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STUDENT LEARNING, CHILDHOOD & VOICES | REVIEW ARTICLE

Flipped education: Transitioning to the homeschool environment

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Abstract: This paper seeks to introduce flipped learning as a viable learning method that can be used in the homeschool environment. Flipped learning can become a valuable aspect of homeschooling when the learning environment is conducive to the application of self-taught knowledge. In fact, the sessions evidently act as clarification bridges and self-actualization for students in that they dedicate their energy to practising and gaining experience in applying the learnt concepts. This paper analyses an approach to a self-directed intuitive learning process while at the same time holding aptitude and self-motivation as a key regard in this method of learning.

Subjects: Childhood and Adolescence; Education; Educational Technology; Parents; Primary Education–Teaching Practice; Teaching Practice–Education

Keywords: homeschooling; flipped learning; self-directed learning; self-regulated learning; self-determined learning

1. Introduction

Learning is a complex process (Liaw, Huang, & Chen, 2007). Practical knowledge intensifies in a content rich learning environment, by engaging in tasks and situations that are authentic (Collins & Halverson, 2010). Flipped learning ensures that a student has encountered a concept before having an instructor or educator walk through the same concept in a classroom setting. Classroom settings are dedicated to exercises, and as students encounter certain problems, they can learn via

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PUBLIC INTEREST STATEMENT

Arguably, self taught skills go a long way in instilling good instincts and best practices when it comes to the art of learning. For instance, advancing gradually to the peak of a certain set of skills is boosted with the interest gained by a learner. As a result, it is debatable to say, the approach of constrcuting learning spaces outside classrooms is far more valuable and worthwhile than the conservative traditional approach in education. This paper gives an in-depth scrutiny and insight to innovative learning spaces while ensuring that a student-centered setup is maintained. At the core of the paper is the regard of self learning, motivation and comittment intuitive are an important aspect in the study. Learning at home is featured widely so as to give a perfect picture of ensuring learning is focused on the student as they are tasked with the duty of self-instilling the knowledge beforehand.

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experience and in stimulus-response-based approaches. Working within this paradigm of learning, a self-directed approach becomes rich, and, when self-regulated, the skills gained can be transferred to other real-life contexts.

Consistent with this is the manner in which flipped learning is being embraced, in fact, as a result of changes taking place in formal education. One apparent way is the dissemination of the "flipped learning" approach into various learning settings.

Harnessing accessibility to technology, this model appreciates that learning need not be limited to what teachers know, but rather what can be accessed by students. Students have a wide scope in which they can access information. With the introduction of the Internet and the cloud for information gathering, no longer is there an over reliance on the expert to teach. In turn, the context of school students is also changing. This confirms a rise in the opportunity for alternative methods of education. Kunzman and Gaither (2013) affirm the influence technology has, and will continue to have, on homeschooling. Further research in this field has resulted in recognition that within this approach students are taught methods of collecting available research data despite their limited supply of prior knowledge.

Given the quality of online learning resources at their fingertips, many parents are prepared for homeschooling of their children. Most parents embracing the idea of homeschooling their children are introduced to the concept and idea of a flipped learning environment in which, students are taught in a not-so-obvious approach to learning. As a result, flipped learning is considered as an important and prominent booster to self-initiated learning and homeschooling. Although it is in its early days, there is little research on how technology impacts homeschoolers. Also, there is evidence that homeschooling parents use technology in different ways for different uses (Bullock, 2011).

The flipped learning approach presents a viable method for homeschooling. It is possible to use the flipped learning approach to facilitate the development of the self-regulated learner within the homeschooling context. In fact, as learners develop within a more structured environment, it may be possible to enable the homeschooled student to become more self-directed and autonomous in their learning. This opportunity is evaluated here, through an assessment of self-directed learning (SDL), self-regulated learning (SRL), flipped learning and homeschooling.

2. SDL

SDL, as defined by theorist such as Knowles, is a process that allows the learner to identify their goal and needs, with or without external direction. Learners are not always exposed to directions and monitoring as depicted in modern society free from educational flow. In some instances, learners will be exposed to a field of study situations they have not encountered in their previous experiences, and they will be expected to make the most out of these situations. They will be expected to gain required information to work their way through the encountered problem resulting in a self-regulated and timed learning approach that is present in such stressed and expected environments. This also includes the learner seeking the necessary resources required to fulfil the identified goals and ensure learning outcomes are met (Boyer, Edmondson, Artis, & Fleming, 2014). This requires an "ability to search for new information, to evaluate critically and adapt the information retrieved" (Cadorin et al., 2015, p. 746).

Students who are engaged in SDL achieve improved outcomes and better results than passive learners (Edmondson, Boyer, & Artis, 2012, p. 41; Ranvar, 2015, p. 489). Evidence can be gathered from the results of the learning process in which flipped learning students and other self-initiated forms of learning produce dynamic outcomes in citizens' day-to-day lives. Such students are not dependent on formal educators and can manoeuvre across the vast scope of resources to find a relevant and dependable source of information. Interestingly, the learner tends to be more motivated and derives greater benefit from the learning experience than passive learners (Ranvar, 2015). A self-directed learner is therefore defined as an active learner.

SDL empowers the learner and instructor alike to foster self-management, self-assessment, the development of learning agreements and the opportunity for reflection and evaluation (Collin & Hammond, 2004, p. 15). It is important to keep in mind that to perform effectively as a self-directed learner, an individual must develop the skills of information searching, information evaluation, identification of quality sources, academic writing, time management, problem-solving and self-management (Khiat, 2015, p. 2). Otherwise, what is information without the availability of a support material, evaluation and analysis of the information in being relevant and reliable? Accordingly, students possessing an "internal locus of control, motivation, support, and self-efficacy" have been found, by Boyer et al. (2014), to be more receptive to SDL.

At one end of the spectrum, research indicates that there is a strong association between technology and efficient SDL (Howland & Moore, 2002; Van Loon, 2001). Technology manages to enable the learner in leveraging social networks so as to establish their communities of practice (Bryan, 2015; Lee, Tsai, Chai, & Koh, 2014). Students must, therefore, have a functional level of experience in technology to be effective self-directed learners. On the other hand, the dual relationship between technology and SDL has been found to play a minimal role in learning. In fact, Khiat (2015, p. 10) found the relationship to be the least significant factor in determining SDL. This evaluation of the SDL and self-initiated motivational approach to learning is further supported by the research of Chu, Chu, Weng, Tsai, and Lin (2012), whose research found that SDL readiness assists in technical learning at a very low level. The research of Song and Hill (2007) suggests that when SDL is conducted in an online context, the technological framework impacts how SDL is performed.

Even though home education is the longest standing educational approach, it closely resembles the ambitions of SDL. The emphasis on progression by achievement rather than age, and the commitment to lifelong learning both testify to the relevance of home education in today's modern learning structures. A learner learns to develop self-motivated goals and achievements that are self-initiated. A self-motivated home study approach incorporated within the contemporary approach to flipped learning is facilitated by the involvement of self-dedicated students. Home education reaffirms the value of learning through real-life problems, the development of critical thinking skills and the use of online tools to continue this progression (Home Education Association, 2014). With the ever-increasing online presence in the home, the connection to the home education community and learning will continue to grow.

3. The difference between SDL and SRL

For the sake of clarity, it is important to define SDL and SRL conceptually. Historically, the two terms were grouped under the umbrella concept of Personal Responsibility Orientation (Brockett & Hiemstra, 1991). Whereas SDL operates at the macro level, SRL functions at the micro level (Brand-Gruwel, Kester, Kicken, & Kirschner, 2014, pp. 364–365). The relationship is illustrated in Figure 1.

From Figure 1, it can be seen that the process of SDL involves the formulation of learning needs, the setting of learning goals and the selection of learning tasks. The process is linked to the performance of the task that involves the stages of orientation, planning, monitoring, steering and self-assessment that then feeds back into the SDL process. Jossberger, Brand-Gruwel, Boshuizen, and van de Wiel (2010) note that while SDL includes SRL, the reverse is not true. This suggests that self-directed learners should also be self-regulated learners and that a self-regulated learner may not necessarily be a self-directed learner.

By definition, SDL involves the learner taking responsibility for their learning by the process illustrated in Figure 1. SRL involves the learner regulating their behaviour, emotions and motivation (Saks & Leijen, 2014, p. 191). Given that SRL is contained within the same umbrella as SDL, it is easy for the two terms to be viewed as congruent. Certainly, a self-directed learner will need to self-regulate, plan, monitor and self-assess their learning (Figure 1). However, they need to do more than this. They need to develop a high level of self-management and the capacity to identify appropriate learning tasks when problems arise (Lee et al., 2014, p. 427).

Figure 1. The relation between self-directed learning (SDL) and self-regulated learning (SRL).

Source: From Brand-Gruwel et al., 2014, pp. 365 Copyright 2014 by Springer Science+Business Media New York. Reprinted with permission.
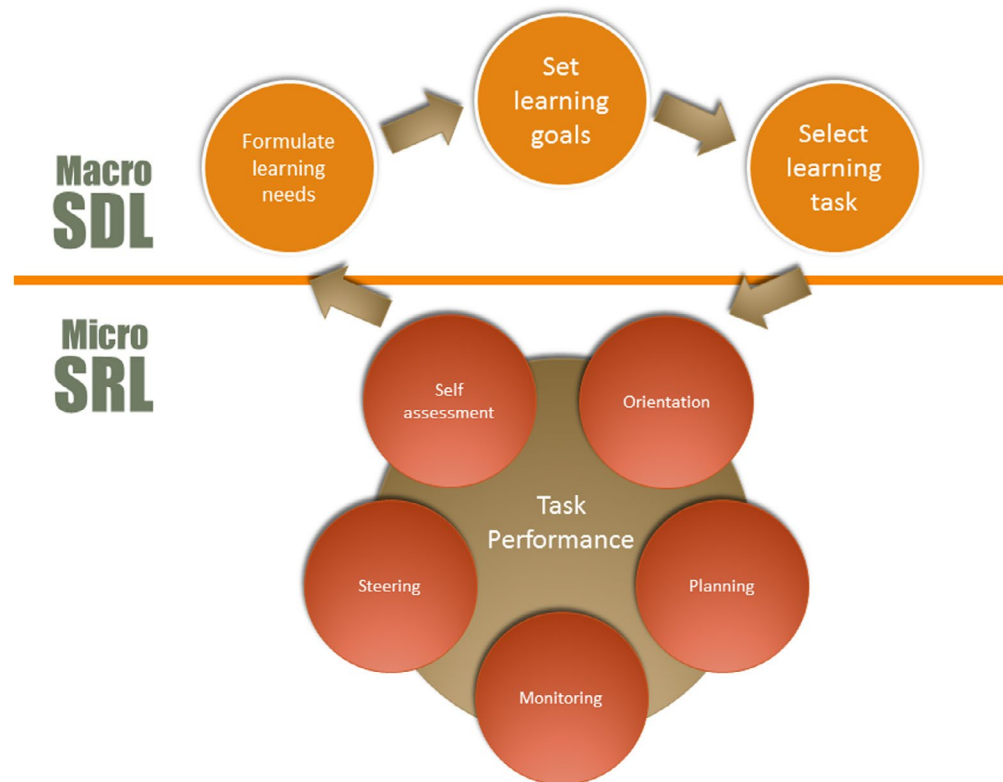
Because the definition of SDL originates in adult education, SDL tends to be applied to learning that occurs outside of the traditional school environment. For example, SDL has embedded into the philosophical underpinnings of homeschooling, especially "unschooling".

Homeschooling families identify with various pedagogical approaches, one of which is "unschooling". Unschooling, or natural learning, is a process by which children learn through real-life experiences. There are no rigid criteria, domains or knowledge benchmarks, and children are left to explore their interests, facilitated by adults. "Radical" unschooled schoolers are often associated with this form of education in various manners. The associated praise is in that, those who practice other forms of child-led parenting, such as offering children the choice of lifestyle and life skills, including bedtimes, food consumption and the use of television and other technology (English, 2014). This pedagogy promotes the tenets of SDL in an informal setting.

4. Flipped classroom and flipped learning

The flipped classroom model is grounded in several theories. It is rooted in Piaget's theory of active learning that involves the learning process being centred on new ideas and concepts (Galway, Corbett, Takaro, Tairyan, & Frank, 2014). Specifically, from Bloom's taxonomy of learning, the flipped classroom allows for both high and low orders of cognitive thinking (Galway et al., 2014). Moreover, the flipped classroom model draws on both constructivist and behavioural learning theories (Hawks, 2014, p. 265). By behavioural learning theory, the student receives information before the class. The flipped classroom model seeks to develop the student as an active learner engaged in a social environment with their peers and instructors (Hawks, 2014, p. 265). Despite the broad theoretical basis of the flipped classroom model, there is a lack of agreement on a common definition of the flipped classroom model.

One element common to most definitions of the flipped classroom is the provision of content outside of the classroom. Maxson and Szaniszlo (2015, pp. 597–598) state "Flipped learning is a pedagogical approach in which direct instruction is passed between the group learning space and the individual space. As a result, the resulting group space is transformed into a dynamic; interactive learning environments are henceforth born out of and transform the resulting group space where the educator guides students as they apply concepts and engage creatively in the subject matter". Hence this quote serves as a viable definition of a flipped classroom as a classroom that is characterized by flipped learning as the dominant pedagogy.

The integration of flipped learning with online technologies can support a homeschooling learning environment. The online environment enables the learner to have a greater degree of control over their learning (Song & Hill, 2007, p. 30) and requires that the learner is self-directed (Shapley, 2000). It is possible to achieve this through leveraging technology to provide learning interactions online in simulated environments, or in one-to-one links to different human resources.

A growing trend in this area is homeschoolers connecting with the flipped learning pedagogy as online resources continue to become available and accessible. Research suggests a connection between the growth of the Internet and the rise in the number of home educators (Anderson & Rainie, 2008; Huerta & González, 2004; Stevens, 2001). Access to the Internet and online resources has become an enabler. The Internet has allowed for an increase in access to other home educators. Pedagogical resources of home educating families (Basham, Merrifield, & Hepburn, 2007), not to mention connecting across vast distances to incorporate flipped learning that opens the doors to other opportunities in cultural exchange and world knowledge (Steinmeier & Yoon, 2010).

Nevertheless, how home educators use online resources requires further research. It is expected that this relatively new area of research will contribute much-needed knowledge for the international context. Preliminary research by Mok (2014, p. 10) found that the flipped learning model assists students in being better prepared for the learning experience, supports increased instructor–student contact, allows students to learn at their own pace and enhances the level of interaction. Likewise, an analysis of the research on the flipped learning model reveals that students predominantly enjoy the flipped learning model, although it does not suit all students (Bishop & Verleger, 2013, p. 10). Because the studies occur over a limited duration and in various contexts, it is hard to draw generalized conclusions on the effectiveness of the flipped learning model.

5. SDL, SRL and flipped learning

As demonstrated above, flipped learning is a viable model for the support of SDL. By removing the transmission of information from the classroom environment, it is possible to create a contextualized learning environment (Hmelo-Silver & Barrows, 2006; Hmelo-Silver & Eberbach, 2012). Flipped learning enables the student to be active in their learning, through leveraging technology for the dissemination of information. In turn, this allows the classroom to be leveraged for the exploration of real-world problems (Becker, 2013; Davies, Dean, & Ball, 2013).

In their review of a case study about the use of the flipped learning approach for problem-based learning, Tawfik and Lilly (2015) found that the self-efficacy of students improved throughout the course of their involvement with flipped learning. Students were motivated, yet there was little evidence to indicate that students were generating their learning needs, setting learning goals and selecting learning tasks, which suggests that SRL, not SDL, was characteristic of flipped learning. Above all, these preliminary conclusions show that the homeschooling environment is an original research setting to investigate the use and effectiveness of flipped learning.

6. Homeschooling, SDL and SRL

Technology has long held great promise for revolutionizing the way we teach, think and learn (Evans, 2002). Continued developments make online learning a natural evolution and extension of traditional styles of learning, and will effectively transform how we approach the teaching and learning

relationship (Garrison & Anderson, 2000). Online learning can facilitate education in all areas of study to a broad range of learners, allowing for the creation of learning communities that overcome the constraints of time, distance and boundaries (Hamada, 2013).

Being able to seek information online is a necessary skill in the real-world context. Not only home educated children, but all children must have appropriate technology skills to transfer what they learn to work and higher education settings. The reality is that the use of technology is needed in every step of application, synthesis and transfer of skills and knowledge in today's society. SDL and SRL have been part of the homeschooling landscape, and increasingly, flipped learning is laying its foundation in homeschooling pedagogy.

There exists a broad range of approaches that are adapted to home education. One approach uses structured schedules, textbooks and lessons that mirror the educational approach adopted in the traditional school environment (Allan & Jackson, 2010, p. 57). Greater use of community resources is often part of this model (Allan & Jackson, 2010, p. 57). Another approach is using unit studies that focus on the student determining what they want to learn, and then placing that learning need into a range of subject contexts (Allan & Jackson, 2010, p. 57). The classical approach fosters learning through written and spoken communication, rather than through visual media and images. Students are taught and given the opportunity to learn from and via "grammar, logic, and rhetoric" (Allan & Jackson, 2010, p. 57). To realize this profound realization, learning is developed in staged processes. In the early stages, it commences with the learning of facts. In the middle stages, students are taught to think critically, and then in the later stages self-expression is developed.

Another approach adopted in homeschooling is the Charlotte Mason Approach. This approach commences with teaching the student the three R's: reading, writing and arithmetic (Allan & Jackson, 2010, p. 57). The student is afterwards equipped with a broad general knowledge through the provision of real-life experiences. Self-expression and an understanding of ethics are incorporated into lessons. As an evident research, by encouraging flipped learning, education is promoted in a manner in which students are taught to be proactive instead of waiting for the educator to come and introduce the topic and approach of each and every knowledge to be learned via apprenticeship. Educators act as possible apprentices for the students teaching them and exposing them to the outside world that is not exam-based but dependent on the idea of a proactive and prepared technique.

A further approach is based on Illich's method that involves de-schooling, i.e. the learning and seeking out of subjective experiences within which learning is a consequence (Allan & Jackson, 2010, p. 57). Every experience of the student becomes an opportunity for learning. This approach is the opposite of structured learning (Allan & Jackson, 2010, p. 57). In this method, the student directs the learning that is facilitated by an adult.

Indeed, there is a wide variety of approaches that range from highly structured to highly unstructured. Correspondingly, there is a broad range of reasons why parents seek to homeschool their children. Research by Harding (1997) identified seven reasons why parents select homeschooling above traditional schooling. One significant highly publicized and possible reason and justification used by parents included religious grounds. Also, homeschooling was pivoted by a need for parents to take total responsibility for the education of their children. Additional reasons for the homeschooling approach included the desire of parents to ensure that their children achieve high numeracy and literacy levels, the need to protect children from negative influences of others in the school environment, the need to overcome the physical isolation of the family and the determination for better catering of students with special needs. The common denominator is that, often those conducting homeschooling will draw on the resources of the community to support resources accessed from home (Allan & Jackson, 2010, p. 56).

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7. Homeschooling and flipped learning

Flipped learning can be used to evaluate the degree to which the student has mastered content and skills, either as other-directed or under their direction. Flipped learning promotes the idea of the homeschooling environment, a concept that is evidenced by the stated and direct approaches of letting a student study on his own before letting the educator come in and assist in possible setbacks encountered by the students during the self-study process. As noted, students will need to be trained in how to access and use resources, and the range of learning strategies that are best suited to them. Educators might decide to offer the students prior resources from which they will be able to construct a skeleton of the information and knowledge to be studied. As a result, the students are detached from the possible spoon-feeding that is experienced in the normal learning approach. Spoon feeding makes students lazy, however in contrast, by encouraging a self-initiated home study learning approach, students tend to be reactive and on top at every instance in their accord. Flipped learning can be used to develop these skills, and enable the student's independent learning process (Song & Hill, 2007, p. 32). The flipped learning approach might then be used as a continuum for developing greater autonomy in the learner.

Flipped learning, married with Internet technology, allows the learner to determine when, how and where they might learn, in consultation with their parents. An external instructor working with the parents and the student might provide the homeschool with the external support that they require as a valuable resource. For example, a skilled instructor might be able to interact with the learner in a manner that can assist the learner to be more self-directive in their learning. The flipped learning might then be used to support the student in their planning, monitoring and evaluation of their learning. The level of assistance that is provided can be varied by the needs of the learner.

8. Conclusion

The flipped learning approach could be advantageous in a homeschooling context, for both the child and their parents. The instructor should be given due respect in this form of learning as they manages to keep a learner motivated as self-learning can tend to be challenging. A conceptual classroom can make learners competitive.

The learners can share their realizations and findings ensuring that they are at par with their counterparts. Without the flipped classroom and, especially when dealing with multiple academic levels in the same environment, learners tend to be satisfactory with modest achievements. This scenario is evident in the comparison of learners and in the manner in which others achieve tasks set by the educator. Ideal in a homeschooling environment, where many siblings may be vying for their parents' attention, SDL directs the attention of children in an effective form of competition by instilling proactiveness and inspiration through relations with their friends. The responsibility of learning is deployed to the student and away from the instructor. In fact, students get to be dependent on themselves and the educators are simply facilitators of the information. The gradual home study develops a person's self-interest in learning resulting in deploying flipped learning as an additional and supportive feature in developing a home study approach for human learning. Regarding this method, SDL enables the learner to become independent by using flipped learning to gain knowledge about the content, before returning to the facilitator for further guidance.

That being said, it is important to emphasize that, although flipped learning can enable SDL, it is not by itself the catalyst for SDL. The instructor, in their design of the learning process, must be willing to transfer the responsibility of their learning to the student. For this to occur, the student must be sufficiently skilled to be able to self-manage their learning. Even within the homeschooling model, the student will often rely on an adult to direct their learning, albeit the learning occurs in a less institutionalized environment than the traditional school.

By using online technologies, it is possible to provide students anywhere and anytime with the information needed in their learning process and application to learn and apply lessons to the real-world. Flipped learning can therefore be leveraged to enable the environment of the learner to

support contextualized learning and SDL. As societies change and continue to adapt to different modes of information transfer and exchange, the classroom authority becomes less valid as a learning paradigm. With this change, there is likely to be a correspondent shift towards knowledge societies where educational institutions are less dominant.

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