

## A Study on Factors Influencing Young and Matured Adult Learners to Continue Their Education

**Kaussalya Verasingam<sup>1</sup>, Kaarthiyainy Supramaniam<sup>2</sup>,  
Nalini Arumugam<sup>3</sup>, Sai Dharinee Sathyiasenan<sup>4</sup>**

<sup>1</sup>INTEC Education College, Shah Alam  
kaussalya.verasingam@intec.edu.my

<sup>2</sup>Universiti Teknologi MARA (UiTM) Shah Alam  
kaarthyainy@salam.uitm.edu.my

<sup>3</sup>Universiti Teknologi MARA (UiTM) Shah Alam  
naliniarumugamsai@gmail.com

<sup>4</sup>Universiti Teknologi MARA (UiTM), Dengkil  
dharineesai\_2493@yahoo.com

*Received: 10 November 2019*

*Article history*  
*Accepted: 22 May 2020*

*Published: 1 June 2020*

### **Abstract**

Distance learning is one convenient form of education for adult learners who aspire to advance their career as well as to meet the demand at workplace. Thus, this study aims to investigate factors encouraging adult learners to continue their education and their coping strategies with challenges they encounter as adult learners. This group of adult learners furthers their studies through a distance learning programme via a system called 'ilearn', which is offered by the institution. This study adopted quantitative methodology to elicit information and substantiated with structured interview responses to add credibility to the findings. Eighty-two adult learners from Bachelor of Finance, UiTM Shah Alam participated in this study. The results indicated that the main factors motivating adult learners to pursue their education are their aspiration for professional advancement, monetary gains and improving their quality of lifestyle. The results also revealed that financial constraints and time factor are the most significant barriers affecting adult learners' mindset and they strive to overcome these challenges by approaching banks for study loans and opting out for distance learning programme offered during weekends. These two options reduce their hurdles slightly and they are able to cope with their choice of furthering their education.

**Keywords:** *adult learners, distance learning, motivating factors, coping challenge*

### **Introduction**

Beese (2014) opines that distance learning gains significant acceptance as it encourages adults to further in-depth education (Aktaruzzaman & Plunkett, 2016). A number of working adults, who aspire to heighten their profession or knowledge in their field, continue their education as part-time students. However, not all towns have the facility to pursue part-time studies. Thus, emerged the concept of distance –learning programmes which are deemed to be the pulling factors for adults to engage in learning (Allen & Seaman, 2017; Wan Zawawi, 2007). Zawacki-Richter and Anderson (2014) and Vargas, Solís, Espinosa and Olivares (2016) expressed that distance learning is intended primarily to meet educational need for adults prevented by work, family and other obligations from attending classes at traditional campus location or class time.

Thoms and Eryilmaz, (2014) claimed that demographics, technology and economics are three forces affecting all of society's endeavors, including adult learning. These are some of the external factors that extrinsically influence adult learners in continuing their education. In today's world, technology has become very important in almost all aspects of human lives. Thus, the need for continuing education has dramatically increased with the increase in knowledge production (Chow & Croxton, 2017; Jarvis, 2002). In order to survive and to ensure that they are fully equipped with the knowledge on how to use the technology devices, furthering their education would be the best solution for the adult learners. However, it is assumed that technology is like a never-ending story as new things are invented each day. Therefore, learning process should become a continuous process. Therefore, professionals whose knowledge becomes outdated in a few short years and auto mechanics who must now master sophisticated electronics diagnostic systems-all must be able to function in a fast-changing society. This necessitates continued learning, so on are expanding the possibilities of meeting the growing learning needs of adults (Hung, 2016; Merriam & Caffarella, 1991).

Adult learners continue their education due to various reasons. Aktaruzzaman and Plunkett, (2016) indicated that adult learners further their education to learn new skills to be abreast with their workplace demand. Daines and Graham (2006) highlighted that 37 per cent of respondents in their study indicated that they had enrolled in education to become a better-informed employee. In line with this, Merriam and Brockett (1997) too revealed that revealed that 77 per cent of adult learners report an interest in furthering their education to be up to date with their workplace needs. They also stressed that adults who are intrinsically motivated to continue their study do so for the sake of gaining more knowledge and the desire to learn new skills which are interesting to them.

## **Background to the Study**

Distance learning refers to the conduct of learning and teaching programmes across space and time, regardless of print or electronic media (Hung, 2016; Moore, 1986). This programme has created an easy access to education for many adult learners, however, this opportunity has not been optimized by many adult learners. In Malaysia, it debuted in 1971 when University Sains Malaysia offered its degree in humanities and social science through distance learning. In 1990, University Teknologi MARA (UiTM) started distance learning by offering diploma programmes. Subsequently, in 1995, the government directed all the public universities to offer distance learning programmes to increase manpower to propel it towards achieving fully developed nation status by the year 2020 Abdrahim (2018). The distance learning programme in UiTM offers four 2-hour face-to-face seminar session in a semester. The seminars are held during weekends. Other days there

will be online discussion through *ilearn* and the respective lecturer monitors students' academic discussion and guide them. Students are encouraged to consult lecturers at all times through *ilearn* group discussions, e-mails or by appointments.

Distance learning becomes a perfect choice for adults to continue their education. Distance education assist working adults to develop their power of influence, speed, and accessibility of instructional technologies (Conde et al., 2014; Shannon & Rice, 2017). They added that an educational qualification is an investment for adult learners to survive and retain in the working life. Sometimes, adults who wish to continue their education are unable to do so due to certain circumstances especially personal commitments and financial constraints (Mazanah & Carter, 2002). Dawson (2009) said that adult learners find distance learning courses offered by some institutions to be expensive and well beyond their financial means. Literature says that adult learners face a lot of challenges continuing their studies. Some find their poor computer literacy low and unable to race among the young generation who is well-versed in technology (Hatlevik, Throndsen, Loi, & Gudmundsdottir, 2018; Rogerson-Revell, 2015). Genuine distance education continues to be the fastest growth area within high education (Reese, 2015).

Somehow a quarter of the population strives to accomplish their education. Therefore, it is crucial to investigate the motive of adult learners pursuing their education and how they cope with the challenges they encounter during their journey of distance learning. Therefore, it is essential to find out the mechanism that the adult learners of UiTM Shah Alam are to stay motivated throughout being in the programme and how they cope with the barriers and challenges faced by adult learners of UiTM Shah Alam. This study hopes to investigate the above by answering the following questions:

- i. What is the cause for adult learners to continue their education?
- ii. What are the coping strategies to overcome barriers in adult learning?

## **Conceptual Framework**

The theoretical underpinnings of this study are based on Constructivism (Vygotsky, 1978) and self-determination theories (Ryan & Deci, 2018). The principles of constructivism and self-determination theory can help inform educators and learning leaders on the instructional design of learning materials, instructional activities, and learning strategies that are used in a distance learning instruction. The constructivist approach has been used extensively as a conceptual framework for research involving virtual learning environments

(Mikropoulos & Natsis, 2010). Wales (2010) noted that constructivism does not fall under one theory of instruction but rather relates to a variety of approaches. The constructivist approach was also selected as a conceptual framework for this study due to its strong emphasis on collaborative and active learning (Adamo & Dib, 2012). Self-determination theory is a key concept to use to understand the quality of motivation that a learner exhibits (Ryan & Deci, 2017). The theory is concerned with learners' autonomy, competency, and interaction in their environment. Self-determination theory postulates that all individuals have an internal desire to control their own destiny as well as to feel competent and connected with others in their space (Ryan & Deci, 2017).

## **Methodology**

This is a quantitative descriptive research. The sample for this study is based on convenient sampling. The study is confined to the selected distance learning students who are currently pursuing their education at Institute of Education Development (INED) UiTM Shah Alam. The total number of adult learners in INED UiTM is about three thousand students. However, due to easy accessibility and time constraints, only 82 samples from the Bachelor of Finance program participated in this study. A set of questionnaires, upon validation and reliability test, that comprised three sections; section A, B and C was used. Section A elicited the demographic data on the respondents' background, Section B comprises information pertaining to reasons for adult learners to continue their education while section C deals with the strategies employed by respondents to cope with barriers throughout their distance learning period. Considering conventional practices, structured interviews were conducted with 5 selected respondents to establish credibility to results.

## **Results & Discussion**

### *Demographic Profile*

From the total of eighty-two respondents, 77% of them are female while 23% of them are male respondents. A total of 79% of the respondents falls in the age category of 24- 34 years old while 21% suits the range of age between 35 to 50 years old. 44 % of the respondents' work as executive, 20 % as bank officer, 15 % as Administration Assistant, 12 % as Assistant Accountant and 9 % as administration Clerk.

### *Reasons for furthering Education*

The adult learners perceived that they pursued their education mainly to get better job opportunities ( $M = 4.25$  and  $SD = .860$ ). Items related to promotion in current job and to have a better earning capacity, showed a significant mean  $M = 4.24$  with  $SD = .860$  respectively (items 2 and 3). Furthering education to enhance their quality of lifestyle also favoured by the respondents. It is obvious that adult learners felt that furthering their education would heighten their career and bring about monetary perks. An adult learner shared in the interview that she was advised by her superior to take up course in order to obtain a degree in a field of study to fit an available post in her office. Abdrahim (2018) shared that adult learners returned to further their education mostly considered financial gain and to be abreast with professional development as their two crucial factors of their enrollment. Rodriguez (1996) and Thomas (2001) indicated that many female adult learners enroll in such programmes because they want to be a good role model for their children.

**Table 1: Extrinsic Reasons for Pursuing Education**

		Mean	Std. Deviation	t	sig
1	Better job opportunities	4.25	.860	-2.14	.011
2	Promotion in current job	4.24	.860	-2.14	.011
3	Better earning capacity	4.24	.860	-2.45	.075
4	To achieve higher quality of lifestyle	4.01	.965	-2.16	.052
5	To put yourself in an intellectual environment	3.98	.905	-2.16	.052
6	Pressure from workplace	3.08	1.013	-.346	.362
7	Family pressure	3.00	1.021	-1.72	.627
8	Peer pressure	2.95	1.126	1.53	.141
9	To expand your network of contacts	2.17	1.137	1.53	.141
10	Earn respect	2.02	1.263	.68	.056

Items 5, 6 and 7 appear to fair quite well among adult learners to further their education as distance learners. Item related to keeping oneself in an intellectual environment showed  $M = 3.98$  and  $SD = .905$ . Pressure from workplace, home and peers are not much famous among adult learners. Knowing the additional finan-

cial burden and decreased availability for family life due to study commitments, adult learners need the support of their family. Respondent 5 shared that

*“Being a married woman with three school going children, is not an easy task. At times I felt that I was being very selfish. But my husband was very supportive and would do most of house chores during my assignment submission period”.*

Items related to peer pressure, to expand your network of contacts and to earn respect, did not go well among adult learners. Furthering their education to earn respect the least favoured by adult learners with  $M = 2.02$  and  $SD = 1.263$ . This result concurs with Thoms and Eryilmaz, (2014) who claimed that adult learners pursue their education merely to upgrade their profession and elevate their earning capacity and not for mere fame and recognition. (Abdrahim 2018; Houle, 1961). Similarly, Chow & Croxton, 2017; Aktaruzzaman and Plunkett, (2016) indicated that obtaining a degree is another motive for adult learners returning to higher education and for social or activity reasons, such as making friends.

Prospective adult learners need encouragement to enroll themselves as it is not easy for all adults to embark on their studies after having family of their own because they are confined in their personal commitments. Respondent 8 said that all his circle of friends started their part-time classes much earlier, but he was very reluctant to do so in his earlier part of life because of his family and work commitments though he was very keen in continuing his studies.

**Table 2: Intrinsic Reasons for Pursuing Education**

		Mean	Std. Deviation	t	sig
1	Learn for self – interest	3.6154	1.29852	-2.14	.011
2	Learn for bring mental alertness	3.5000	1.27279	-2.14	.011
3	Desire to learn new skills	3.4231	1.27037	-2.45	.075
4	Learn for fun	3.0769	1.26248	-2.16	.052
5	Learn for knowledge	2.9231	1.16355	-.346	.362
6	Learn out of curiosity	2.5000	1.14018	-1.72	.627
7	Learn for personal satisfaction	3.6154	1.29852	1.53	.141

In terms of reasons that influence respondents to continue their education, self-interest and learning for mental alertness show the highest mean value,  $M = 4.24$  and  $SD = .860$ . This is followed by desire to learn new skill ( $M = 4.12$  and  $SD = .781$ ), learning for fun ( $M = 3.93$  and  $SD = .905$ ), learning for knowledge ( $M = 3.78$  and  $SD = .1013$ ) and learning out of curiosity ( $M = 3.68$  and  $SD = 1.011$ ). Learning for personal satisfaction faired the least where it showed ( $M = 3.17$  and  $SD = 1.116$ ) at  $t 0.05$ . Researchers also found that personal satisfaction and interests are factors that motivate adult learners going back to graduate school (Ali, 2013; Chow & Croxton, 2017; Flynn, 2006).

The adult learners on average were shown to perceive a strategy to overcome negative perception and misconception by talking to friends and relatives who have experienced further or higher education. This means the adult learners believed that a strategy to overcome negative perception and misconception by talking to friends and relatives who have been through further or higher education to get a brief idea about distance or e – learning so that adult learners could prepare mentally and physically before the course begins. Beese

(2014) and Vargas, Solís, Espinosa and Olivares (2016) indicated that international adult learners pursue education to obtain academic, development, personal growth benefits, and internships abroad. Hung (2016) and Sánchez, Fornerino, and Zhang (2006) found that most of the Chinese adult learners embark on education especially abroad to find a good job and work for international companies, thereby enhancing their social status. It can be said that matured adult learners do have intrinsic and extrinsic motivations that influence them to continue their education further.

### **Coping Strategies to Overcome Barriers in Adult Learning.**

The challenge for prospective distance education students is to be sufficiently self-reflective regarding their own needs and to seek guidance or reality check as to whether those needs can be realistically met and how they may evolve over time within an academic community. The analysis of the data showed that, adult learners encounter three major barriers, namely; financial, lack of time and family commitments. Thus, the study investigates their strategies in coping with those challenges.

#### **4.3. Coping with Challenges: Financial**

No.	Statement	Yes (%)
.	Other step you have taken:	
i	PTPTN	48.8
ii	Employer’s Provident fund (EPF)	12.6
.iii	Seek employers’ help	11.1
iv	Choose courses that you can afford it.	9.7
V	Choose courses that allow you to pay installment.	8.5
vi	Bank	4.8
vii	I have no problem in this aspect	2.5

Generally, table 4.3 represents steps taken by adult learners to overcome financial problems. For item 1, 48.8% of respondents seek finance help from PTPTN, an agency formed by the government to assist students financially to obtain their tertiary education. 12.6 % opted to solicit a portion of their EPF allocation which is available for those who have contributed to this agency while a group of 11.1% preferred to seek assistance from their employers. Some of the respondents revealed that they (9.7%) opt out for a course that falls within their affordability. A small group of the respondents (8.5%) prefer to look for a course or institu-



tion which permits them to settle the fees progressively. Only 4.8 % of respondents choose to solicit a study loan from the banks. This could be due to the high interest rate of the banks. Only 2.5 % of the adult learners indicated that they have sound financial situations.

The adult learners believed that a strategy to overcome financial problems is by choosing courses that allow them to study on a modular basis which mean take a module only when you are afforded to pay for it. This is concurrent with Zawacki-Richter & Anderson, (2014) adult learners should find courses which suite their budget or look for other courses if some courses are very expensive and well beyond their financial means.

**Table 4.4 Coping with Challenges: Time**

No.	Statement	Yes (%)
1.	Choose distance learning or e- learning.	68.3
2.	Apply for paid study leave from employers.	14.6
3	Family support	14.6
3.	Choose part – time or short – courses.	2.5
4.	I have no problem in this aspect	0

Table 4.4 represents steps taken by adult learners to overcome time constraint. For item number 1, most or 68.3.4% of respondents choose distance learning or e- learning to adjust their time with education and other commitments. 14.6 % of the respondents applied for paid study leave and depended on their family support to juggle between education and other commitments. A marginal number of respondents (2.5%) shared that they chose a shorter term of course which would enable them to complete their education in shorter duration. It was a known fact that part-time students’ especially adult learners often face a great challenge of time factor and it is proven here as none of them admitted that they do have sufficient time for the education. Thoms and Eryilmaz, (2014) too highlighted that part-time adult learners need balance their time in order to complete their distance learning programme.

Respondent 1 said,

*“Time is one of my major concerns. There are a lot of deadlines to meet at workplace and submission of assignments. Sometimes, I will be so stressed and get angry too fast. My family members are very understanding. My husband helps to take care of my children and gives me more time to settle my assignments.”*

The adult learners believed that a strategy to overcome lack of time is by choosing distance or e- learning which fit their busy schedule as students and employees at the same time. This is concurrent with (Hung, 2016). Adult should also be more realistic by choosing courses which make it easier for them to fit learning in with their hectic lifestyle and do not enroll on a course which takes up too much of their time and put them under more pressure.

#### 4.5. Coping with Challenges: Family Responsibilities

No.	Statement	Yes (%)
	Steps Taken:	
1.	Spouse Support	43.9
	Extended family support	26.8
2.	Assignments when children are at school	21.9
3.	Ignore Responsibilities occasionally	7.3
4.	No problem at all	0

Table 4.5 shows steps taken by adult learners to execute their family responsibilities. For item number 1, 43.9 % revealed that their spouse support is essential for them to continue their studies. 26.8 % shared that their extended family plays an important role in helping to juggle their family commitments. When adult learners have weekend classes, they get their parents to take care of their children. 21.9 % said they try to complete their assignments and their other tasks related to their education when their children are at school and their spouse is at work. This helps them to spend some time with their family and to carry out their responsibilities too. Surprisingly, 7.3 % admitted ignoring their family commitments.

In the structured interview, respondent 2 said that he feels guilty for placing the whole family responsibilities on his wife. Sometimes, he loses his patience while his children are playing or interrupting his work.

*“I am lucky that my wife understands the stress I go through to complete my assignment’.*

Respondent 3 shared in the structured interview,

*“I am an adult, respected person and has made a good career. I am very conscious of making any clumsy actions and fear failure in class.”*

Respondent 3 revealed that when he gets low grades, he often gets upset and loses his confidence.

The adult learners continue their education because it gives them better job scope and higher earning capacity. The adult learners were shown to perceive that they do have predicament in executing their family responsibilities. This means the adult learners received good support from their spouse and extended family members.

The adult learners on average were shown to motivate themselves by making friends who are on the same track and keep them close throughout the program. This means the adult learners believed that the best way to stay motivated is by making new friends who are on the same track and keep them close throughout the program and this is concurrent with a past research done by (Drori, 2015). (Xiao, 2018) stated that answer to a successful career adult student is to get support from family and friends and it is important to find friends in classes.

## **CONCLUSION**

The findings provided by the respondents in this study mirror that distance learning is a most preferred form of education for adult learners who desire to progress in their career path. Based on the findings, it can be concluded that both young and matured adult learners regardless of their age continue study because of extrinsic motivation; which is to get higher status in job. However, there is no significant difference in terms of factors contributing adult learners to continue study and it shows that extrinsic motivation has a greater impact and influence on adult learners’ decision to continue their studies compared to intrinsic motivation. The findings show that adult learners have strong bond and relationship with one another especially when they work together as a team and help their spouse to stay motivated throughout the duration of their study.

## RECOMMENDATIONS

Although, adult learners are coping with the barriers, they need support from their employers. Some employers find it very difficult to let go off their employees. Therefore, it is recommended that government should implement a new act or law for employers to permit their employees to continue their education.

Moreover, even if their class is only during the weekend, the adult learners are still caught up between workload at the office and assignments. Without having sufficient rest, it shortened their attention span in class and indirectly affects their academic performance. Therefore, employers should provide a specific break or time off for a certain period of time for employees who wish to continue their study. This will help them to stay focus in their study and could become better employees once they get back to work.

Most adult learners pay for the fees using their own saving or withdraw EPF saving. It is best if they could avoid withdrawing their EPF and employers should provide a special education scheme for their employees. This will not only help the employees but also bring benefit to the company later on.

Further investigation should be carried out to identify other barriers faced and also other ways on how they motivate themselves, which have not been discussed in this study.

## REFERENCES

- Abdrahim, N. A. (2018). Distance Education: Historical Overview and Current Practices in Malaysian Higher Education. *International Journal of Academic Research in Business and Social Sciences*, 8(12), 33–45.
- Adamo-Villani, N., & Dib, H. (2012). Evaluating technology-based educational interventions: A review of two projects. *Journal of Educational Technology Systems*, 41(4), 295-317. doi:10.2190/ET.41.4.b
- Adinarayana.P.R. (2007). *Continuing Education for Globalized Era*. New Delhi. Sonali Publications.
- Allen, I. E., & Seaman, J. (2017). *Digital Compass Learning: Distance Education Enrollment Report 2017*. Babson Survey Research Group.
- Aktaruzzaman, M., & Plunkett, M. (2016). An Innovative Approach toward a Comprehensive Distance Education Framework for a Developing Country. *American Journal of Distance Education*, 30(4), 211-224. <https://doi.org/10.1080/08923647.2016.1227098>

- Beese, J. (2014). Expanding learning opportunities for high school students with distance learning. *American Journal of Distance Education*, 28(4), 292-306. <https://doi.org/10.1080/08923647.2014.959343>
- Bourgeois.E, Duke.C, Guyot.J.L & Merrill. B. (1999). *The Adult Universit.*, Buckingham; Open University Press.
- Calder.J. (1993). *Disaffection and Diversity: Overcoming Barriers for Adult Learners*. London; Oxford Press University.
- Chow, A. S., & Croxton, R. A. (2017). Designing a Responsive e-Learning Infrastructure: Systemic Change in Higher Education. *American Journal of Distance Education*, 31(1), 20-42. <https://doi.org/10.1080/08923647.2017.1262733>
- Conde, M. Á., García-Peñalvo, F. J., Rodríguez-Conde, M. J., Alier, M., Casany, M. J., & Piguillem, J. (2014). An evolving Learning Management System for new educational environments using 2.0 tools. *Interactive Learning Environments*, 22(2), 188-204. <https://doi.org/10.1080/10494820.2012.745433>
- Courtney. S. (1992). *Why Adult Learn: Towards a Theory of Participation in Adult Education*. New York; Routledge.
- Cross. K .P. (1981). *Adult Learners: Increasing Participation and Facilitating Learning*. New York; McMillan Publishing.
- Daines.J, Daine. C & Graham. B. (2006). *Adult learning and Adult Teaching*. Cardiff; Welsh Academic Press.
- Dawson, C. (2009). *Overcoming Barriers to Learning*. Retrieved July 12, 2009, from, [http://www.howto.co.uk/learning/adultlearning/overcoming\\_barriers\\_to\\_learning/](http://www.howto.co.uk/learning/adultlearning/overcoming_barriers_to_learning/)
- Drori, G. (2015). Branding universities: Trends and strategies. *International Higher Education*, (71), 3-5. <https://doi.org/10.6017/ihe.2013.71.6083>
- Deci, E. L., & Ryan, R. M. (2002). *Handbook of self-determination research*. Rochester, NY: University of Rochester Press.
- Driscoll, M. P. (2005). *Psychology of learning for instruction* (3rd ed.). Boston, MA: Pearson Education, Inc.
- Field. J & Leicester.M (2000). *Lifelong Learning: Education Across the Lifespan*. New York. RoutledgeFalmer.
- Hatlevik, O. E., Throndsen, I., Loi, M., & Gudmundsdottir, G. B. (2018). Students' ICT self-efficacy and computer and information literacy: Determinants and relationships. *Computers & Education*, 118, 107-119. <https://doi.org/10.1016/j.compedu.2017.11.011>
- Hung, M. L. (2016). Teacher readiness for online learning: Scale development and teacher perceptions. *Computers & Education*, 94, 120-133.

<https://doi.org/10.1016/j.compedu.2015.11.012>

- Mazanah. M & Carter.G. L. (2002). *Designing & Facilitating Adults Learning*. Serdang. University Putra Malaysia Press.
- Merriam.S.B & Brockett.R.G. (1997). *The Profession and Practice of Adult Education*.California, Josey – Bass Limited.
- Mikropoulos, T. S., & Natsis, A. (2011). Educational virtual learning environments: A ten year review of empirical research (1999-2009). *Computers & Education*, 56, 769-780.
- Reese, S. A. (2015). Online learning environments in higher education: Connectivism vs. dissociation. *Education and information technologies*, 20(3), 579-588. <https://doi.org/10.1007/s10639-013-9303-7>
- Rogerson-Revell, P. (2015). Constructively aligning technologies with learning and assessment in a distance education master’s programme. *Distance Education*, 36(1), 129-147. <https://doi.org/10.1080/01587919.2015.1019972>
- Ryan, RM, & Deci, EL. *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. New York: The Guilford Press; 2017.
- Shannon, L. J. Y., & Rice, M. (2017). Scoring the Open Source Learning Management Systems. *International Journal of Information and Education Technology*, 7(6), 432-436.
- Thoms, B., & Eryilmaz, E. (2014). How media choice affects learner interactions in distance learning classes. *Computers & Education*, 75, 112-126. <https://doi.org/10.1016/j.compedu.2014.02.002>
- Vargas, Y. H., Solís, I. I., Espinosa, J. C. M., & Olivares, F. M. (2016). Distance Learning vs on Site Learning “A Comparative Study in a Public University in Mexico”. *Education*, 6(3), 69-74. <https://doi.org/10.5923/j.edu.20160603.01>
- Wales, J. (2010). Constructivism (Psychological School).*Journal of Education and Technology*. Vol 3: 57-74.
- Xiao, J. (2018). On the margins or at the center? Distance education in higher education. *Distance Education*, 259-274. <https://doi.org/10.1080/01587919.2018.1429213>
- Zawacki-Richter, O., & Anderson, T. (Eds.). (2014). *Online distance education: Towards a research agenda*. Athabasca University Press.