



Standardization of Revised Learning Stress Inventory

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ABSTRACT

Schools are becoming significant sources of stress for children. Efforts to reform schools usually lay emphasis on academic acceleration, competition, evaluation, reduction of learning burden and accountability. The balance between the stress resulting from motivation to learn and that related to pressures to achieve success and avoid failure has ceased to exist. Academic preparation and mastery learning strategies become stress inducing. Students find it difficult to adapt to the changing demands of educational situations. This learning stress leads to learning inhibition, less development of competencies needed for learning and citizenship, drop out, failure in school, and retarded development of information processing abilities. The need for creating an educational climate in the classrooms is being felt by teachers who work to facilitate learning. Stress related problems and sources of stress need to be identified, their influences are to be identified and moderated, and academic alienation is to be checked. Studies on incidence of learning stress, the effects of debilitating learning stress, strategies for ameliorating the deleterious influence of learning stress and factors that exacerbate or reduce distress are needed. Stress management competencies are to be fostered and the positive coping strategies are to be supported. The latter author constructed a 'Learning Stress Inventory' to measure learning stress among students studying in fifth grade. This paper embodies the efforts made to make it more suitable for students of upper primary to degree level and standardize it.

Keywords: Academic acceleration, competition, evaluation, learning burden, learning stress, Students

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Modification of items

Learning stress refers to feelings of perplexity or uneasiness which are experienced by a student when he/she fails to perform the appropriate task in any educational situation. ‘Learning Stress Inventory’ developed using a three-point rating scale. The three responses were “true, cannot say and false”. Researchers thought that all items included in this tool are suitable for measuring learning stress in present situation. However, the need to modify the response format from three to five-point rating scale was felt to increase the discrimination power of the items. The five responses namely-“strongly agree, agree, undecided, disagree and strongly disagree” were used.

Item analysis

The revised Learning Stress Inventory was administered on a sample of 874 students selected randomly from students of eighth, high school, intermediate, graduation, post-graduate and BTC classes of Allahabad and Lucknow city. Students were asked to respond to various items by choosing one of the five alternate responses namely- ‘strongly agree, agree, undecided, disagree and strongly disagree’. A score of 5, 4, 3, 2, and 1 was assigned to these responses respectively. The aggregate of scores on all the 38 items was considered as the total score. Then SPSS was used to find out item-total correlations for all the 38 items. Their values have been depicted in table 1. Perusal of the table shows that all values are significant at .01 level. Chi-squares were also computed for all the 38 items. They have been shown in table 2. All values of chi-square are significant at .05 level. So, all items are worth retaining in the revised version of the inventory. The LSI was discussed with two experts and one item related to smoke related stress was excluded from the final form.

Table 1: Item-total correlations for various items of Learning Stress Inventory

Item no.	Item-total correlation						
1	.550**	11	.647**	21	.376**	31	.576**
2	.640**	12	.661**	22	.489**	32	.600**
3	.554**	13	.655**	23	.364**	33	.574**
4	.635**	14	.525**	24	.361**	34	.635**
5	.493**	15	.599**	25	.597**	35	.289**
6	.615**	16	.555**	26	.453**	36	.324**
7	.627**	17	.603**	27	.628**	37	.419**
8	.596**	18	.536**	28	.624**		
9	.429**	19	.559**	29	.583**	38	.366**
10	.575**	20	.625**	30	.554**		

** significant at .01 level.

Table 2: Results of chi-squares for various items of Learning Stress Inventory

Item No.	1	2	3	4	5	6	7	8
Chi-Square	322.362**	257.499**	264.352**	253.346**	611.366**	190.085**	194.284**	281.503**
Item No.	9	10	11	12	13	14	15	16
Chi-Square	88.621**	313.128**	189.719**	233.174**	185.771**	327.178**	221.686**	165.165**
Item No.	17	18	19	20	21	22	23	24
Chi-Square	195.600**	252.705**	127.865**	174.066**	632.339**	393.860**	459.066**	308.803**
Item No.	25	26	27	28	29	30	31	32
Chi-Square	225.073**	243.689**	151.149**	142.602**	193.231**	217.224**	191.263**	184.124**
Item No.	33	34	35	36	37	38		
Chi-Square	176.778**	163.174**	379.833**	237.476**	318.918**	587.213**		

** significant at .01 level.

Reliability

Split half reliability for the LSI has been found to be .950. The alpha value is .934 (N=874).

Validity

Principal component varimax rotated factor analysis of Learning Stress Inventory was carried out. It yielded two factors which accounted for 38.539 percent variation in total score on learning stress. Table 3 shows that I factor accounted for 28.076 percent of variance. Table 4 shows that it has high (i.e. > .3) factor loadings on 31 items. These items belonged to stressors related to cognitive areas of learning like- understanding, memory, attention, load, linguistic competence, analysis, synthesis, focusing, creativity and application; and supportive areas like- teacher involvement demand, boring teaching style, availability of books from library, unsolved learning difficulties, homework completion, aspiration, hesitation in expression, feedback about home/class work, co-curricular participation, family workload, fatigue and speed of teaching and writing. So, it may be labelled as "Academic". The second factor explained 10.463 percent of variance in learning stress. It has high factor loadings on items related to availability of less light, more conflicts at home, illness prone conditions, presence of noise in surroundings, time for study at home and availability of less space at home. So, this factor can be labelled as "Ecological".

Table 3: Variance explained by two factors of learning stress as measured by the Learning Stress Inventory

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	10.669	28.076	28.076
2	3.976	10.463	38.539

Table 4: Factor loadings for various items included in final form of Learning Stress Inventory

Item no.	Factor loadings		Item no.	Factor loadings for	
	I factor	II factor		I factor	II factor
1	.562	-.067	20	.645	-.120
2	.658	-.084	21	.323	.551
3	.570	-.095	22	.456	.390
4	.652	-.056	23	.297	.630
5	.484	.212	24	.291	.634
6	.626	-.064	25	.607	-.069
7	.652	-.192	26	.442	.060
8	.615	-.126	27	.637	-.034
9	.424	-.110	28	.643	-.158
10	.592	-.094	29	.596	-.141
11	.661	-.057	30	.556	-.047
12	.681	-.079	31	.580	-.016
13	.673	-.084	32	.602	.024
14	.531	-.090	33	.586	-.083
15	.612	-.124	34	.642	-.012
16	.570	-.175	35	.215	.662
17	.614	-.099	36	.242	.712
18	.559	-.185	37	.365	.529
19	.565	-.109			

REFERENCES

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