

Revealing teachers' motivational strategies in Libyan English as a Foreign Language Classrooms

¹RemalAzitoni, ²Ann Dashwood, ³Jill Lawrence

ABSTRACT--In recent years, a positive consensus has emerged about how effective it is for teachers to use motivational strategies with formative learners of English as a foreign language. This study investigates its significance in Libyan primary public schools. The study employed a large scale empirical survey to collect the data. Seventy-six EFL teachers ranked a list of 48 motivational strategies on a Likert scale (1-6) from 'not important' (1) to 'very important' (6). The quantitative results revealed that EFL teachers believed motivational strategies were highly relevant in motivating learners in the early stages of learning English as a foreign language. The four most important motivational clusters encompassed 'proper' teacher behaviour, encouraging learners' self-confidence, recognizing students' efforts and creating a productive and relaxed classroom climate. Less importance was attached to strategies related to increasing learners' goal-orientedness, familiarising learners with second language (L2) values, promoting learners' autonomy, and promoting group cohesiveness and group norms.

Keywords--English as a Foreign Language, motivational teaching strategies, EFL teachers in Libyan schools, formative learners in primary schools.

I INTRODUCTION

Over a number of years, for political reasons, English language teaching in the Libyan educational system was not consistently provided, and English language learning has undergone many fluctuations. During the period 1970-1985, learning English from grade seven was a compulsory component of the curriculum in Libyan public schools. However, in 1986, banning English teaching and learning, across the country affected the education system, especially in relation to language acquisition. In 1997, when the relationship between Libya and the United States of America started to improve, policy makers and educationalists decided to re-introduce the English language into the curriculum in public schools allowing English teaching again. In 2005-2006 English was introduced in primary schools to grade 3 aged 9, but it was taught for only one year before it was stopped. In that time, the education sector was not well prepared technically or professionally to provide English language teaching due to an undeveloped curriculum that corresponded with third-grade student interests, and an insufficient number of (qualified) teachers. Consequently, inconsistency has continued. In 2006-2007, the Libyan government, for the first time introduced the subject of English to the basic education curriculum in public schools and it became a compulsory subject for beginner learners in grades five and six, among children aged between 11 and 12. Given the discontinuity in teaching and learning the English language, little is known about how English Foreign language (EFL) teachers motivate their learners to learn English which is still taught as a

¹ University of southern Queensland

² University of southern Queensland

foreign language in Libyan schools, and what their beliefs are on the importance of using motivational strategies in the classroom to motivate the younger learners.

II LITERATURE REVIEW

Motivation continues to be one of the important keys to success in learning a foreign language. [1]Points out that “motivation provides the primary impetus to initiate learning an (L2) and later as a driving force to sustain the long and often tedious learning process”. [2]Argues that the most effective method for teachers to facilitate students’ learning success is to encourage students to understand their real needs to achieve personal learning goals and to supply them with the motivation to learn. Motivation to learn any language depends on finding something meaningful in that language that encourages learners to express their feelings, thoughts and to exchange ideas with others [3]. [4]Defines motivation as “one of the most powerful effective variables in accounting for the success or failure of virtually any complex task” (p. 158).

With motivation considered one of the important factors in the success of any learning process, motivational strategies for enhancing and improving students’ motivation have become an area of research.[5]defines motivational strategies as “techniques that promote the individuals goal-related behaviour” (p.28). [6] argues that “learners need strategies to keep motivated”. Teachers can use various motivational strategies inside the classroom to achieve a positive and persistent learning effect [5]. [5] adds that paramount among these strategies are teachers’ behaviour and the relationship teachers have with their learners, their ability to create a pleasant and supportive classroom atmosphere and to gain a cohesive group of learners. According to [5], these motivational strategies are interrelated and necessary in the classroom to promote learners’ motivation. In addition, many studies[7]-[8]-[9]-[10]-[11]-[12] conclude that there is agreement among many English teachers and students that these strategies are important for motivating learners of English as a foreign language.

There is consensus within the literature on the role of teachers in motivating students. Classroom teachers’ motivating behaviors are considered powerful tools in enhancing students’ motivation. For example, two key For example, two factors are teachers’ strong interest in the subject and the amount of effort spent in teaching, both of which have a strong influence on students’ motivation [13]. [14] investigated the motivating and demotivating factors that affect English learning at National University in California. The survey was based on the work of [15] who determined the factors that motivate undergraduate students to work hard in college. The findings showed that teachers’ behaviour had the most influential effect on students’ motivation and their desire to be successful. A number of studies [7]-[8]-[9]-[16]- [10]- [17]-[12] conducted in the field of motivation and motivational strategies in a wide variety of contexts: Western, Asian, South Korean, North American, Indonesian, Chinese and institutions. They have found that appropriate teacher behaviour is the most powerful and effective strategy in motivating learners (ranging from elementary to university level) in learning English as a Foreign Language. These studies endorse the importance of teachers’ behaviour as an effective strategy to motivate learners among a variety of institutional contexts.

Teachers have an important impact on enhancing students’ level of motivation to learn a foreign language [18]-[19]-[2]. According to [9] when teachers focus on the use of motivational strategies inside the classroom, students’ learning motivated behaviour is more likely to increase. Teaching English as a foreign language in

schools needs considerable effort from teachers to increase learner interest in learning the language [20]. Effective English education requires able teachers who can motivate students to learn the language. The successful teacher is one who can apply suitable techniques to encourage students to be interested in language learning. If teachers do not motivate students sufficiently from the early years, students find difficulty in the following years of study [21]. Therefore, the teacher plays a crucial role in promoting students' motivation to learn the English language.

III METHODOLOGY

The study used the questionnaire as the instrument for collecting quantitative data to investigate the motivational strategies that Libyan EFL teachers believe are important to use with formative learners. The statements of the questionnaire were adapted from the original questionnaire by [8]. The six-point Likert scale ranging from 'not important' (1) to 'very important' (6) was used to gain responses on 48 items. That questionnaire was adopted because it has been used in many studies for investigating the motivational strategies in different contexts and it has international validity.

There were 76 EFL teacher participants (70 female, 5 male and 1 gender unspecified) who had experience in teaching in a variety of institutional contexts, from primary to secondary schools in the North West of Libya. A purposive sample selection of teachers was made from twenty primary schools where students achieved the highest scores in the National Examination in 2017. Regarding the teaching qualifications, 10.5% of teachers held a diploma, whereas 88.2% had a licentiate. The age of the participants varied from 25 to 55 years, representing a range of teaching experience: 19.7% had less than three years' experience, 49.3% had less than 10 years' experience and 50.7% had been teaching for over 10 years.

The study had several limitations. Firstly, the sample was small. Secondly, the sample obtained was specific to high performing schools in one city and therefore generalisation of the findings cannot necessarily be applied to other teachers in primary schools in Libya or in other countries.

IV DATA ANALYSIS

The questionnaire data were subjected to a number of statistical analyses within SPSS (the Statistical Package for Social Sciences). Since the questionnaire was adapted from [8], the same procedures were used to analyze the data. As some strategies were closely interrelated, the 48 motivational strategies were grouped into 10 clusters as in [8]. The 10 clusters were ranked according to the importance that they were given by participating teachers. The scale was structured by ranking the highest strategy as the most important of 48 strategies and adding to it the strategies that have the same content similarities. Following the same technique, the strategies were grouped together depending on their internal content to form a 10 strategy cluster. The internal consistency of these scales was tested by means of reliability analysis. Using the descriptive analysis, the mean and standard deviation of the 48 strategies were calculated and tabulated similar to [8] under each macrostrategy. Then, the strategies were ranked according to teachers' responses from the highest to lowest mean under each macrostrategy. As each cluster had a set of related strategies, the overall mean value of the related strategies was taken to determine the

importance attached to each cluster and then ranked from the highest (5.18) to the lowest mean (4.48) on the scale.

V FINDINGS

Table (1) shows the quantitative findings from the questionnaire responses on EFL teachers' beliefs' regarding the importance of the use of motivational strategies with formative learners of English as a foreign language in Libyan primary schools. The findings revealed that out of ten motivational clusters, three had mean values greater than five indicating that these clusters were rated of highest importance by the participants in motivating their children to learn English. Those motivational clusters reinforced teacher behaviours which promoted learners' self-confidence and recognised student effort. Two other motivational clusters came with a mean value nearly five which, illustrates that the teachers believed those strategies also to be important motivators. These motivational clusters included creating a pleasant classroom climate and constructing a stimulating learning task. The top five motivational strategies showed that teachers believe strongly in the importance of using those strategies in the classroom. On the other hand, as the table depicts, familiarising learners with L2-related values, promoting learner autonomy and encouraging group cohesiveness and group norms are the three lowest clusters. Those clusters seem underused in the classrooms due to the lack of importance given by teachers. The findings suggest that EFL teachers in Libyan primary schools possess the belief that some strategies are more important than others.

Table 1: Final rank order and descriptive statistics of the strategy scale and the individual constituent strategies

<i>Scales and constituent strategies</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>
1. Proper teacher behaviour (Cronbach $\alpha = .73$)	76	5.18	0.26
(2) Show students you care about them	76	5.42	1.12
(17) Show your enthusiasm for teaching	76	5.32	1.31
(47) Be yourself in front of the student	76	5.22	1.10
(23) Establish good rapport with students	76	5.21	1.48
(40) Share with students that you value English as a meaningful experience	76	4.74	1.42
2. Promote learners' self-confidence (Cronbach $\alpha = 0.71$)	76	5.14	0.44
(28) Encourage students to try harder	76	5.51	.774
(36) Teach students learning techniques	76	5.34	.946
(34) Provide students with positive feedback	76	5.29	1.00
(11) Design tasks that are within the students' ability	76	5.20	1.00
(33) Make clear to students that communicating meaning effectively is more important than being grammatically correct.	76	4.38	1.46
3. Recognise students' effort (Cronbach $\alpha = 0.75$)	76	5.13	0.21
(42) Promote effort attributions	76	5.33	.90
(15) Make sure grades reflect students' effort and hard work	76	5.28	.85
(46) Recognise students' effort and achievement	76	5.08	.94
(8) Monitor students' progress and celebrate their victory	76	4.86	1.24

4. Creating a pleasant classroom climate (Cronbach $\alpha = 0.60$)	76	4.91	0.36
(30) Create a supportive classroom climate that promotes risk-taking	76	5.34	.825
(21) Use a short and interesting opening activity to start each class	76	4.95	1.23
(41) Avoid social comparison	76	4.91	1.32
(1) Bring in and encourage humor	76	4.45	1.36
5. Make the learning tasks stimulating (Cronbach $\alpha = 0.78$)	76	4.90	0.29
(45) Present various auditory and visual teaching aids	76	5.25	1.06
(18) Break the routine by varying the presentation format	76	5.24	.907
(43) Make tasks attractive by including novel and fantasy element	76	4.92	1.19
(12) Introduce various interesting topics	76	4.87	1.08
(27) Encourage students to create products	76	4.64	1.50
(13) Make tasks challenging	76	4.53	1.37
6. Present tasks properly (Cronbach $\alpha = 0.72$)	76	4.82	0.67
(6) Give clear instructions by modeling	76	5.30	1.11
(25) Give good reasons to students as to why a particular task is meaningful	76	4.34	1.48
7. Increase learners' goal-orientedness (Cronbach $\alpha = 0.67$)	76	4.57	0.30
(10) Encourage students to set learning goals	76	4.87	1.13
(26) Find out students' needs and build them into the curriculum	76	4.80	1.27
(20) Help students develop realistic beliefs about English learning	76	4.33	1.15
(31) Display the class goal in a wall chart and review it regularly	76	4.30	1.16
8. Familiarise learners with L2-related values (Cronbach $\alpha = 0.71$)	76	4.56	0.75
(39) Increase the amount of English you use in the class	76	5.46	.840
(38) Encourage students to use English outside the classroom	76	5.30	1.15
(9) Remind students of the benefits of mastering English	76	5.12	1.20
(4) Familiarise students with the cultural background of the target language	76	4.41	1.30
(32) Introduce authentic cultural materials	76	4.38	1.51
(7) Invite senior students to share their English learning experiences	76	3.67	1.38
(19) Invite English-speaking foreigners to class	76	3.62	1.60
9. Promote learner autonomy (Cronbach $\alpha = 0.72$)	76	4.50	0.65
(37) Adopt the role of a 'facilitator'	76	5.26	0.99
14) Teach self-motivating strategies	76	5.07	0.75
(24) Encourage peer teaching and group presentation	76	4.92	1.08
(48) Allow students to assess themselves	76	4.01	1.30
(22) Involve students in designing and running the English course	76	3.92	1.36
(29) Give students choices in deciding how and when they will be assessed	76	3.82	1.33
10. Promote group cohesiveness and group norms (Cronbach $\alpha = 0.79$)	76	4.48	0.48
(35) Ask students to work toward the same goal	76	4.87	1.15
(44) Encourage students to share personal experiences and thoughts	76	4.83	1.15
(5) Explain the importance of the class rules	76	4.67	1.27
(3) Allow students to get to know each other	76	4.33	1.27

(16) Let students suggest class rules	76	3.71	1.28
---------------------------------------	----	------	------

VI THE FREQUENCY OF RESPONSES TO THE MOTIVATIONAL STRATEGIES

The frequency average was calculated in order to discern the importance that teachers allocated to each cluster (see Table 2). In order to discern the frequency of teachers' responses on the key variables, the 6-point scale ratings were grouped into two categories: 'not important' and 'important'. The ratings of 1-3 were categorized as negative or 'not important' from the scales 1= not important (NI), 2= rarely important (RI), 3= slightly important (SI). The ratings 4 - 6 (4 = moderately important (MI), 5= important (I), 6 = very important (VI) were considered as positive or 'important' so they were categorized together revealing the largest frequencies for each cluster as in Table 2.

Table 2: the frequency average to the clusters of motivational strategies

The clusters of motivational strategies	(VI,I,MI)	(SI,RI,NI)	Categories with largest percentage % of importance
1.Proper teacher behaviour	91.04%	8.96%	50% (very important)
2. Promote learners' self – confidence	93.16%	6.84%	46% (very important)
3.Recognize students' effort	93.4%	6.6%	44% (important)
4.Creating a pleasant classroom climate	89.475%	10.52%	40% (very important)
5. Make the learning tasks stimulating	89.26%	10.74%	40% (important)
6. Present tasks properly	88.15%	11.85%	42% (very important)
7.Increase learners' goal-	87.475%	12.52%	34% (important)

orientedness			
8.Familiarise learners with L2-related values	81.4 %	18.6%	48% (very important)
9.Promote learner autonomy	82.25%	17.75%	44% (important)
10. Promote group cohesiveness and group norms	86.04%	13.96%	36 (important)

VII DISCUSSION OF THE FINDINGS

The results from the questionnaire study revealed that EFL teachers in Libyan primary public schools believed that motivational strategies were overwhelmingly important in motivating learners to learn English as a foreign language. This is evident in the high frequency of importance rating of using motivational strategies in teaching indicating that EFL teachers in Libyan primary schools consider the macro strategy of ‘appropriate teacher behaviour’ to be at the top of their priorities. This result is similar to findings in a range of studies in many institutional and cultural contexts [8]-[9]-[10]-[12]. Therefore, regardless of teaching contexts, for example, Taiwan, Hungary, Indonesian, North America and Libya (whether labelled “proper” or “appropriate”), “appropriate teacher behaviour” is the key strategy in motivating learners of English in a foreign language. This study’s findings give a clear indication that Libyan teachers are aware of their roles as teachers and of the importance of using strategies directly aimed at increasing students’ interaction.

Libyan EFL teachers ranked “promoting learners self-confidence” highly as an important strategy in motivating formative learners. This finding lends support to the idea that having confidence in one’s ability can enhance motivation [22]. The results echo the findings of previous studies [7]-[8]-[10]-[12] as this motivational strategy comes in the top half of their lists. In addition, Tavani and Losh [23] revealed that there is a strong relationship between academic performance, motivation and self-confidence. Those findings are considered to be reliable evidence of the importance of promoting students’ self-confidence and increasing the opportunity of EFL Libyan teachers to improve students’ academic performance.

Furthermore, the results showed that EFL teachers place a high value on recognizing students’ effort and celebrating their success as an important strategy to motivate formative learners. Their encouragement of learners to exert higher levels of effort increases opportunities for success [5]. No wonder therefore that the Libyan teacher surveys ranked highly in third place, the importance of recognising students’ effort. Although this macrostrategy failed to make the top 10 list in the [7] among Taiwanese teachers and [10] studies with North American teachers, it was rated highly by the Hungarian [8], Indonesian [12], and Libyan teachers, providing evidence that some motivational strategies are culture-dependent [8].

Learning a foreign language is a face-threatening experience for learners due to the pressure they may experience. One way to reduce such language anxiety is to facilitate a pleasant classroom climate [5]. The results of this study indicate that most EFL teachers recognize the importance of creating a pleasant and relaxed atmosphere in the classroom as it ranked in fourth place. This finding supports the idea that building warm and trustful relationships, based on mutual respect between teachers and learners, can enhance learners' ability to learn [5]. Studies in motivation prioritized this strategy as it was placed second in [7] list of strategies and highly by teachers and students in. [24] studya Saudi context. These two studies reinforce the importance of this strategy as a motivational tool.

Within the top five rankings, "Showing an interest in learning" is an important indicator of learning among Libyan teachers. Making the learning task stimulating and enjoyable was classified by [5] as one of the most powerful teaching strategies to maintain and produce motivation in L2 learners and has been widely recognised as an important motivational component in models related to L2 motivation. Teachers need to make the learning process interesting and enjoyable for learners to promote learners' confidence and to provide them with positive feedback [8]-[25]. It can be claimed that teachers need to vary the teaching tasks, introduce exciting topics with the use of various teaching aids, and make the task challenging for learners in order they generate interest and ensure learners are enthusiastic to learn [5].

This Libyan study revealed that teachers in primary schools are not entirely sure of the importance of using of certain strategies. For example, "presenting the task appropriately, setting learners goals and increasing their goal-orientations in the classroom setting, familiarising learners with second language (L2) - related values, promoting learners autonomy and promoting group cohesiveness and group norms" were rated in the second half of the rank order. Libyan EFL teachers may find it difficult to utilise some these strategies. For example, it is hard to familiarise learners with second language (L2) - related values in the Libyan environment because is hardly used outside the classroom. In addition, teachers and learners have no direct with native- English speakers. Furthermore, there is a major lack of authentic cultural material to familiarise learners with the culture of English. These two challenges have been exacerbated by the political context in Libya from inconsistent government decisions in the teaching and learning of English over the decades.

The lowest ranked strategies were "promote learners' autonomy" and "promote group cohesiveness and group norms". These findings support the argument that group-related matters were given low importance in second language studies [26]. English teachers generally do not deem adopting promoting learners' autonomy and promoting group cohesiveness as a significant component for motivating learners as is borne out by the [7]-[8]-[10]-[19]-[12] studies. Since learners' motivation tends to increase when students work in a cohesive group, the study suggests that teachers need to pay more attention to the relationships between the members of the group and understand how the group behaves and develops. Teachers need to be sure that there is an 'attraction' and 'acceptance' between group members [27]. These two basic characteristics assist in forming strong group cohesiveness. In addition, teachers need to provide more opportunity for learners to talk, interact, and know each other. Moreover, teachers need to give learners more opportunities to share their personal ideas and cooperate together to achieve their goals in learning [28]. The results also suggest that EFL Libyan teachers need to be aware of group norms and the effect of one member's behaviour on group members as this is believed to influence learners' academic achievement.

VIII CONCLUSION

This study has shown that EFL teachers' believe motivational strategies are important in teaching formative learners of English as a foreign language in Libyan public primary schools. Whereas previous studies established key motivational strategies in different institutional contexts, this study endorsed the relevance by teachers of using motivating strategies for young learners. Strategic motivation has therefore been found to transfer across cultures and age groups, in particular using appropriate teacher behaviour, promoting learners' self-confidence and creating a pleasant classroom atmosphere. Other strategies seem to be culture specific such as recognizing students' effort, making the learning tasks stimulating and presenting tasks properly. Since some strategies have been neglected in the Libyan setting, it is important to extend the investigation to identify those reasons and to shed light on the strategies used by primary school teachers in other areas in Libya.

REFERENCES

1. Z. Dörnyei, "Motivation in second and foreign language learning. *Language teaching*", 31(3): pp. 117-135, 1998.
2. A.A. Alhodiry, "The Libyan EFL teachers' role in developing students' motivation". *Procedia - Social and Behavioral Sciences*, 232: pp. 83-89, 2016.
3. Y. Nakata, "Motivation and experience in foreign language learning". Peter Lang, 2006
4. H.D. Brown, "Principles of language learning and teaching: A course in second language acquisition". Pearson Education, 2014.
5. Z. Dörnyei, "Motivational strategies in the language classroom". Cambridge language teaching library. Cambridge: Cambridge University Press, 2001.
6. A.D. Cohen, "Strategies in learning and using a second language". Routledge, 2014
7. Z. Dörnyei, and K. Csizér, "Ten commandments for motivating language learners": Results of an empirical study. *Language teaching research*, 2(3): pp. 203-229, 1998.
8. H.-F. Cheng, and Z. Dörnyei, "The use of motivational strategies in language instruction: The case of EFL teaching in Taiwan". *International Journal of Innovation in Language Learning and Teaching*, 1(1): pp. 153-174, 2007
9. M. Guilloteaux, and Z. Dörnyei, "Motivating language learners: A classroom-oriented investigation of the effects of motivational strategies on student motivation". *TESOL Quarterly*, 42(1): pp. 55-77, 2008.
10. A. Ruesch, J. Bown, and D.P. Dewey, "Student and teacher perceptions of motivational strategies in the foreign language classroom. *Innovation in Language Learning and Teaching*", 6(1): pp. 15-27, 2012.
11. A.A. Alnatheer, "The role of motivation and motivational strategies in Saudi students' communicative competence in English". Queensland University of Technology, 2013.
12. I. Khasbani, "Revealing teachers' motivational strategy in Indonesian EFL classrooms". *Journal of the European Journal of English Language Teaching*, 2018.
13. D.J. Stipek, "Motivation to learn: Integrating theory and practice". Allyn & Bacon, 2002.
14. T.M. Green, and C.M. Kelso, "Factors that affect motivation among adult learners". *Journal of College Teaching & Learning (TLC)*, 3(4), 2011.

15. J. Gorham, and D.M. Christophel, "Students' perceptions of teacher behaviors as motivating and demotivating factors in college classes". *Communication Quarterly*,. 40(3):pp. 239-252, 1992.
16. M. Guilloteaux, "Motivational strategies for the language classroom: Perceptions of Korean secondary school English teachers", 41(1): pp. 3-14, 2013.
17. R.M. Wong, "An investigation of strategies for student motivation in the Chinese EFL context", *Innovation in Language Learning and Teaching*,. 8(2): pp. 132-154, 2014.
18. J. Zaman, "Role of motivation in second language learning: a study of private university students in Bangladesh"., BRAC University, 2015.
19. N. Eragamreddy, "Motivating learners to learn: Libyan EFL teachers' strategies and a perspective". *International Journal of English and Translation Studies*,. 3(2): pp. 42-54, 2015.
20. D.R. Hill, "Survey review: Graded readers". *ELT journal*,. 51(1):pp. 57-81, 1997.
21. M. Nikolov, "The age factor and early language learning, in *Studies on language acquisition*", M. Nikolov, Editor., Mouton de Gruyter: Berlin, 2009.
22. R. Bénabou, and J. Tirole, "Self-confidence and personal motivation". *The Quarterly Journal of Economics*,. 117(3): pp. 871-915, 2002.
23. [23] C.M. Tavani, and S.C.J.C.s.j. Losh, "Motivation, self-confidence, and expectations as predictors of the academic performances among our high school students"., 33(3): pp. 141-152, 2003.
24. A.I Shousha, "Motivational Strategies and Student Motivation in an EFL Saudi Context". *International Journal of English Language Education*,. 6(1): pp. 20-44, 2018.
25. Z. Dörnyei, and R. Schmidt, "Motivation and second language acquisition". Vol. 23. *Natl Foreign Lg Resource Ctr*, 2011.
26. Z. Dörnyei, and T. Murphey, "Group dynamics in the language classroom". *Ernst Klett Sprachen*, 2003.
27. Z. Dörnyei, "Creating a motivating classroom environment, in *International handbook of English language teaching*", Springer. pp. 719-731, 2007.
28. Z. Dörnyei, "New themes and approaches in second language motivation research". *Annual review of applied linguistics*,. 21: pp. 43-59, 2001.
29. SANTHI, Dr. M, NANDA KUMAR, G.UDHAYA KUMAR, S.MOHANDOSS, and R.VENKATASUBRAMANIYAN. "Quantum-Dot Cellular Automata based Public Key Cryptography." *International Journal of Communication and Computer Technologies* 7 (2019), 13-18. doi:10.31838/ijccts/07.02.04
30. Li, J.A timeless and spaceless quantum theory of consciousness (2013) *NeuroQuantology*, 11 (3), pp. 431-442.
31. Kim, S.W., Schenck, C.H., Grant, J.E., Yoon, G., Dosa, P.I., Odlaug, B.L., Schreiber, L.R.N., Hurwitz, T.D., Pfaus, J.G. *Neurobiology of sexual desire* (2013) *NeuroQuantology*, 11 (2), pp. 332-359.