

CONSTRUCTION AND STANDARDIZATION OF ENGLISH SELF-EFFICACY SCALE

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ABSTRACT

This paper highlights the process of construction and standardization of English self-efficacy scale for secondary school students. Self-efficacy is the personal estimation of an individual about his/her own abilities and competencies. It may favorable or unfavorable items. The scale initially consisted of 76 items after review and evaluation by subject experts, which were reduced to 72 in the first try out and then finally to 40 items in the final draft after the item analysis. The test-retest reliability of the test was computed to be 0.85. The content validity was calculated and the scale was found to be valid.

Keywords: Self-Efficacy, English, Construction and Standardization, Scale

Introduction

Self-efficacy refers to students' beliefs about their capability to learn or to perform effectively; outcome expectations refer to students' beliefs about ultimate end of performance. Students with high sense of self-efficacy tend to use cognitive and meta-cognitive strategies and persist in difficult or uninteresting tasks. Intrinsic interest or value and goal orientation essentially concern students' reason for performing a task. The perceived academic self-efficacy is defined as personal judgments of one's capabilities to organize and execute courses of action to attain designed types of educational performances (Bandura, 1977). Students' beliefs in their efficacy to regulate their own learning and to master academic activities determine their aspirations, level of motivation and academic accomplishments (Bandura, 1993). High academic self-efficacy is shown to be a very strong predictor of academic achievement (Moulton, Brown & Lent, 1991; Pajares & Miller, 1994).

Bandura (1977) defined self-efficacy as individuals' beliefs regarding their ability to successfully accomplish certain tasks. Self-efficacy perceptions influence the development of interests and

goal setting, both of which serve as the bases of the general career decision processes and the process of committing to a vocational choice in particular (Bentz & Voyten, 1997).

Self-efficacy refers to an individual's confidence in his or her ability to perform the behaviors required to obtain a desired outcome (Bandura, 1986). Eysenck (2000) defines self-efficacy as an individual's assessment of his or her ability to cope with given situation. Self-efficacy is an impression that one is capable of performing in a certain manner or attaining certain goals (Ormrod, 2006).

Since the birth of psychology, researchers have been interested in ascertaining how well people know themselves and what psychological processes promote accuracy versus distortion in self-perception" (Robins & John, 1997). Attachment theory, which has received considerable attention in the field of developmental psychology over the past thirty years (Masten & Coatsworth, 1998) offers a particularly interesting perspective on the development of self-views. However, despite promising theoretical inference and a substantial body of research on linkages between attachment and psychosocial functioning in childhood, adolescence (Allen, Moore, Kuperminc & Bell, 1998), and early adulthood (Waters, Hamilton, & Weinfield, 2000) there is limited empirical research on how attachment may account for stable and enduring individual differences in self-perception across the lifespan (Allen & Land, 1999). Psychologists and motivating theorists have long believed that students' positive attitude toward learning and positive self-perception of their competence have great impact on their motivation thus enhancing their academic achievement (Harter, 1981; Bandura, 1994). Many empirical studies have tested these assumptions and generally support this hypothesized feedback loop among people's self-evaluation, or self-efficacy beliefs, intrinsic interest, motivation, and accomplishment (Schunk, 1991; Brown, Lent & Larkin, 1989; Locke & Latham, 1990; Multon, Brown & Lent, 1991; Zimmerman, Bandura & Martinez-Pons, 1992; Zimmerman & Bandura, 1994).

Process of Construction of English Self-Efficacy Scale

English self-efficacy scale was used to perform individuals' confidence in her or his ability to successfully perform or accomplish a particular English task or problem. English self-efficacy was assessed as individuals' judgments of their capabilities to solve specific English problems, perform English-related tasks, or succeed in English-related courses. Awareness and efficacy about oneself in achievement situations is termed as self-efficacy. Favorable self- efficacy about the course or a particular subject forms a significant part in adolescent learners' to their adjustment in school. For checking student's self-efficacy in English, the investigator felt the need for new scale. The process of construction of English self- efficacy scale was carried out in three phases such as (i) Planning phase (ii) Construction Phase (iii) Standardization Phase.

The development and description of the English self-efficacy scale is given below:

(i) *Planning Phase:* Planning of the English self-efficacy scale encompassed all of the varied operations that go into producing the scales. It included the activities e.g. fixing up the objectives/ purposes, determining the weightage to different instructional objectives, take decision about its mechanical aspects like time duration, test size, total marks, give instructions for scoring of the test and its administration procedure; and preparation of the table of specification blue-print. While planning the scale the researcher followed Likert's method of summated rating for conduction of English self-efficacy scale, so as to differentiate the levels of English self- efficacy scale. The statements formed were a mixture of favorable and unfavorable statements in order to add variety to the scale. Discussions were held with university teachers, educators from colleges of education, prospective teachers, friends and school English teachers to know their views so as to plan appropriately for English self-efficacy scale. English Self-efficacy scale is five point scales. Every item is in statement form. The favorable and unfavorable statements are included in the scale to add variety and reduce the student's tendency to respond perfunctorily. Five response categories are provided for responding to each item. These response categories are:

- Strongly Agree
- Agree
- Not Sure
- Disagree
- Strongly Disagree

(ii) *Construction Phase:* To measure English self-efficacy of students, 76 items were written after going through conceptual framework of English self-efficacy. All the items were carefully worded for use with children aged 13 to 18 years under three dimensions: cognitive, affective and conative. The following points were kept in mind while writing items of the scale:

- (a) The test items were clear, comprehensive and free from ambiguity.
- (b) The language of the items was so chosen that the content and not the form of the items determine the answer.
- (c) The items which have hidden meanings were not included.
- (d) The vocabulary used in the items was simple enough to be understood by all.
- (e) Items were related to their dimensions.
- (f) The items were so chosen that the students learn the habit of correlating their knowledge with their real life.

(iii) Standardization Phase. On the basis of available literature on English self efficacy, a number of statements were framed with the help of experienced colleagues, school principals, mathematics experts and students. After careful exploration of literature, a pool of 80 items were written and edited. The following points were kept in mind while writing the items: The standardization phase of English self-efficacy was based on three stages such as: (i) First Draft of English Self-Efficacy Scale (ii) Second Draft of English Self-Efficacy Scale (iii) Final Draft of English Self-Efficacy Scale.

First Draft of English Self-Efficacy Scale

At this stage, the investigator had prepared the test items, the directions to test items, the directions for administration and the directions for scoring. The preliminary draft of English self-efficacy scale for 13 to 18 yrs old age group of children with 76 items was thus prepared. The items were constructed as rating scale type in which students’ responses were to be marked on a five point scale as strongly agree, agree, not sure, disagree and strongly disagree. The test items were scored accurately by hand and no scoring key or stencil was used so far. There were favorable as well as unfavorable statements in the questionnaire. For favorable statements, any response indicated as strongly agree, agree, not sure, disagree and strongly disagree the investigator awarded the score of five, four, three, two and one respectively. For unfavorable statements, any response indicated as strongly agree, agree, not sure, disagree and strongly disagree the investigator awarded the score of one, two, three, four and five respectively. The sum of the entire responses was the total English self- efficacy score of the individual. The specification of three dimensions of English self-efficacy scale in the first draft is as shown in table-1.

Table 1: Specification of dimension wise items of the first draft of English self-efficacy scale

No.	Dimensions	Item Number	Total
1.	Cognitive	3,8,10,15,20,25,26,27,28,29,30,33,34,35,36,37,38,39,40,41,44,45,46,47,49,50,51,52,65,66	30
2.	Affective	2,4,5,6,11,12,14,17,18,19,21,22,23,24,32,42,43,59,67,69,73,75,76	23
3.	Conative	1,7,9,13,16,31,48,53,54,55,56,57,58,60,61,62,63,64,68,70,71,72,74	23
Total			76

Table-1 shows that out of 76 items, 30 items were framed for cognitive dimension, 23 items for affective dimension and 23 items for conative dimension for the first draft of English Self-efficacy scale

- *First Try-out and Evaluation:* The first draft of 76 items was given to experts for their opinion. Items that seemed repetitive or ambiguous or about which there was disagreement, were eliminated after consultation with the supervisor, experts of university. On the basis of their opinions, 4 items were dropped and 7 items were modified as shown in table-2.

Table 2: Description of items dropped or modified of English self-efficacy scale

Sr. No.	Item Number	Total	Remarks
1.	52, 56, 67, 76	4	Dropped
2.	5, 30, 34, 51, 60, 72, 74	7	Modified

Table-2 shows that 4 items were dropped while 7 items were modified after consultation with the experts. Thus, the total 72 items remain left for the second draft of English self-efficacy scale.

Second Draft of English Self-Efficacy Scale

The second draft comprised of 72 items for English self efficacy scale. The specification of favorable and unfavorable items with their dimension is shown as below in table-3.

Table 3: Specification of dimension wise items of the second draft of self efficacy scale

Sr. No.	Dimensions	Favorable items	Unfavorable items	Total
1.	Cognitive	3,15,25,27,28,29,30,34,36,37, 38,39,40,41,45,46,50,51,63	8, 10, 20, 26, 33, 35, 44, 47, 49	28
2.	Affective	6, 23, 42	2,4,5,6,11,12,14,17,18,19,21,22,24, 32, 43,57, 64,66, 70,72	22
3.	Conative	1,7,9,13,16,48,52,53,55,56,58, 59,60,65,67,69,71	31, 54, 61, 62, 68	22
	Total	39	33	72

Table-3 shows that 28 items were framed for cognitive dimension in which 19 items were favorable and 9 were unfavorable items. The 22 items were for affective dimension in which 3 items were favorable and 19 were unfavorable items. The conative dimension had total 22 items in which 17 items were favorable and 5 were unfavorable items were retained for the second draft of English self-efficacy scale.

- *Second Try-out and Evaluation:* Before doing item analysis, the set of items in second draft was tested for its comprehensibility with a group of 36 students of class 10th of Kendriya Vidyalaya, Central Reserve Police Force, Pinjore, so as to remove language difficulty, if any.

Three items were modified because students were unable to understand difficult words in the items. After that, the 72 set of items in second draft was tested for its comprehensibility with a group of 50 students of class 10th of Kendriya Vidyalaya No. 4, Ambala Cantt. The test was given to these students and purpose was explained. Instructions how to fill it and there was no time limit fixed for completing the test; were made clear. Opposite to each statement there were 5 columns viz. strongly agree, agree, not sure, disagree and strongly disagree. The respondents had to mark the responses with a tick depending upon ‘what they actually feel’ and not according to ‘what they should feel’. They were told that there was no right or wrong answers as such. For the purpose of improving items through item analysis, the responses of each respondent were scored as per the five point scale detailed above. On the basis of total scores, high and low groups were formulated according to the Kelley (1939) criteria of taking up top 27% and bottom 27% students as constituting the high and low groups respectively. According to which, the high group constituted 14 students and low group also had 14 students (because 27% of 50 is 14 approximately). After that the t-test was computed between the high group scores and low group scores as shown in table-4.

Table 4: t-ratio showing the items on second draft of English self-efficacy scale

Item No.	t-ratio	Item No.	t-ratio	Item No.	t-ratio	Item No.	t-ratio
1	2.90**	19	0.78	37	0.74	55	1.12
2	2.63*	20	3.28**	38	4.58**	56	1.96
3	1.17	21	2.36*	39	1.71	57	3.17**
4	1.34	22	1.49	40	1.28	58	2.91**
5	1.59	23	0.78	41	5.63**	59	4.94**
6	1.59	24	3.13**	42	3.52**	60	1.25
7	3.56**	25	2.52*	43	3.71**	61	0.38
8	3.22**	26	5.06**	44	3.51**	62	2.65*
9	1.08	27	2.58*	45	0.62	63	4.12**
10	3.65**	28	1.12	46	0.31	64	2.39*
11	2.28*	29	1.50	47	2.82**	65	3.28**
12	4.54**	30	2.88**	48	2.64*	66	2.89**
13	2.33*	31	1.55	49	1.68	67	1.69
14	1.79	32	0.58	50	0.53	68	1.65
15	2.34*	33	2.15*	51	2.96**	69	3.61**
16	3.23**	34	0.86	52	0.52	70	3.35**
17	2.79**	35	3.73**	53	0.83	71	0.65
18	3.11**	36	1.72	54	0.28	72	4.13**

*Significant at 0.05 level

**Significant at 0.01 level

(Critical Value 2.06 at 0.05 and 2.78 at 0.01 level, *df* =26)

Table-4 shows that the t-ratios for 32 items i.e. 3, 4, 5, 6, 9, 14, 19, 22, 23, 28, 29, 31, 32, 34, 36, 37, 39, 40, 45, 46, 49, 50, 52, 53, 54, 55, 56, 60, 61, 67, 68 and 71 were not significant even at 0.05 level of significance and rest of items were significant at either 0.05 or 0.01 level of significance. Hence, 32 items were dropped after item analysis and 40 items were retained for the final draft of English self-efficacy scale.

Final Draft of English Self-Efficacy Scale

The final draft of the English self-efficacy comprised of 40 items in three dimensions. There were 18 favorable items and 22 unfavorable items in the final draft. For favorable statements, any response indicated as strongly agree, agree, not sure, disagree and strongly disagree, the investigator awarded the score of five, four, three, two and one respectively. For unfavorable statements, any response indicated as strongly agree, agree, not sure, disagree and strongly disagree, the investigator awarded the score of one, two, three, four and five respectively. The distribution of items in three dimensions for final draft of English self-efficacy has been presented in table-5.

Table 5: Distribution of items for the final draft of English self-efficacy scale

Dimensions	Item Number	Total
Cognitive	4,5,9,13,16,17,18,19,20,21,22,23,26,27,29,34	16
Affective	2,6,7,11,12,14,15,24,25,30,35,37,39,40	14
Conative	1,3,8,10,28,31,31,33,36,38	10
Total		40

Table-5 shows that the final draft of the scale has 16 items in cognitive dimension, 14 in affective and 10 items in conative dimension. The distribution of favorable and unfavorable items of final draft of English self-efficacy has been presented in table-6.

Table 6: Distribution of dimension wise favorable and unfavorable items for the final draft

Statement	Dimensions	Item Number	Total
Favorable items	Cognitive	9,16,18,19,22,23,29,34	8
	Affective	24	1
	Conative	1,3,8,10,28,31,32,36,38	9
Unfavorable items	Cognitive	4,5,13,17,20,21,26,27	8
	Affective	2,6,7,11,12,14,15,25,30,35,37,39,40	13
	Conative	33	1
	Total		40

Table-6 shows that 16 items were remained for cognitive dimension in which items were favorable and 8 unfavorable items. 14 items were for affective dimension in which 1 item was favorable and 13 were unfavorable items. The conative dimension had total 10 items in which 9 items were favorable and 1 item was unfavorable. Thus, the total 40 items remain left for the final draft of English self-efficacy scale.

Scoring

For the scoring of English self-efficacy scale, any response indicated as Strongly Agree (SA), Agree (A), Not Sure (NS), Disagree (D) and Strongly Disagree (SD), the investigator awarded the score of five, four, three, two and one respectively. For unfavorable statements, any response indicated as strongly agree, agree, not sure, disagree and strongly disagree, the investigator awarded the score of one, two, three, four and five respectively. The scoring pattern of the scale has been presented in table-7.

Table 7: Scoring pattern of English self-efficacy scale

Scoring	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
Favorable items	5	4	3	2	1
Unfavorable items	1	2	3	4	5

Table 7 shows that English self-efficacy scale of the subject is the sum of the favorable. Similarly the total unfavorable score is calculated. The total favorable and unfavorable scores give the composite score for that aspect for that individual. The maximum possible score 200 (if the subject will respond to all strongly agree options for favorable items and strongly disagree for the unfavorable items then 5 marks will be given for each 40 statements that the total comes to $40 \times 5 = 200$) and minimum possible score 40 (If the subject will respond to all strongly disagree options for unfavorable items and strongly agree for unfavorable items then 1 mark will be given for each 40 items that the total comes to $40 \times 1 = 40$) will be the English self-efficacy scale.

Reliability

The test-retest method was employed on 34 students of class 10th of Kendriya Vidyalaya, Central Reserve Police Force, Pinjore to determine the temporal stability of the test. The product moment correlation between the test and retest scores of whole test was 0.85, which indicates that test is reliable. The reliability of cognitive, affective and conative dimension of English self-efficacy was 0.87, 0.71 and 0.86 respectively.

Validity

The content validity is connected with the relevance of the contents of the items, individually and as a whole. Anastasi (1988) has said that content validity “involves essentially the systematic examination of the test content to determine whether it covers a representative sample of the behaviour domain to be measured.” Content validity of a test was examined by expert’s judgments. As the experts were agreed on their opinion, so the content of the test was valid.

Conclusion

English self-efficacy scale was developed by the investigators to know about the self-efficacy of secondary school students in the subject of English. In particular this scale was constructed and standardized for the students of 10th class. During the research investigators felt the need for construction of this test due to the non availability of English self-efficacy scale of above mentioned class students. Another reason for the construction of this test was the learning environment of above mentioned students. In keeping mind both the points scale was constructed and standardized by following all the scientific steps of construction and standardization of reliable research tool. The present English self-efficacy scale consists of 40 items, 22 items are favorable and 18 are unfavorable for the data collection.

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