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Self-Directed Adult Learners and the Paradox of Choice

Matti Koivisto¹

¹ South-Eastern Finland University of Applied Science, Mikkeli, Finland

Abstract—It is common knowledge that we all learn best when we are motivated. But what motivates us? A large body of research suggests that we have individual differences in our learning motivations and these differences increase with age. However, many scholars believe that adult learners typically have a deep need to be self-directing and the possibility to choose increases their motivation. To fulfill this need many higher education institutions offer a large number of optional courses to their adult students. This paper analyzes how freedom to choose affects the progress of adult learners' studies. The findings of the empirical study suggest that although possibility to choose is in most cases good for us, too many alternatives can be even harmful and slow down adults' studies. These results are in line with prior observations made in other fields. However, as far as I know, the theory of the paradox of choice has not earlier been used to analyze adult learners' study progress.

Index Terms—Adult education, Paradox of Choice, Self-directed learning.

I. INTRODUCTION

The acceleration of the technological change compels both organizations and individuals to update their knowledge. This has increased both the educational alternatives and the number of adult learners in all forms and levels of education, including universities. Even though adult learners' motivations and needs vary earlier studies suggest that they typically want to be in control of their educational paths and they appreciate the ability to choose. On the other hand, American psychologist Barry Schwartz has pointed out that although the alternatives and possibility to choose mean commonly welfare and freedom, too many options can be even harmful to our psychological and emotional well-being [1].

In many study programs, curricula consist of both compulsory and optional studies. The compulsory courses do not offer any freedom of choice unlike the optional ones. Many academic institutions believe that a wide selection of optional courses supports Self-Directed Learning (SDL) in formal education and fulfills adult learners' individual needs. This paper analyzes the effect of choice on the adult learners' study progress based on the performance of the 327 first year students. All participants of the study were post-graduate students returning to college. They all had at least three years of work experience after gaining their bachelor's degrees and therefore they all can be considered adult learners.

The structure of the paper is as follows: In Section II I give a short review on the key concepts of the paper – i.e. paradox of choice, motivation of adult learners and theory of self-directed learning. Section III describes the

experiment mentioned above to test the importance of freedom to choose in the context of the study progress. The paper ends with final conclusions provided in Section IV.

II. CHOICES AND SELF-DIRECTED LEARNING

A. Freedom to Choose and Paradox of Choice

Most of us believe that the more choices we have, the better. Freedom to choose allows individuals to pursue the kind of lives they value the most. Some scholars have suggested that the sense of control is among the strongest determinants of subjective well-being. For example, perceived freedom and control are the best predictors of life satisfaction [2] and the highest feeling of personal happiness is achieved, when people are fully involved in self-selected tasks and activities [3]. In general, most of us believe that people whose lives are affected by a decision must also take part in the decision-making process [4]. Alternatives promote innovation, economic development and social progress also more widely. Thus, it has been stated that maximizing freedom should be the ultimate goal of the society [5] and freedom to choose is one of the key principals of market capitalism [6]. American writer Madeleine L'Engle has gone even further as she wrote "It is the ability to choose which makes us human [7]"

On the other hand, too many alternatives may leave people with less perception of control. The available number of options affects evaluation and rises the complexity of decision-making process. As a result, people tend to simplify their decision-making processes or do not make the decisions at all. For example, Reference [8] demonstrated this in the famous jam experiment in which more alternatives generated more interest towards the products but lead to lower sales. American psychologist Barry Schwartz called this phenomena paradox of choice and defined it as follows: "Even though the alternatives mean commonly welfare and freedom, too many options and too great freedom of choice can be even harmful to our psychological and emotional well-being [1]." Accordingly, the paradox of choice can also partly explain why in many developed countries economic development improves subjective well-being, but only up to a point [9].

B. Adult Learners Motivation

All of us learn best when we are motivated. This holds true also among adult learners returning to college. Therefore, all educational institutions try to find out what motivate their students and sustains them in the learning process. Scholars have defined motivation in numerous ways. In the context of learning, it has been seen for example as purposeful engagement in study, to master concepts or skills [10] or simply to be moved into action [11]. Scholars and practitioners have introduced several

adult learning frameworks and theories, like andragogy [12], self-determination theory [13], self-directed learning [14] and transformative learning [15]. During the recent years, scholars has recognized that in addition to analyzing progress toward goals, we should also focus how students feel during the learning process [16].

Even though adult learners' motivations and needs vary; earlier studies suggest that they typically want to be in control of their educational paths and they appreciate the ability to choose. Scholars suggest that the individual learning possibilities are extremely important in motivating adults to learn [17] and the importance of autonomous and self-determined motivational factors increases with higher age [18]. According to [19] adults have more experience in participation in decision-making and expect the same during their education. The implications of the earlier studies clearly suggest that adult learning should be based on students' individual needs and experiences and it should focus on real life situations and goals [20].

C. Self-Directed Learning

Today learners have an increasing choice over the timing, location, contents, and path of their learning [21]. Free and open online learning platforms have made learning increasingly self-directed, open, and informal [22]. In the ideal Self-Directed Learning (SDL) process, students' are directing all the steps in their own learning including identification of learning needs, developing goals, locating learning resources, creating and implementing learning plans, and finally evaluating the results.

SDL is not a new concept and its role in adult education was recognized already in 1980's. Reference [23] pointed out that, "no concept is more central to what adult education is all about than self-directed learning". However, in the world of unprecedented volume of new information and fast changes in technology and communication, SDL is now, more than ever, a necessity for the professional survival of individuals.

SDL can take place both in formal and informal education. In every learning situation it is possible to develop the skills required in SDL, but far too seldom these opportunities are fully utilized in schools and universities or other forms of formal educations [24]. In self-directed informal online learning the key success factors are freedom, choice; control, interest and engagement and our current formal education environments might burden the student with the restricted opportunity to enjoy their own learning [21].

III. STUDY DESIGN

As discussed in previous chapters, the currently accepted premise in adult education is that freedom to choose increases students' motivation and promotes their progress of studies. However, in this study the following alternative research hypothesis (H_a) is tested: *The possibility to choose study modules from a large number of alternatives to fulfill adult learners' personal needs does not increase students' commitment to studies or promote their study progress.*

A. Methods and results

The empirical part of the study was carried out in a Finnish university of applied sciences (UAS). The sample contained all 273 students starting their post-graduate

studies in fall 2018. In Finland, all degree programs have both compulsory and optional courses and students have to enroll on each course separately.

Students' course selections as well as passed and failed courses were retrieved from the official study registry of the UAS. During their first academic year, all students together passed 1603 course out of 2971 enrolled ones. The passed courses were equal to 8015 credit points counted according to European Credit Transfer and Accumulation System (ECTS). All courses have an equal importance because all of them are five credit point courses and thus have an equal weight in the Grade Point Average (GPA) calculation.

Equation (1) was used to calculate the passing ratios both for the compulsory and optional modules. The passing ratio for compulsory courses was 0.68 (students passed 1207 courses from the 1764 enrolled ones) and for optional modules it was only 0.45 (396 passed and 1207 enrolled courses).

$$Passing\ ratio = \frac{Number\ of\ passed\ courses}{Number\ of\ enrolled\ courses} \quad (1)$$

In addition, individual passing ratios for each student were calculated. Table I contains the means and standard deviations both for compulsory and optional courses. According to the results, a student passed a mandatory course with the probability of more than 80 per cent, but for an elective module, the probability was under 50 per cent. The difference in probabilities was statistically significant ($p < .01$).

The progress of studies and graduation are not important only to the students but also to the educational institutions. This is emphasized in Finland, where higher education institutions (HEIs) are not allowed to charge any tuition fees for the students coming from any EU/EEA country. Instead, the HEIs are funded by the government and the funding is heavily based on the number of the degrees attained at the university. Due to economic impact, the Finnish HEIs pay special interest on efficient flow of studies, timely graduation as well as efficient allocation of scarce resources to the different educational actions.

As mentioned earlier, all Finnish under and post-graduate degree programs have both compulsory and optional study modules. In order to graduate, a student must complete all required mandatory and elective studies. Because, the labor costs are same for compulsory and optional modules, we can calculate the unit costs for both types of courses. Table II highlights that the average labor cost for every optional course passed by one student is 490 euros and 281 for mandatory course.

TABLE I.
PASSING RATIOS FOR COMPULSORY AND OPTIONAL COURSES

	N	Mean	SD
Compulsory courses	275	0.83*	0.26
Optional courses	272	0.48*	0.40

* Significant at $p < .01$

	Labor cost	Passing students	Cost / student
Compulsory course	5000	17.8	281
Optional course	5000	10.2	490

B. Discussion

Today learners have easy access to information and variety of online resources and new technologies allow people to learn on demand and just when needed. These new learning possibilities have challenged traditional educators like HEIs. Therefore, formal institutions are forced to modify their current offerings and innovate new ways to fulfill learners' wants and needs. Many adult educators have based their responses on two key assumptions. First, they trust that adult learners know what they want and therefore adult students are more motivated and more likely to pass self-selected courses than mandatory ones. Second, educators believe that more is better and therefore they have increased the number of optional courses offered to their students.

However, the statistically significant findings of the empirical experiment reported suggest that in formal adult education the more options is not always better. In the UAS in question, freedom to choose optional modules from the large pool of alternatives did not promote adult learners' study progress. The graduate students were far more likely to pass the mandatory courses than the courses that they have freely selected from the long list of optional courses.

Earlier studies on choice indicate that the evaluation and selection of options are clearly affected by the number of alternatives. As the complexity of making choices rises, people simplify their decision-making processes and rely on simple heuristics [25]. Findings on consumer research also suggests that with a higher number of options and more information about them, people tend to consider fewer choices and use a smaller fraction of the available information in their decisions [26]

The findings of the study are not limited only to the learners and their flow of study. They have also a direct effect on the business of the educational institutions. This holds true at least in the cases when the organization's sales or income are directly connected to some measurable outputs like an annual number of attained degrees. In the new competitive environment, all HEIs must allocate their limited resources more efficiently and effectively. The findings of the study pointed out that in the UAS in question, the labor cost to get one student to pass an optional course was 74.6 per cent higher compared to mandatory one. Although, the labor costs are only one of the many factors in the management of a HEI this kind of cost difference cannot be totally forgotten.

IV. CONCLUSIONS

The accepted premise in adult education is that freedom to choose increases students' motivation and commitment and promote their study progress. However, in this study, the following alternative hypothesis H_a was tested: *The possibility to choose study modules from a large number of alternatives to fulfill adult learners' personal needs does*

not increase students' commitment to studies or promote their study progress. The results of this study seems to confirm the alternative hypothesis. Findings suggest that the extensive number of alternatives does not necessarily lead to enhanced motivation, commitment and performance. Instead the participating students were far more likely to pass compulsory than self-selected optional courses.

However, it is important to notice that it is too early to reject the null hypothesis that the freedom of choice promotes adult learners' commitment and study progress in general. First, people differ in their choice making orientation and they have different decision-making approaches and preferences [27]. Therefore, the findings cannot be generalized to all adult learners and HEIs. Second, self-directed learning takes place both in formal and informal contexts. In formal education, one of the major motivational factors for learning is obtaining a degree or certification. Informal education - instead - can be seen as any activity involving the pursuit of knowledge or skill without any externally imposed curricular criteria [28] and it has different motivational factors than formal learning. Studies on informal education have clearly pointed out the importance of choice to the learners. For example, in [21] the five most often mentioned factors leading to successful of self-directed informal learning were; freedom to learn, fun, creating something, abundant resources and choice.

This study has some limitations. First, the discussion did not take into account the effect of the learning method (traditional, blended and online learning) on the passing ratio and study progress. Second, the discussion was limited only to the quantitative metrics and the quality of learning was not covered at all. The main reason for this was a lack of reliable metrics. Although the UAS in question has a comprehensive quality system with student and course feedback metrics, they all suffer from the survivorship bias and therefore do not provide valuable information to this topic.

In the rapidly changing world, self-directed learning is a topic of growing importance. Today, all educators must prepare their students for the future and provide them with skills required to be self-directed, lifelong learners. Thus, we must be able to do more than just believe that students know what they want and offer a large number optional studies. Therefore, continued study of SDL will help us to develop both formal and informal learning environments.

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AUTHORS

Matti Koivisto, PhD in Technology and is with the school of Engineering at South-Eastern Finland University of Applied Sciences, Mikkeli, FI-50101 Finland (e-mail: matti.koivisto@xamk.fi).

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