety of possible course content, goals and tasks.'
Level 3: 'Intervention':	'Learners are involved in modifying and adapting course content, goals and tasks.'
Level 4: 'Creation':	'Learners are encouraged to create their own content, goals and tasks.'
Level 5: 'Transcendence':	'Learners transcend the classroom, making links between the content of the classroom and the world beyond the classroom.'

Taking the perspective of the teacher, Nunan (2003: 195-203) later proposed a nine-step ‘learner training and autonomy’ procedure to move learners along the continuum from a state of total dependence to a state of autonomy, highlighting that some of these steps overlap and can be introduced simultaneously. These steps are outlined in **Table 2**.

Table 2

Table 2: Nunan’s 9-step learner training and autonomy procedure (adapted from Nunan, 2003: 196-203)
Step 1: ‘Make instruction goals clear to learners. (Content-oriented)’
Step 2: ‘Allow learners to create their own goals. (Content-oriented)’
Step 3: ‘Encourage learners to use their second language outside the classroom. (Content-oriented)’
Step 4: ‘Raise awareness of learning processes. (Focus on learning process)’
Step 5: ‘Help learners identify their own preferred styles and strategies. (Focus on learning process)’
Step 6: ‘Encourage learner choice. (Focus on learning process)’
Step 7: ‘Allow learners to generate their own tasks. (Focus on learning process)’
Step 8: ‘Encourage learners to become teachers. (Focus on learning process)’
Step 9: ‘Encourage learners to become researchers. (Focus on learning process)’

To embark on the journey through these stages requires a fundamental, potentially stressful, conceptual shift for the participants. To reduce anxiety and increase confidence in all parties, it is recommended that the transition to UDL and a focus on developing expert learners should be gradual. Starting with a single lesson or activity relevant to learning goals, and then moving to other parts of the curriculum (Rodriguez, 2017).

This movement away from a traditional to a UDL-style classroom can be encapsulated in three broad stages:

1. Teacher-centered- but with more learner input and choice.
2. Co-operative with the learners as co-designers of their learning paths.
3. Learner-driven where learners drive their own learning.

(McClaskey, 2016: 33)

Movement through these stages necessitates reflection on the parts of both the educator and the learner. Teachers, especially those used to more traditional teaching methods need to get comfortable with the idea of relinquishing power in the classroom and interacting with learners as equals in the learning process. Learners on the other hand, will need to accept that with autonomy comes responsibility and a possibly greater, although hopefully more enjoyable, workload. Passage through these stages should, in theory, trigger within the learner a cycle of extrinsic and intrinsic motivation, where concrete achievements lead to greater confidence and motivation, which in turn lead to more concrete achievement. It is this ever-widening spiral of achievement and autonomy that provides the cognitive and affective basis for developing learner autonomy and expert learners, as well as providing clear signs as to the readiness of the learner for the move to the next stage in the progression.

UDL Style Activities in the Classroom

The following are examples of customizable learner-oriented activities implementing the principles of UDL. They include activities coming from different published sources and original activities designed by the authors.

- Interest logs (also called ‘issue logs’)
 - Students research a topic they have an interest in using their target language. They collect information about their interests through reading articles and books, listening to news broadcasts, or watching videos on the Internet. The information can be recorded in a notebook and can include language-focused components such as lexical records (Nation, 2014; Barfield, 2012a, 2012b; Barfield et al., 2016). This is ideally done outside of class, but can also be done in class, especially if the students and teachers have access to a CALL room.
 - The research and data collection is ideally done over several weeks or months, which allows the effects of this form of narrow reading/listening to manifest themselves. As Nation (2014: 54) highlights, ‘By focusing on a narrow topic area, the vocabulary load of the topic-related listening and reading input is greatly reduced (by at least 50%) compared with focusing on a varied range of topics. In addition, background knowledge of the topic is quickly built up, making it easier to deal with the input material and to gain large quantities of understandable input’. This research can also be done in pairs or small groups, with students using different resources on the same topic.
 - These interest logs can form the core of a cyclic process that combines them with interest sharing sessions and presentations during which learners share their findings orally or in writing with the support of different media (e.g. poster, PowerPoint, Prezi, academic paper, booklet, blog, website). Andy Barfield and Mike Nix have developed a very successful content-based taught-in-English programme at Chuo University based on such a process. Their programme aimed at developing students’ second-language literacy is built around ‘Research Cycles’, blocks of 4-to-5 weeks during which students read and listen to English content about topics or issues they are interested in, take research notes in a notebook, then explain, discuss, and present their understanding of these topics/issues through weekly informal discussions and end-of-cycle formal presentations using different media (e.g. PowerPoint, Prezi, poster, academic paper, booklet, website). These research cycles are also used to develop research skills, such as note-taking, vocabulary, listening, reading and compensation strategies, as well as critical thinking (Barfield, 2012a, 2012b; Barfield et al., 2016).
 - The benefits of the integration of interest logs in such communicative processes are twofold. First, the speaking sessions during which students discuss and share their findings in pairs or small groups in class allows for the repetition of the new language encountered during the research and its progressive activation in the learner’s lexical repertoire (Nation, 2014).

As Barfield highlights, these series of activities help students to ‘attend to their vocabulary through meaning-focused output activities (explaining and discussing with other students) and completing language-focused learning activities (exploring ways of making vocabulary notes)’. As he adds, it ‘also involves fluency development, so in many ways the interaction between the four strands of meaning-focused input, meaning-focused output, language-focused learning, and fluency development (Nation, 2001, 2007) allows for the integration of “intentional and incidental vocabulary learning” (Schmitt, 2008) that is currently understood to be optimal for effective L2 vocabulary development in an instructed context’ (Barfield et al., 2016: 84). Second, it has been shown to increase students’ motivation and help them build their knowledge of content of interest in English through meaning-focused input activities (Nation, 2014; Barfield et al., 2016).

- Having used and adapted this type of process in three different academic settings for two years, one of the authors has observed these benefits on a weekly basis. While the out-of-class work can appear too demanding for students who start with very low motivation in learning and using a second language, this generally fades away as these students realise that they can use the language to learn about their personal interests and share them with others. As they focus more and more on the content, these students stop focusing on their negative feelings towards the language, which can ultimately turn these negative affects around. The main difficulty for the teacher is to help students find resources that are at the right level for them. While advanced and intermediate students are generally able to find their own resources on the Internet or libraries, pre-intermediate students often require further guidance and benefit from being provided with teacher-selected pools of resources on different topics. Google sites and other website services such as WordPress.com can be used to build up such pools of resources on broad topics such as global issues or sports (Barfield, 2012a, 2012b; Barfield et al., 2016). Although building such pools of resources can represent big time investments for the teachers, the authors find it is well worth the efforts.

- Journaling with peer-reading

- The idea of journaling in a foreign language is not new and has been shown to encourage and develop self-reflections, fluency and motivation (Fulwiler, 1987; Nation, 2004; Casanave, 2011). It is also simple to implement in the classroom. Students can, for example, write about their lives, about what they read, listen or watch, about what they learn in short writing sessions of about 10-15 minutes. This can be elicited by basic prompt questions such as:
 - What did you watch, read, play, learn yesterday? How was it?
 - What are your plans for tonight?
 - What are your plans for the weekend?
 - What do you want to do, read, watch, play, learn tomorrow?

- Like interest logs, journaling can be integrated into a process and turned into a communicative activity simply by having students exchange journals with a partner, read the new entry and write content-based comments. Language-focused feedback can also be given by students.
 - The authors have observed that such activities are far more engaging for their students than the standard writing activities found in most textbooks.
- Writing challenges
 - Writing challenges are another example of classic creative writing activities that can be used in class to encourage students to express themselves, practice their writing skills and develop their fluency. Students can for example be given 10 minutes to write about a type of experience (e.g. best trip abroad, best present offered/received, a scary/funny experience). These writing challenges can be followed by peer-reading sessions and content-focused peer-feedback sessions.
 - Writing a short story or dialogue using words the students recorded in their notebook or a list of words given by the teacher (based on a textbook unit topic, for example). This can be done alone or in pairs.
- Prepared talks
 - Students make a list of the situations in which they are (more) likely to use the target language in their current daily life or in which they would like to use the language in the future. They research the words they would want to use should this situation occur and prepare the imaginary dialogue or speech. Students then receive feedback from peers and teachers and role-play the situations with other students. This activity has been described by other teachers, including Paul Nation (2014).
- Student-teachers
 - Students prepare and deliver “lessons” during which they explain to other students how to do things they have an interest or expertise in (e.g. cooking, sports techniques, planning a sports diet or workout programme, maths, magic tricks). This is an example of application of the 8th step of Nunan’s (2003) learner training and autonomy procedure.
- 5 social questions of the day
 - Students draw four columns in their notebook and write 5 questions they would like to ask other students in the class. Students then mingle in the class and interview 3 classmates, taking notes of their answers. Finally, students can talk with a fourth partner and report their findings.
 - This is a great warm-up activity that challenges students to form new questions every week.

- Poster presentations based on textbook topics
 - Any textbook topic can be turned into a poster presentation that allows students to share their own experiences of that topic or motivate personal research that allows them to engage with that topic. For example, a research-presentation about world festivals based on a textbook unit about special occasions; a perfect date plan presentation sbased on a unit about relationships; or a presentation about hometowns based on a unit about city living. By contextualising language items used in a textbook and relating them to their own experiences and interests, students make them more memorable, increasing the chances of language acquisition.
 - The poster format can encourage students to express themselves without reading, especially if they are prompted to only use drawings, images and keywords.
 - The presentation can be based on a series of questions on the topic. Students first answer these questions in sentences then turn their answers into a poster.
 - To create a comfortable atmosphere for students, the presentations can be done in groups of 5-8 students, the teacher moving from group to group to monitor students' progress. Students can be encouraged to listen carefully to their classmates through a listening task asking them to record specific information about their classmates' presentation and/or a peer-feedback task encouraging them to react on the content of their classmates' presentation and to give them advice.
 - The A3 format is particularly convenient as students can use a double page in an A4 notebook to make their posters.

- Personal histories in texts and pictures
 - Students answer questions about their lives by drawing pictures then translating these pictures in texts. These pictures can then be used to help them talk about their lives without reading the text in groups or pairs.
 - Although this activity and the previous one can become time-consuming with artistic students and/or an additional source of self-consciousness for those who are less dexterous, a gentle reminder that it is a language task and a demonstration of the teacher's poor drawing skills were found to help students engage with the task and reap the benefits of the activity. Amongst these benefits, the authors have observed that the use of pictures can be liberating for students as they help their interlocutors understand what they say and help them remember the content of the answers they generated. It is felt by the authors that having this visual support, and being able to focus the listener's attention on them also takes away some of the pressure we so often observe when students have to communicate orally in front of others in a second language.

Conclusion

The path to becoming an autonomous, expert learner is a life-long one that is by nature both reflective and proactive. In order to define and develop their optimum learning style, learners need the time, mental space and opportunity to experiment with various learning strategies and tools, and educators need the freedom, time and space to plan, evaluate and support their progress. The implementation of the principles of Universal Design for Learning frees both parties to achieve these goals by sharing decision and choice making in the classroom and providing all stakeholders with equal access and input to the curriculum. By focusing on the three cognitive networks, the 'what', 'how' and 'why', and by providing learners with multiple means of engagement, action and expression, educators lay the cognitive and sociological base for a shift from teacher-centered to autonomous and finally expert learning.

That is not to say, however, that the introduction of UDL principles and practices into the classroom will be met with enthusiasm by all. For some, the move from a traditional, controlled approach to one where classroom power is more equitably distributed may be uncomfortable. Learners who are accustomed to being passive recipients of information may resent the increase in workload and responsibility implied in the proactive creation of their own knowledge. Educators may equate a loss of direct control with a loss of respect and may feel daunted by the prospect of facilitating and monitoring multiple learning pathways for multiple learners. Both parties may not be prepared for the confusion that often accompanies the initial attempts at UDL style activities as classroom roles shift, new technologies are mastered, and learners begin to evaluate and experiment with goals and learning styles. For these individuals the adoption of a gradual move to UDL style classes is recommended, allowing all participants time to adjust to, and enjoy, the benefits of greater educational autonomy and time for reflection. Furthermore, it is hoped that by adopting some, or all of the principles of Universal Design for learning, these educators and learners will find that the learning experience becomes truly inclusive in the sense that, not only are all members of the class invited to join the process, but they opt to include themselves.

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