Original Papers

Polish Psychological Bulletin
2021, vol. 52(1) 117–129
DOI – 10.24425/ppb.2021.136822

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Development and Validation of Teacher Enthusiasm Scale

Abstract: *The present study was carried out to develop a valid and reliable scale for assessing enthusiasm among teachers teaching at the school level.*
Methods: *After reviewing the literature and discussing with experts, an item pool of 115 statements was created. The items were organized into seven dimensions of teacher enthusiasm based on factors generated after performing exploratory factor analysis. These seven dimensions were: Interest and Engagement (IE), Interaction with Students (IWS), Passion for Teaching (PT), Creativity and Innovation (CI), Professional Development (PD), Subject Knowledge Enrichment (SKE), and Professional Commitment (PC). The responses of teachers were taken on five points Likert scale. The standardization of the scale was completed on 558 teachers, who were teaching at Primary, Secondary and Senior Secondary level schools in the state of Haryana in India. Multi-stage random sampling was used to select the sample.*
Results: *Item analysis was done by calculating t-value and r-value for each statement; twenty items were deleted and 95 items were retained. Factor analysis (principal component methods) generated seven factors behind the teacher enthusiasm scale which explain 44.02% of the total variance together. Cronbach's Alpha of the final teacher enthusiasm scale was .957. The final teacher enthusiasm scale contains 78 items.*
Discussion: *The findings of the present study suggest that it would be a useful tool for future research and will help in assessing the enthusiasm of the teachers. The results have demonstrated that this teacher enthusiasm scale is a reliable and valid tool.*
Implications for practitioners: *The teacher enthusiasm scale would be useful for different stakeholders (government, school administration and management) as they can evaluate the enthusiasm of teachers while selection process and due weightage can be given to the enthusiastic candidates. Enthusiastic teachers can work effectively for children with special needs along with normal students.*

Keywords: *Teacher Enthusiasm, Student Interaction, Professional Development, Professional Commitment, Passion, Creativity and Innovation.*

1. BACKGROUND OF THE STUDY

The quality and progress of any country depend on the quality of education programs there and good education programs largely depend upon the quality of teachers who implement these programs (Indian Education Commission, 1964-66). Teaching is an art of combining and applying knowledge with methodology and technology with appropriate behavior to create a good learning environment for the learners. Enthusiastic teachers look for every available opportunity to increase students learning. Enthusiasm is a state of having interest in a particular subject or activity and eagerness to be involved in it. Keller, Neumann and Fischer (2013) defined enthusiasm as, *"For a teacher, enthusiasm is possession of an unwavering love of subject and of teaching and demonstrating commitment to the job"* (p. 247). Ralph Waldo Emerson, an American philosopher, said, ''*Nothing great was ever achieved without enthusiasm*.'' Enthusiasm was derived from the Greek word 'enthousiasmos' which means a divine inspiration. It means God enters a person, fills the person with energy, interest and great happiness and he deeply immerses himself in his work (Orosz et al., 2015). According to Oxford, Advanced American Dictionary enthusiasm means, *"Strong feeling of excitement and interest in something, and a desire to become involved in it*". Keenness, passion, excitement, warmth, motivation and devotion, interest, obsession, or craze are some terms commonly used to describe enthusiasm (Gabryś-Barker, 2014).

Despite long research history, teacher enthusiasm is not consistent in its definition. Different researchers have defined teacher enthusiasm differently (Keller, Neumann, & Fischer, 2013). Caruso (1980) mentioned that teacher enthusiasm is multifaceted and a group of behaviour is

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used to explain it. Enthusiastic teachers have interest, enjoyment and excitement towards the subject and teaching itself (Kunter et al., 2008). The concept of teacher enthusiasm has evolved gradually. The personality trait approach and behavioural concepts (manifestations of enthusiasm in teaching) of teacher enthusiasm were merged to give an operational definition of the teacher enthusiasm (Kunter, Frenzel, Nagy, Baumert, & Pekrun, 2011). Researchers believed that enthusiasm is experienced by teachers initially, only then it is reflected in their actions. It leads the concept of teacher enthusiasm a step ahead. Now it includes both experienced enthusiasm (feel excited, passionate, happy and enjoy teaching) and displayed enthusiasm (nonverbally expressiveness) as complementary to each other (Keller, Hoy, Goetz, & Frenzel, 2015). A qualitative study was conducted on the narratives and perceptions of pre-service teachers about teacher enthusiasm. It suggested that the qualities like helpfulness, positive attitude towards students, passion for teaching, and enjoying the company of the students are the important characteristics of enthusiastic teachers' behaviour. It was observed that enthusiastic teachers were creative in their work, facilitator of learning, involved in motivating students, focused on professional development, use humour and friendly to the students (Gabryś-Barker, 2014). Enthusiasm for teaching and enthusiasm for subject have been treated as separate dimensions of teacher enthusiasm(Kunter et al., 2011).

Teacher enthusiasm is the teaching behaviour that displays the inner state of a teacher. It is a personal feeling of teacher which has motivational effects on the learner. Some researchers think teacher enthusiasm as one of the core teacher qualities of effective teaching (Minor, Onwuegbuzie, Witcher, & James, 2002). Teacher enthusiasm is positively related to students' learning and achievement (Bettencourt, Gillett, Gall, & Hull, 1983). Teacher enthusiasm is a consistent and stable characteristic of enthusiastic teachers. They express positive emotions during teaching and these emotions are observable in their behaviour. It is often viewed as the teacher's capacity to transfer important intrinsic value of learning and effective way of delivering information to the learners (Kunter et al., 2008). Enthusiastic teachers have positive feelings and excitement towards teaching at all times. Enthusiasm promotes teacher's active involvement with students in their learning. Enthusiastic teachers easily attract students' attention and able to create interest in the learning (Allen, Witt, & Wheeless, 2006; Bettencourt et al., 1983; Keller, Goetz, Becker, Morger, & Hensley, 2014; Kim & Schallert, 2014; Meyer & Turner, 2006). Such teachers always enjoy teaching and their work. This creates a positive effect on the learning of teachers as well as students (Sutton, 2004 as cited in Keller, Becker, Frenzel, & Taxer, 2018).

Teacher enthusiasm influences the classroom learning environment. Enthusiastic teachers use humour to make learning pleasurable and enjoyable (Frenzel, Goetz, Lüdtke, Pekrun, & Sutton, 2009). There is something contagious about the body language of enthusiastic teachers and such teachers talk with a smile on their face, students also respond in the same way, this makes the environment friendly and interactive. Teacher enthusiasm is positively related with students' motivation (Patrick, Hisley, & Kempler, 2000), learners' test performance (Marlin, 1991), recalling ability (Stewart, 1989), attention and on-task behaviour (Bettencourt et al., 1983), and attitude toward learning (McMillan, 1976).

Barr (1930) conducted a study on teachers with the help of a rating scale and found teacher enthusiasm as a significant characteristic of successful teachers (as cited in Caruso, 1980). Many scientific studies were conducted during the 1960s and after that, it has been considered as an important characteristic of an effective teacher and quality of teaching (Brophy & Good, 1986 as cited in Keller, 2011). Rosenshine and Furst (1971) considered enthusiasm as the third most important variable affecting the teacher behaviour (as cited in Gabryś-Barker, 2014) in higher education research (Feldman, 2007) as well as at secondary level (Keller et al. 2013). Even teachers consider enthusiasm as an important aspect of effective teaching (Minor et al., 2002). The pre-service teachers gave second rank to enthusiasm in six most important characteristics of effective teachers (Witcher, Onwuegbuzie & Minor, 2001). Students ranked enthusiasm fifth out of 22 characteristics of effective teachers which clearly shows that students also want their teachers to be enthusiastic. Teacher enthusiasm has been considered as an important aspect of teacher evaluation instruments used at the university level (Marsh, 1994 as cited in Keller et al., 2013). Enthusiasm for teaching is positively correlated with instructional qualities from teachers as well as students viewpoint (Kunter et al., 2013).

Teacher enthusiasm is very close to some psychological terms like teacher presence (Anderson, Rourke, Garrison & Archer, 2001, p. 5). Presence means to remain ready to serve. Another related term is immediacy which has been defined as *"nonverbal behaviours that refer to physical and psychological closeness between people*" (Keller, 2011, p. 13). Some psychologists have used term *flow* to indicate eagerness and enthusiasm. According to Csikszentmihalyi (1990), *flow* is a state of mind in which a person is motivated to absorb in his work with high energy and focus (as cited in Gabryś-Barker, 2014).

Different theorists suggest that teacher enthusiasm is a very helpful tool for teachers. It involves three mechanisms which makes it capable of producing desirable results. These are: '*engage students'* attention by effective delivery of the content (Bettencourt et al., 1983), *'emotional contagion'* means the students tend to express and feel emotions that are similar to their teachers (Mottet & Beebe, 2000). Third, the mechanism explains that teachers may present themselves as '*role models*' (Gabryś--Barker, 2014).

Review of literature has suggested that teacher enthusiasm is very important for teachers as well as for students. Even, occupational well-being of a teacher is related to their enthusiasm and enthusiastic teacher tend to be more satisfied in their life and at the workplace. Teachers with the high level of enthusiasm do not feel

emotional exhaustion, hence, the feeling of enthusiasm is positively related with health, happiness of the teachers (Kunter et al., 2008; 2011; 2013) and quality of mentoring (Richter et al., 2013). Teacher enthusiasm is related to the course quality (Keller et al., 2015), teaching autonomy, cooperation and support from colleagues (Cobb & Foeller, 1992). Students perceive more autonomy and task value in the class of an enthusiastic teacher and feel less boredom (Cui, Yao, & Zhang, 2017). Enthusiasm is positively related to pedagogical content knowledge of the teachers (Mahler, Großschedl, & Harms, 2017). It determines different aspects of quality teaching like, classroom management and learning support to the students (Baumert & Kunter 2013). Teachers' enthusiasm is negatively related to students' cheating (Oroszl et al., 2015), students' anger and class-related boredom (Goetz, Pekrun, Hall, & Haag, 2006). It was found that enthusiasm is the single factor out of nine which can differentiate between average and exemplary teachers (Murray,1983 as cited in Keller et al., 2015).

In sum, it is very clear from the review of literature that teacher enthusiasm is a very important characteristic of a successful and effective teacher. Several instruments (Collins, 1976,1978; Marsh & Ware 1982; Murray1983; Marsh1994; Patrick et al.,2000; Kunter et al., 2008, 2011; Frenzel et al., 2009; Wheeless et al., 2011) are available for assessing the teacher enthusiasm (as cited in Keller et al. 2015). In these instruments, teacher enthusiasm is a dimension of a multidimensional scale measuring teaching effectiveness or teacher effectiveness. Some of these instruments are based on the perception of students. Collins (1978) worked on "Effects of Enthusiasm Training on Preservice Elementary Teachers" and developed a tool which describes enthusiastic behaviour at three levels (high, medium and low level). It included eight behaviour indicators (Vocal Delive1y, Eyes, Gestures, Movements, Facial Expression, Word Selection, Acceptance of ideas and Feelings, Overall Energy) to train teachers in enthusiastic teaching.

Murray (1983) explained nine dimensions of teaching effectiveness, out of these nine, one is enthusiasm and behavioural indicators of teacher enthusiasm (speaking in a dramatic expressive way, variation in pitch and volume, vocal inflexion, smiling or laughing while teaching, moving about while lecturing, gesturing with hands or arms, exhibiting facial gestures or expressions, eye contact, humour). The scale was used by students to assess teachers. Orosz et al. (2015) developed a teacher enthusiasm instrument, based on enthusiasm awareness index of Sanders & Gosenpud (1986), a questionnaire for university students, with thirteen items was used to assess the enthusiasm related to teaching. These items were based on (eye contact, facial expressions, gestures, body movements, word selection, vocal delivery and general energy level) descriptions of the teacher.

Keller et al. (2014) defined teacher enthusiasm as behavioural expressiveness during teaching. Authors developed a four-point rating scale, based on eight dimensions of enthusiastic teaching given by Collins (1978). The scale was used by external observers to observe enthusiastic teaching of German teachers. A detailed description of enthusiastic behaviour was assigned to all four points (not enthusiastic, a little enthusiastic, somewhat enthusiastic and enthusiastic) on a Likert type scale.

Gabryś-Barker (2014) proposed a training program based on pre-service teacher's narratives of enthusiastic teachers. They used seven dimensions of behaviour (verbal indicators, ways of praising, ways of using proxemics, expressions of teacher's physical animation, vocal animations, strategic use of voice and importance of overall energy) to determine teacher enthusiasm. Kunter et al. (2008; 2011) developed teacher enthusiasm questionnaire based on two factors: (1) teachers' enthusiasm for the subject and teachers' enthusiasm for teaching. The items of the questionnaire were based on the teaching effectiveness questionnaire developed by Marsh and Ware (1982) and four items were from teacher motivation questionnaire, which was designed for "COACTIVE" study. Four-point (4 strongly agree to 1 strongly disagree) Likert type scale was used for rating. This enthusiasm questionnaire had four items to be answered by teachers for self-rating while three items were for students for their teacher's ratings. Kunter et al. (2011) further expanded this scale into ten items under the same two dimensions for teachers self--report. Patrick, Hisley, & Kempler (2000) developed a Likert type seven-point scale. The scale assessed the teacher behaviour perceived by their students. The scale contained fifteen subscales, out of these fifteen subscales one is teacher enthusiasm. This enthusiasm subscale contained four items. One such instrument prepared by Marsh was "The Students' Evaluations of Educational Quality (SEEQ) instrument". Marsh & Bailey (1993) used this tool based on multiple dimensions of educational quality, and one of its dimension was enthusiasm.

Review of literature suggests that there is a lack of explicit enthusiasm tool for teachers based on self-report. In most of the tools, teacher enthusiasm has been included as one of the subscale or dimension of the tool. Additionally, most of the available tools are based on a small number of items which may not be sufficient to assess the teacher enthusiasm. Further, the researchers are of the view that the students may not be able to assess the teacher's real level of enthusiasm. The fourth reason, existing enthusiasm scales have direct questions related to the enthusiasm, which may also create hindrance in the real assessment of the teacher's behaviour. Moreover, maximum studies are focused on the external observable enthusiastic behaviour of the teachers. Very few recent studies are based on an internal feeling of enthusiasm. All these underlying reasons led the researchers to construct a new scale for the assessment of teacher enthusiasm.

Based on the review of literature and discussion with colleagues and experts in the field, 115 statements were prepared to quantify teacher enthusiasm. After factor analysis, seven dimensions were derived and items were pooled together on the basis of their factorization scores. These dimensions are:

CONCEPTUAL FRAMEWORK

2.1. Interest and Engagement (IE)

As described earlier, one of the dimensions of teaching enthusiasm corresponds to enjoyable teaching (Kunter et al. 2013). Fernet et al. (2008) mentioned that teacher enthusiasm is related to intrinsic motivation. Teacher enthusiasm involves enjoyable teaching (Keller et al. 2013, Kunter et al. 2013, Frenzel et al. 2009), active learning and group planning which done in connection with the real world. Therefore, enthusiasm apparently corresponds to interest (Schiefele et al. 2013).

2.2 Interaction with Students (IWS)

Interaction with students is essential for effective teaching and learning. Enthusiastic teachers respect learners autonomy, are more open and humorous (Oprea, 2013) to students, encourage students to use their expertise, welcome democratic environment in the class (Kunter et al., 2011). Enthusiasm among teachers is considered as a powerful component of teacher's effectiveness which positively influences the learner's outcomes (Patrick, Hisley, & Kempler, 2000).

2.3 Passion for Teaching (PT)

Passion and commitment are the qualities of enthusiastic teachers which makes them more dedicated towards the teaching-learning process (Keller et al., 2013; Kunter et al., 2011). They start giving more time, energy and other resources to the teaching (Gabryś-Barker, 2014; Kunter, 2008; Oprea, 2013).

2.4 Creativity and Innovation (CI)

Creativity is a set of attitudes and skills which makes someone novel, problem solver, capable of tolerating ambiguity and taking risk (Davis & Davis, 2019). Teachers can use creativity and innovation (Oprea, 2013) for making teaching more enjoyable and individualized. Creative teachers tend to use enriched subject matter, innovative way of subject matter presentation and inclusion of new ideas and experiments in the classroom (Gabryś-Barker, 2014). They also welcome students' innovative and creative ideas and try to develop problem-solving skills among them.

2.5 Professional development (PD)

Enthusiastic teachers always have a desire to develop professionally (Gabryś-Barker, 2014) and learning new skills for better understanding of pedagogy. They appreciate the use of new technology for better understanding of pedagogy

2.6 Subject Knowledge Enrichment (SKE)

Research findings indicate that subject knowledge should be both deep and extensive to become an enthusiastic teacher and it has been considered one of the important factor in the two factor model of enthusiasm (Kunter et al.,2008*)*. It can be assessed on the basis of following parameters viz. staying up-to-date with subject-specific innovations (Gabryś-Barker, 2014; Keller et al., 2014), attending training sessions and conferences regularly, upgrading knowledge, reading articles from different publications, sharing resources and holding discussion with subject experts.

2.7 Professional Commitment (PC)

Professional commitment means the extent to which somebody is engaged in doing a specific task and the degree of importance he attached to his work (Brown & Leigh, 1996). Highly committed teachers always work beyond expectations, therefore, it is very essential to have committed teachers in order to achieve good instruction (Firestone & Pennell, 1993). Committed teachers work normatively for enhancing their abilities and improving students' performance in the classroom (Blase, 1993; Soodak & Podell, 1996).

METHODOLOGY

3.1 Participants

The sample for the final development of teacher enthusiasm tool consisted of 558 teachers and multistage random sampling was used to select the sampling unit. The state of Haryana is divided into six revenue divisions (Ambala, Rohtak, Gurugram, Hisar, Karnal, and Faridabad). These teachers (sampling unit) were selected from all six revenue divisions of Haryana state, India. The sample consisted of male (231) and female (327) teachers teaching at school level (Primary, Secondary and Senior Secondary level) in government (state) and private schools. Their teaching experience varied from less than one year to more than twenty-five years. All these teachers had completed their professional teacher training before joining the service. After obtaining written permissions from the administrators of their schools, the investigators personally visited the schools and collected data from the teachers. The investigators explained teachers about the purpose of the study and assured them that their responses will be kept confidential. Some administrators and teachers were hesitant to respond and were not interested to participate in the research. The response rate was 45%, the investigators obtained 900 out of 2000 teacher enthusiasm scale printed on paper, out of these, only 558 were completely filled, 342 partially filled.

3.2 Procedure

First of all, a draft containing 120 items was prepared on the basis of review and discussion with the experts. Then the draft was submitted to eight experts to determine the face and content validity of the scale. After vetting, about 30 items were modified and five were deleted. Before taking the final sample, a purposive sample of 60 teachers (teaching at Primary, secondary and senior secondary level) was drawn from 2 government and 4 private senior secondary schools situated in Charkhi Dadri, Haryana, to identify any difficulty or confusion in understanding the statements of teacher enthusiasm tool. Some suggestions were given by these teachers and based

on these suggestions, some items were modified. After revising the preliminary draft, it was subjected to the participants and data was collected personally by the investigators. Data was entered into SPSS and analysis was completed using SPSS 23 version.

3.3 Item scoring

A five-point Likert scale format was used in teacher enthusiasm scale. This scale consisted of both positive and negative statements. In case of positively worded statements, 5 score was assigned to strongly agree, 4 to agree, 3 to neutral, 2 to disagree and 1 to strongly disagree. Scoring procedure was reversed in case of negatively worded statements.

3.4 Item analysis and item selection

Item analysis of the teacher enthusiasm scale was completed by computing the t-values and r-value (presented in Table 1). Every item showed t-value greater than 1.75, so no item was rejected from the scale on the basis of t-value. However, twenty items showed poor discrimination value based on r-value (<0.30) and were weeded out. Further, exploratory factor analysis was carried on 95 items.

3.5 Exploratory Factor Analysis

EFA helps researchers in condensing a large number of variables into a few factors (Finch, 2013). In the present study, the exploratory factor analysis aimed to find out the main factors underlying teachers' enthusiasm scale. So, the exploratory factor analysis was administered to 95 items. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (.94), suggests that sample size is satisfactory to yield distinct and reliable factors. Bartlett's Test of Sphericity showed that correlations between the statements were large enough (Chi-Square =26736.96) and significant (p=0.00) for factor analysis.

Initially, when principal component analysis was run, twenty-one factors had an eigenvalue greater than one and these factors explained 62.603% of the total variance. Hence, to determine the reasonable number of factors, parallel analysis was carried out. Results of the parallel analysis showed that seven factors could be extracted for the scale. Hence, EFA was run again for fixed seven factors and these components explained 44.02% of the variability in original ninety-five statements. The varimax rotation was used and factor loading for each item were examined. According to Nunnally (1978), factor loading of .30 or .40 was considered as significant estimated factor loading (as cited in Sass, 2009). Items with loading less than 0.4 were eliminated, so seventeen items were deleted because of low factor loading. Thus the factor analysis resulted in seventy-eight items in seven independent factors with factor loading greater than 0.4.

As seen in Table 2, there are seven factors in teachers' enthusiasm scale. Eigenvalues of these seven factors are 10.754, 8.286, 5.804, 5.178, 4.913, 3.521and 3.364 respectively (Table 3). Factor 1 explained 11.320% of the total variance, factor 2 explained 8.722% of the total variance, factor 3 6.109% of the total variance, factor 4 explained 5.451% of the total variance, factor 5 explained 5.172% of the total variance, factor 6 explained 3.706% of the total variance and factor 7 explained 3.541% of the total variance. These seven factors explained 44.02% of the total variance and were named according to the common characteristics of loaded items in the same factor.

The factor loading of items in the present scale range between .406 to .768. The high-quality factor loading value range is between .6 to 1.0 and the medium quality factor load value range is between .30 to .60 (Kline, 1994). Present situation indicated that 78 items are qualified in the teachers' enthusiasm scale.

These 78 items were distributed in seven factors, the factor1contains twenty two items: 46, 51, 27, 26, 25, 53, 60, 43, 49, 29, 35, 64, 66, 70, 52, 48, 44, 61, 14, 17, 21 and 11.These items explicitly measure teachers' interest and engagement. Therefore the factor was named as Interest and Engagement (IE). Factor 2 includes seventeen items: 32, 41, 39, 31, 40, 38, 33, 37, 30, 19, 42, 36, 23, 47, 18, 54 and 20. These items explicitly measure teachers' interaction with students, so the factor was named as Interaction with Students (IWS). The factor 3 includes ten items: 4, 7, 5, 2, 3, 1, 9, 6, 10 and 8. These items explicitly indicate the passion of a teacher for teaching. So the factor was named Passion for Teaching (PT).The fourth factor includes ten items: 56, 45, 34, 50, 24, 22, 15, 8, 63 and 57. These items explicitly measure teachers' creativity and innovation, so the factor was named creativity and innovation (CI). The fifth factor includes ten items: 78, 75, 76, 69, 74, 72, 77, 71, 68 and 73. These items explicitly measure teachers' professional development, so the factor was named professional development (PD). The factor 6 contains five items: 62, 65, 67, 59 and 55 and the factor was named as Subject Knowledge Enrichment (SKE). The factor 7 contains four items: 13, 16, 28 and 12. These items explicitly measure teachers' commitment towards their profession. Therefore, this factor was named as Professional Commitment (PC). Hence, as a result of item loading and eigenvalues of the factors, the teachers' enthusiasm scale can be considered suitable for use in research.

3.6 Reliability

Reliability of the scale was determined by calculating Cronbach's Alpha and split-half correlation. Cronbach's alpha value was .95 for the preliminary draft (115 items) and.957 for the final teacher enthusiasm scale. The Guttman split-half correlation value was .779. Values of both coefficients indicated that the internal consistency of scale is excellent (Taber, 2017). Further, Cronbach alpha coefficients were calculated for each factor. Table 4 summarizes the factor names, number of items in each factor, reliability of each factor (Internal Consistency).

3.7 Validity

At the earlier, validity of the scale was determined based on content and face validity. For determining content validity and face validity, a preliminary draft consisting of 120 items was submitted to 8 experts from

Table 1: Item analysis and correlation between items and total score of the Teacher Enthusiasm Scale.

Sr. no.	t-value	r-value	Cronbach's Alpha if Items deleted	Decision	Sr. no.	t-value	r-value	Cronbach's Alpha if Items deleted	Decision
1	11.04	.437	.957	Retained	59	12.94	.534	.957	Retained
2	13.56	.553	.957	Retained	60	11.68	.466	.957	Retained
3	12.06	.518	.957	Retained	61	6.92	.279	.957	**Rejected**
4	10.32	.483	.957	Retained	62	7.69	.420	.957	Retained
5	10.82	.506	.957	Retained	63	8.52	.369	.957	Retained
6	9.54	.504	.957	Retained	64	3.95	.206	.958	**Rejected**
7	9.54	.505	.957	Retained	65	5.65	.254	.958	**Rejected**
8	8.83	.427	.957	Retained	66	9.43	.387	.957	Retained
9	10.49	.490	.957	Retained	67	4.01	.202	.958	**Rejected**
10	9.13	.445	.957	Retained	68	8.02	.329	.957	Retained
11	8.43	.314	.958	Retained	69	16.04	.579	.957	Retained
12	10.19	.435	.957	Retained	70	7.11	.347	.957	Retained
13	7.90	.403	.957	Retained	71	8.96	.433	.957	Retained
14	6.96	.253	.958	**Rejected**	72	9.87	.491	.957	Retained
15	7.44	.298	.957	**Rejected**	73	11.72	.434	.957	Retained
16	8.57	.337	.957	Retained	74	10.99	.499	.957	Retained
17	9.18	.338	.957	Retained	75	8.58	.352	.957	Retained
18	4.43	.194	.958	**Rejected**	76	4.52	.224	.958	**Rejected**
19	10.94	.440	.957	Retained	77	14.34	.545	.957	Retained
20	8.52	.421	.957	Retained	78	8.98	.356	.957	Retained
21	9.18	.331	.957	Retained	79	11.92	.483	.957	Retained
22	13.42	.571	.957	Retained	80	7.33	.304	.957	Retained
23	14.90	.627	.957	Retained	81	7.33	.579	.957	Retained
24	11.81	.566	.957	Retained	82	10.41	.455	.957	Retained
25	15.07	.611	.957	Retained	83	11.32	.515	.957	Retained
26	8.69	.342	.957	Retained	84	8.87	.407	.957	Retained
27	8.29	.320	.957	Retained	85	4.17	.157	.958	**Rejected**
28	13.17	.587	.957	Retained	86	5.23	.208	.958	**Rejected**
29	12.75	.572	.957	Retained	87	10.93	.437	.957	Retained
30	13.81	.572	.957	Retained	88	7.65	.286	.958	**Rejected**
31	8.68	.412	.957	Retained	89	8.32	.387	.957	Retained
32	10.91	.442	.957	Retained	90	6.85	.298	.958	**Rejected**
33	2.29	.073	.958	**Rejected**	91	4.56	.196	.958	**Rejected**
34	11.82	.453	.957	Retained	92	11.06	.471	.957	Retained
35	10.45	.417	.957	Retained	93	10.69	.444	.957	Retained
36	13.63	.539	.957	Retained	94	3.01	.101	.958	**Rejected**
37	13.57	.495	.957	Retained	95	8.08	.335	.957	Retained
38	16.17	.609	.957	Retained	96	9.03	.425	.957	Retained
39	-0.88	-.041	.958	**Rejected**	97	13.25	.548	.957	Retained

Sr. no.	t-value	r-value	Cronbach's Alpha if Items deleted	Decision	Sr. no.	t-value	r-value	Cronbach's Alpha if Items deleted	Decision
40	11.21	.515	.957	Retained	98	10.69	.415	.957	Retained
41	2.11	.027	.958	**Rejected**	99	5.62	.264	.958	**Rejected**
42	10.74	.444	.957	Retained	100	6.86	.300	.957	Retained
43	14.11	.556	.957	Retained	101	9.95	.405	.957	Retained
44	15.31	.589	.957	Retained	102	11.17	.469	.957	Retained
45	15.54	.625	.957	Retained	103	10.42	.478	.957	Retained
46	12.14	.538	.957	Retained	104	12.19	.528	.957	Retained
47	12.69	.556	.957	Retained	105	7.74	.339	.957	Retained
48	11.64	.502	.957	Retained	106	9.89	.471	.957	Retained
49	11.97	.569	.957	Retained	107	11.71	.464	.957	Retained
50	4.95	.162	.958	**Rejected**	108	14.20	.618	.957	Retained
51	2.56	.098	.958	**Rejected**	109	6.84	.350	.957	Retained
52	13.58	.480	.957	Retained	110	8.01	.332	.957	Retained
53	12.56	.544	.957	Retained	111	9.11	.413	.957	Retained
54	13.62	.612	.957	Retained	112	11.41	.540	.957	Retained
55	12.90	.479	.957	Retained	113	9.38	.420	.957	Retained
56	16.62	.642	.957	Retained	114	13.44	.600	.957	Retained
57	10.08	.452	.957	Retained	115	11.37	.485	.957	Retained
58	12.12	.557	.957	Retained					

The highlighted value necessitating rejection of the item.

Table 2: Factor loading of 78 items

Sr.	Statement	F1	F2	F3	F4	F5	F6	F7
46	Sometimes, I make fun of my students' mistakes.	.768						
51	I avoid eye contact with student while teaching.	.759						
27	Sometimes, due to lack of time and approaching deadlines, I avoid taking my classes.	.740						
26	Most of the time, I get late for my class and school.	.722						
25	I often feel stressed due to workload.	.714						
53	I do not like to move from one place to another while teaching	.712						
60	I do not prefer the use of different teaching aids in my class.	.672						
43	Students often hesitate in talking with me.	.668						
49	Every student come with problem and I can't solve everyone's problem.	.661						
29	I think a teacher does not learn anything from his students because they are less mature and less experienced.	.661						
35	I feel better when Principal is on leave.	.649						

Sr.	Statement	F1	F2	F3	F4	F5	F6	F7
64	When I try new things in teaching then these usually do not work.	.646						
66	I feel there is no new knowledge given in seminars and workshops on teaching methodology.	.645						
70	I think, attending professional development program is waste of time and money.	.637						
52	I don't use much face expressions while teaching.	.634						
48	It is difficult to give individual attention to every student in the class.	.633						
44	Humor distracts the attention of the class.	.609						
61	I do not take risk of trying new and unusual methods in my class.	.599						
14	Teaching is not a pleasure for me, it is only the part of duty.	.566						
17	Sometimes, I deviate from the major theme of the lecture.	.559						
21	I find it difficult to involve every student in my class.	.537						
11	I hesitate to share my subject related difficulties with others.	.523						
32	I like to interact with my students.		.631					
41	I share my joy/pleasure of teaching and reading with students.		.626					
39	I am deeply interested in helping students.		.610					
31	I respect my students.		.609					
40	I learn a lot from my students.		.587					
38	I enjoy the company of students.		.573					
33	I always work for teacher- parents' partnership.		.568					
37	I feel great personal satisfaction from students' achievement.		.521					
30	Teaching is a fun, exciting and stimulating activity for me.		.495					
19	I use real life stories and anecdotes in my teaching.		.461					
42	I always enjoy working with students.		.450					
36	As my knowledge base grows, so grows my passion for teaching.		.442					
23	I focus on weak students of my class		.438					
47	I use humor to reduce anxiety of students.		.437					
18	I focus on the real values during my lecture.		.436					
54	I use both positive and negative reinforcements while dealing with the students.		.429					
20	I always assess the work given to the students on time.		.420					
4	I always prepare myself for every lecture.			.646				

Sr.	Statement	F1	F2	F3	F4	F5	F6	F7
7	I always read additional information related to the lecture topic.			.633				
5	I keep myself updated with recent advancement in my subject.			.629				
2	I enjoy teaching my subject.			.622				
3	I enjoy teaching new things to the students.			.587				
1	I find my subject very interesting.			.584				
9	I use wide variety of examples to illustrate abstract concept.			.584				
6	I have sound knowledge of my subject.			.576				
10	I keep on updating my reference books.			.519				
8	I search relevant information on internet.			.496				
56	I like to experiment on novel elements in teaching.				.519			
45	I keep on switching interaction mode in my class.				.510			
34	I learn from research articles and books.				.500			
50	I am always available for my students even after the school hours for helping them solving their difficulties.				.465			
24	I prepare students for different competitive assignments.				.459			
22	I provide relevant study materials to students like e-books, online resources, previous question papers, audios and videos etc.				.453			
15	I read scholarly articles based on the current research in the field.				.437			
58	I try to enrich the subject matter with different audio visual aids.				.436			
63	I continue trying new approaches in my teaching.				.431			
57	I am comfortable in using Information Communication Technology.				.406			
78	I go online and read educational blogs and literature related to teaching and learning.					.616		
75	I observe my peers, who are a great source of inspiration to me.					.594		
76	I join some groups online, who can prove a great source of information as well as inspiration.					.594		
69	I am always keen to learn from different resources.					.539		
74	I try to learn new techniques of managing students' behavior.					.529		
72	I try to understand and explore techniques used by other experts in the field of education.					.515		
77	I believe knowledge is power.					.484		

Sr.	Statement	F1	F2	F3	F4	F5	F6	F7
71	I agree that knowledge and skills develop with continuous engrossment.					.483		
68	I engage myself in my formal development.					.463		
73	I connect myself with neighboring schools to share good practice and capitalize on local expertise.					.430		
62	I learn many things while preparing the course material for teaching.						.596	
65	I am always eager to enrich my subject knowledge.						.580	
67	I enjoy my accomplishment.						.470	
59	I keep myself updated with new ways of teaching.						.458	
55	I spend adequate time in preparing for my lecture.						.417	
13	My subject is very vast and I work hard to learn many things.							.469
16	I frequently ask students for specific feedback on my teaching.							.455
28	I continue my learning from different sources of knowledge.							.445
12	I share my books and other resources related to my teaching subject with others.							.410

Table 3: Eigenvalues, variances and total variances of the seven factors

Factors	Eigenvalues	Percentages of variance	Percentages of total variances
Factor 1	10.754	11.320	11.320
Factor 2	8.286	8.722	20.042
Factor 3	5.804	6.109	26.151
Factor 4	5.178	5.451	31.602
Factor 5	4.913	5.172	36.774
Factor 6	3.521	3.706	40.480
Factor 7	3.364	3.541	44.020

Table 4: Factor names, number of the items and Cronbach alpha value of each factor

Factors name	Number of items	Cronbach's Alpha Value
Interest and Engagement (IE)	22	0.93
Interaction with Students (IWS)	17	0.91
Passion for Teaching (PT)	10	0.87
Creativity and Innovation (CI)	10	0.795
Professional Development (PD)	10	0.85
Subject Knowledge Enrichment (SKE)	5	0.74
Professional Commitment (PC)	4	0.64
Total	78	0.957

different areas. On the basis of experts' opinion and feedback, 5 statements were dropped and 30 statements were modified. Finally, for the preliminary draft, 115 statements were retained which showed 80% or above agreement and unanimity of experts. Experts consent on each statement separately was taken as an index of content validity. Later on, construct validity of the scale was determined by calculating the inter-correlation between factors and total score. The values of correlation coefficients are listed in Table 5, which range from .608 to 841 and significantly represent that all the factor are related to the same construct. Criterion validity of the scale was also determined by validating against another teacher enthusiasm scale developed by Kunter et al. (2011). This scale contains two dimensions, the first dimension is teaching and second is subject. The four-point rating scale (1-disagree strongly to 4-agree strongly) was used to record the teachers' response. The internal consistency for both dimensions: subject enthusiasm (Cronbach alpha is .81) and teaching enthusiasm (.85) is sufficiently good.

Table 5. Inter-Correlation matrix between Factors and Total Score

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Total
Factor 1	1							
Factor 2	.444**							
Factor 3	.334**	.641**						
Factor 4	.262**	.653**	.583**					
Factor 5	.295**	.621**	.570**	.631**				
Factor 6	.195**	.608**	.497**	.609**	.610**			
Factor 7	.290**	.622**	.560**	.504**	.496**	.438**		
Total	.767**	.841**	.714**	.711**	.714**	.608**	.635**	1

Responses from 103 teachers were collected on Kunter scale and correlation with their previous score was calculated. The value of Pearson Product Moment Correlation came out to be .79 which indicates that the scale has fairly good external validity.

Further, this scale was also cross-validated against Sanders and Gosenpud (as cited in Orosz et al. (2015) questionnaire. This questionnaire contains 13 items based on the student's observation regarding their teacher's enthusiasm. The survey items correspond to eye contact, facial expressions, gestures, movements of the body, choice of words, voice delivery (pitch, speech rate, etc.) and general level of energy. 61 students responded on the dichotomous scale. The correlation between the score of a teacher's on the presented scale and their student's response came out to be 0.87 which is significantly good. Hence, both these analytical techniques have established the external validity of the scale.

3.8 Norms

Norms for the present scale were determined based on Percentile scores obtained from teachers' enthusiasm scale. Before establishing percentile norms the normality of the sample was determined by plotting Gaussian curve. As the data followed normal distribution hence percentile norm was determined for the scale (Punia and Berwal 2017; 2018). The maximum score of the teachers' enthusiasm was 369 and the minimum score was 274. Very high, high, moderate, low and very low enthusiasm are five categories of the scores. Table 6 summarizes the interpretation of the score of the teachers' enthusiasm.

DESCRIPTION OF THE RESULTING TEACHER ENTHUSIASM SCALE

Teacher enthusiasm scale was designed to measure the feeling of enthusiasm in teachers who are teaching at the school level. It has seven dimensions: Interest and Engagement (IE), Interaction with Students (IWS), Passion for Teaching (PT), Creativity and Innovation (CI), Professional development (PD), Subject Knowledge Enrichment (SKE) and Professional Commitment (PC). Under these seven dimensions, the scale contained 78 items. Table 6 shows the distribution of items contained in each dimension. The scale consisted of 56 positively keyed items and 22 negatively keyed items. Both the negatively and positively keyed items were randomly placed in scale to maintain the balance and to obtain most appropriate responses.

DISCUSSION

The present study aimed to develop a reliable and valid tool for assessing teacher enthusiasm. For this purpose, the data was collected from teachers as well as from their students. The scale was validated against Kunter et al. (2011) scale and Sanders and Gosenpud (as cited in Orosz et al. (2015) questionnaire. The scale contains both negative and positive statements and has been constructed in both Hindi and English languages. The psychometric analysis of the teacher enthusiasm scale suggests that the reliability and validity of the scale were satisfactory. EFA was used to reduce the items into seven meaningful

Table 6: Percentile norms for teacher enthusiasm scale and their interpretation

Percentile	Teacher enthusiasm score	Quantitative interpretation	Qualitative interpretation
90	369.00	351 and above	Very high
75	350.00	327 to 350	High
50	326.00	308 to 326	Moderate
25	307.75	275 to 307	Low
10	274.00	274 and below	Very low

dimensions which represent teacher enthusiasm. Construct validity was determined on the basis of inter-correlation of factors with the total score. Like any other tool, this scale also has some limitations. The generalizability of the results is limited by the fact that the standardization procedure was completed on the teachers and their students belonging to Haryana (India) only. Further, as the authors have included some new dimensions of teacher enthusiasm, so it needs more validation. However, it can be used outside India after determining its reliability and validity in context-specific conditions. Despite these limitations, the findings of the present study suggest that this teacher enthusiasm scale is a useful tool for future research. So, this teacher enthusiasm scale would be highly relevant for stakeholders (researchers, government, school administration and management) in different ways like recruitment, selection, training and development of teachers. During pre-service and in-service the theoretical dimensions of the scale can be considered for developing enthusiasm among teachers for improving their professional competence. Stakeholders can use the power of enthusiasm in the classrooms by selecting enthusiastic candidates for high-quality teaching. This quality of teachers can be very well employed for better learning and future research can be conducted on teacher enthusiasm regarding other professional qualities of the teachers.

CONCLUSION

It is clear from the review of the literature that enthusiasm is a core quality of successful teachers and employers are always in search of enthusiastic teachers (Gabryś-Barker, 2014). In this way, it can be considered as one of the most demanding quality. Enthusiastic teachers can work better for the learner with special needs as they enjoy more in the class of enthusiastic teachers. As enthusiastic teachers love their job, so they always feel a sense of accomplishment, contentment and satisfaction. The satisfied employees are the asset for any organization. The review of the literature in the area of education indicated that there is a lack of comprehensive-scale for assessing teacher enthusiasm. Therefore, this teacher enthusiasm scale was constructed by investigators after following due scientific procedure for standardization. This tool is easy to administer and is available in Hindi and English. It contains 78 statements based on seven dimensions of teacher enthusiasm. The opinion of the teachers is rated on a five-point Likert scale. This teacher enthusiasm scale has been verified for its reliability and validity. This tool will prove to be a valuable tool in assessing the enthusiasm of teachers teaching at school level in India.

REFERENCES

Allen, M., Witt, P. L., & Wheeless, L. R. (2006). The Role of Teacher Immediacy as a Motivational Factor in Student Learning: Using Meta-Analysis to Test a Causal Model. *Communication Education*, *55*(1), 21–31. DOI: 10.1080/03634520500343368

Bettencourt, E. M., Gillett, M. H., Gall, M. D., & Hull, R. E. (1983). Effects of teacher enthusiasm training on student on-task behavior and achievement. *American Educational Research Journal*, *20*(3), 435–450. DOI: 10.3102/00028312020003435

Baumert, J., & Kunter, M. (2013). The COACTIVE model of teachers' professional competence. *Cognitive Activation in the Mathematics Classroom and Professional Competence of Teachers*, 25–48. DOI: 10.1007/978-1-4614-5149-5_2

Blase, J. (1993). The micropolitics of effective school-based leader-ship: Teachers' perspectives. *Educational Administration Quarterly*, *29*(2), 142–163. DOI: 10.1177/0013161X93029002003

Brown, S. P., & Leigh, T. W. (1996). A new look at psychological climate and its relationship to job involvement, effort, and performance. *Journal of Applied Psychology*, *81*(4), 358–368. DOI: 10.1037/ 0021-9010.81.4.358

Caruso, V. M. (1980). Behaviors indicating teacher enthusiasm: Critical incidents reported by teachers and students in secondary school physical education and English (Doctoral Dissertations). Retrieved from http://scholarworks.umass.edu/dissertations_1/3564 Cobb, S. L., & Foeller, W. H. (1992). An organizational behavior analysis of teacher attitudes about teaching high school economics. *Theory and Research in Social Education*, *20*(4), 421–439. DOI: 10.1080/ 00933104.1992.10505681

Collins, M. L. (1978). Effects of enthusiasm training on preservice elementary teachers. *Journal of Teacher Education*, *29*(1), 53–57. DOI: 10.1177/002248717802900120

Cui, G., Yao, M., & Zhang, X. (2017). The dampening effects of perceived teacher enthusiasm on class-related boredom: The mediating role of perceived autonomy support and task value. *Frontiers in Psychology*, *8*, 400. DOI: 10.3389/fpsyg.2017.00400

Davis, P., & Davis, L. (2019, October 07). Creative teaching and teaching creativity: How to foster creativity in the classroom. Retrieved from http://psychlearningcurve.org/creative-teaching-and-teaching-creativity-how-to-foster-creativity-in-the-classroom/

Feldman, K. A. (2007). Identifying exemplary teachers and teaching: Evidence from student ratings1. *Scholarship of Teaching and Learning in Higher Education: an Evidence-Based Perspective*, 93–143.DOI: 10.1007/1-4020-5742-3_5

Fernet, C., Senécal, C., Guay, F., Marsh, H., & Dowson, M. (2008). The work tasks motivation scale for teachers (WTMST). *Journal of Career Assessment*, *16*(2), 256–279. DOI: 10.1177/ 1069072707305764

Finch, W. H. (2013). Exploratory factor analysis. *Handbook of Quantitative Methods for Educational Research*, 167–186. DOI: 10.1007/978-94-6209-404-8_8

Firestone, W. A., & Pennell, J. R. (1993). Teacher commitment, working conditions, and differential incentive policies. *Review of Educational Research*, *63*(4), 489–525. DOI: 10.3102/00346543063004489

Frenzel, A. C., Goetz, T., Lüdtke, O., Pekrun, R., & Sutton, R. E. (2009). Emotional transmission in the classroom: Exploring the relationship between teacher and student enjoyment. *Journal of Educational Psychology*, *101*(3), 705–716. DOI: 10.1037/a0014695

Gabryś-Barker, D. (2014). Success: From failure to failure with enthusiasm. *Studies in Second Language Learning and Teaching*, *4*(2), 301–325. DOI: 10.14746/ssllt.2014.4.2.7

Goetz, T., Pekrun, R., Hall, N., & Haag, L. (2006). Academic emotions from a social-cognitive perspective: Antecedents and domain specificity of students' affect in the context of Latin instruction. *British Journal of Educational Psychology*, *76*(2), 289–308. DOI: 10.1348/000709905X42860

Keller, M. (2011). Teacher enthusiasm in physics instruction. Retrieved from https://d-nb.info/101542791X/34. Germany: Doctoral Dissertation, Universität Duisburg-Essen. Keller, M. M., Becker, E. S., Frenzel, A. C., & Taxer, J. L. (2018). When teacher enthusiasm is authentic or inauthentic: Lesson profiles of teacher enthusiasm and relations to students' emotions. *AERA Open*, 4(2). DOI: 10.1177/ 2332858418782967

Keller, M. M., Goetz, T., Becker, E. S., Morger, V., & Hensley, L. (2014). Feeling and showing: A new conceptualization of dispositional teacher enthusiasm and its relation to students' interest.

Learning and Instruction, *33*, 29–38. DOI: 10.1016/j.learninstruc.2014.03.001

Keller, M. M., Hoy, A. W., Goetz, T., & Frenzel, A. C. (2016). Teacher enthusiasm: Reviewing and redefining a complex construct. *Educational Psychology Review*, *28*(4), 743–769. DOI: 10.1007/s10648-015- 9354-y

Keller, M. M., Neumann, K., & Fischer, H. E. (2013). Teacher enthusiasm and student achievement. In J. Hattie & E. M. Andermann (Eds.). Retrieved from https://kops.uni-konstanz.de/bitstream/handle/123456789/25688/Keller_256884.pdf;sequence=2, In-ternational guide to student achievement (pp. 247–250). New York: Routledge. Kim, T., & Schallert, D. L. (2014). Mediating effects of teacher enthusiasm and peer enthusiasm on students' interest in the college classroom. *Contemporary Educational Psychology*, *39*(2), 134–144. DOI: 10.1016/j.cedpsych.2014.03.002

Kline, P. (1994). *An easy guide to factor analysis*. *Abingdon-on-Thames*. Routledge. Kunter, M. (2013). Motivation as an aspect of professional competence: Research findings on teacher enthusiasm. *Cognitive Activation in the Mathematics Classroom and Professional Competence of Teachers*, 273–289. DOI: 10.1007/978-1-4614-5149-5_13

Kunter, M., Frenzel, A., Nagy, G., Baumert, J., & Pekrun, R. (2011). Teacher enthusiasm: Dimensionality and context specificity. *Contemporary Educational Psychology*, *36*(4), 289–301. DOI: 10.1016/j.cedpsych.2011.07.001

Kunter, M., Klusmann, U., Baumert, J., Richter, D., Voss, T., & Hachfeld, A. (2013). Professional competence of teachers: Effects on instructional quality and student development. *Journal of Educational Psychology*, *105*(3), 805–820. DOI: 10.1037/a0032583

Kunter, M., Tsai, Y., Klusmann, U., Brunner, M., Krauss, S., & Baumert, J. (2008). Students' and mathematics teachers' perceptions of teacher enthusiasm and instruction. *Learning and Instruction*, *18*(5), 468–482. DOI:.1016/j.learninstruc.2008.06.008

Mahler, D., Großschedl, J., & Harms, U. (2017). Opportunities to learn for teachers' self-efficacy and enthusiasm. *Education Research International*, 2017, 1–17. DOI: 10.1155/2017/4698371

Marlin, J. W. (1991). State-mandated economic education, teacher attitudes, and student learning. *Journal of Economic Education*, *22* (1), 5–14. DOI: 10.1080/00220485.1991.10844693

Marsh, H. W., & Bailey, M. (1993). Multidimensional students' evaluations of teaching effectiveness: A profile analysis. *The Journal of Higher Education*, *64*(1), 1. doi:10.2307/2959975 McMillan, J. H. (1976). Factors affecting the development of pupil attitudes toward school subjects. *Psychology in the Schools*, *13*(3), 322–325. DOI: 10.1002/1520-6807(197607)13:3<322::AID- PITS2310130317>3.0.CO;2-3

Meyer, D. K., & Turner, J. C. (2006). Re-conceptualizing emotion and motivation to learn in classroom contexts. *Educational Psychology Review*, *18*(4), 377–390. DOI: 10.1007/s10648-006-9032-1

Minor, L. C., Onwuegbuzie, A. J., Witcher, A. E., & James, T. L. (2002). Preservice teachers' educational beliefs and their perceptions of characteristics of effective teachers. *The Journal of Educational Research*, *96*(2), 116–127. DOI: 10.1080/00220670209598798

Mottet, T. P., & Beebe, S. A. (2000). *Emotional Contagion in the Classroom An Examination of How Teacher and Student Emotions Are Related*. Place of publication not identified: Distributed by ERIC Clearinghouse. Murray, H. G. (1983). Low-inference classroom teaching behaviors and student ratings of college teaching effectiveness. *Journal of Educational Psychology*, *75*(1), 138–149. DOI: 10.1037/0022-0663. 75.1.138

Oprea, C. L. (2013). The enthusiastic teaching–the actor's art didactically transposed for teachers. *Procedia - Social and Behavioral Sciences*, *76*, 602–607. DOI: 10.1016/j.sbspro.2013.04.172

Orosz, G., Tóth-Király, I., Bőthe, B., Kusztor, A., Kovács, Z. Ü, & Jánvári, M., KovÃ¡cs. (2015) Teacher enthusiasm: A potential cure of academic cheating. *Frontiers in Psychology*, *6*, 318. DOI: 10.3389/fpsyg.2015.00318

Patrick, B. C., Hisley, J., & Kempler, T. (2000). 'What's everybody so excited about?': The effects of teacher enthusiasm on student intrinsic motivation and vitality. *The Journal of Experimental Education*, *68*(3), 217–236. DOI: 10.1080/00220970009600093

Punia, P., & Berwal, S. (2017). Development and standardization of an alienation scale for visually impaired students. *Journal of Visual Impairment and Blindness*, *111*(5), 427–439. DOI: 10.1177/0145482X1711100504

Punia, P., & Berwal, S. (2018). Development and standardization of mental health battery for visually impaired. *International Journal of Special Education*, *33*(2), 382–396. Emerson, R. W. Retrieved from http://en.wikipedia.org/wiki/Ralph_Wal-do_Emerson Richter, D., Kunter, M., Lüdtke, O., Klusmann, U., Anders, Y., & Baumert, J. (2013). How different mentoring approaches affect beginning teachers' development in the first years of practice. *Teaching and Teacher Education*, *36*, 166–177. DOI: 10.1016/j. tate.2013.07.012

Sass, D. A. (2010). Factor loading estimation error and stability using exploratory factor analysis. *Educational and Psychological Measurement*, *70*(4), 557–577. DOI: 10.1177/0013164409355695

Schiefele, U., Streblow, L., & Retelsdorf, J. (2013). 'Dimensions of teacher interest and their relations to occupational well-being and instructional practices.' *JERO*: *Journal for Educational Research Online Journal Für Bildungsforschung Online 5(1)*. Retrieved from https://www.pedocs.de/volltexte/2013/8018/pdf/JERO_2013_1_Schiefele_Streblow_Retelsdorf_Dimensions_of_teacher_interest.pdf (pp. 7–37). Soodak, L. C., & Podell, D. M. (1996). Teacher efficacy: Toward the understanding of a multi-faceted construct. *Teaching and Teacher Education*, *12*(4), 401–411. DOI: 10.1016/0742-051X(95)00047-N

Stewart, R. A. (1989). Interaction effects of teacher enthusiasm and student note taking on recall and recognition of lecture content. *Communication Research Reports*, *6*(2), 84–89. DOI: 10.1080/08824098909359838

Sutton, R. E. (2004). Emotional regulation goals and strategies of teachers. *Social Psychology of Education*, *7*(4), 379–398. DOI: 10.1007/s11218-004-4229-y

Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, *48*(6), 1273–1296. DOI:.1007/s11165-016-9602-2

Witcher, A. E., Onwuegbuzie, A. J., & Minor, L. C. (2001). Characteristics of effective teachers: Perceptions of preservice teachers. *Research in the Schools*, 8(2), 45–57.