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Teachers' Use of Motivational Strategies in the EFL Classroom: A Study of Hungarian High Schools

Abstract: The present study investigates English as a Foreign Language (EFL) teachers' use of motivational strategies (MS) in Hungarian high schools. It also seeks to identify whether students recognize these strategies. Keller's (2010) motivational model was employed through the instructional materials motivational survey (IMMS) questionnaire that was translated into Hungarian. A population of 117 Hungarian high school students from grades 9 to 12 filled out questionnaires on their teachers' use of MS, and 62 high school teachers completed the same questionnaire to report their MS. Classroom observations were also conducted following the Motivational Orientation of Language Teaching (MOLT) scheme proposed by Guilloteaux and Dörnyei (2008). For each grade, face-to-face and online classes were observed. Quantitative and qualitative methods were used to process the data. The results show that teachers' mean scores for all the ARCS categories were higher than those of students, with significant differences between students' and teachers' views on attention and relevance. Teachers reported using satisfaction-generating strategies most often, while the observation results indicated that the most frequently used strategy was attention. Students' grades had no correlation with students' perception of the use of MS, which might be due to the homogeneity of the sample selected.

Keywords: EFL Motivation, ARCS model, motivational strategies, Hungarian high schools, language learning, COVID19, online learning

1. Introduction

Motivation has been acknowledged as the most important factor in learning a foreign language. Dörnyei (2014, 519) states that “motivation is responsible for why people decide to do something, how long they are willing to sustain the activity, and how hard they are going to pursue it”. An abundance of research suggests that motivation is important for learning in general and for language learning in particular, not only for its pivotal role for the mastery of foreign languages but also because it is the second most serious problem that teachers encounter (Veenman 1984). However, few studies have attempted to shed light on the effective use of motivational strategies by teachers. Teachers may play a key role in enhancing students’ motivation (Bernaus and Gardner 2008). As Keller (2010, 38) claims, “Teachers cannot control student motivation but they certainly do influence it. They can stimulate students’ desire to learn or they can kill learner motivation”. This can be achieved by using some strategies to motivate students which are referred to as ‘motivational strategies’ (Dörnyei 2001). Still, what teachers perceive as motivating may not appeal to the L2 learners. The current study seeks to investigate Hungarian high school EFL teachers’ use of motivational strategies (MS) and whether their students recognize them. It equally highlights whether there is a correlation between students’ English proficiency level and their perception of MS.

2. Theoretical background

2.1 Language learning motivation research

The field of language learning motivation has been thriving for decades. This development will be briefly outlined here with a focus on Keller’s (2010) model, which will be used in this study. Motivation has been the focus of L2 scholars as it represents a key element in studies of individual differences. Cohen and Dörnyei (2002) assert that motivation is the key learner variable, without which learning is not possible. This concept has been studied in terms of distinctions ranging from instrumental and integrative motivation (Gardner 1985) to intrinsic and extrinsic motivation (Deci and Ryan 1985). It then developed into various models of L2 motivation (Crookes and Schmidt 1991; Dörnyei 1994; 2005).

Research on motivational teaching strategies stresses the teachers’ conscious practice and its effect on learners (Lamb 2017). Dörnyei (1994) initiated research on motivational strategies. They are defined as “those motivational influences that are consciously exerted to achieve some systematic and enduring positive effect” (Dörnyei 2001, 28). He proposes four components of motivational teaching: (i) creating the basic motivational conditions, (ii) generating initial motivation, (iii) maintaining and protecting motivation, and (iv) encouraging positive retrospective

self-evaluation. Dörnyei and Ushioda (2011) note that teachers should not try to employ all the aforementioned strategies; they should rather choose those that fit their sociocultural context and go in line with their students' intrinsic motivation.

Another model that was proposed by Dörnyei (2005; 2009), the L2 Motivational Self System (L2MSS) theory, is based on the learners' visions of their future self-image: the ideal L2 self, the ought-to L2 self, and the L2 learning experience. The ideal L2 self refers to the learner's ideal self-image as a proficient L2 speaker; the ought-to L2 self describes the learner's characteristics that he or she ought to have; and the L2 learning experience relates to the L2 learning environment (Dörnyei 2005). These dimensions have been widely applied in foreign language settings both in and beyond Hungary. Still, the third element, the L2 learning experience, has been given little attention (Csizér and Kálmán 2019). Indeed, Maeng and Lee (2015) argue that L2 motivation research has not addressed the classroom environment, including tasks, materials, design, and teachers, hence the need to focus on classroom practices that boost motivation. Keller (1987; 2010) puts forward a motivational design that fills this gap. His model is used in instructional theories and has been applied in various educational contexts, not just to the language learning context (Li and Keller 2018). Keller (2010) views his motivational design as a bridge that connects the study of motivation and the classroom practice to enhance students' motivation.

2.2 Keller's ARCS Model

The ARCS (Attention, Relevance, Confidence, Satisfaction) model is derived from Keller's (1987) macro theory of motivation and instructional design. Keller's (2010) model accentuates the role of teachers to promote learners' motivation, as it provides a thorough view of motivation, including motivational concepts, roles and strategies, classroom implementation, material and task integration, and the responsibilities of the teacher. Ono, Ishihara, and Yamashiro (2015) argue that the ARCS model can be applied in foreign language research.

Keller (1987) developed the ARCS model with four components: Attention, Relevance, Confidence, and Satisfaction. Each component is divided into three subcategories with substrategies that guide the teachers when planning their lessons. Attention refers to learners' interest during learning. It falls into perceptual arousal, inquiry arousal, and variability. Relevance refers to language or examples that are relevant to the learner's needs. It includes goal orientation, motive matching, and familiarity. Confidence refers to positive expectations for success. It encompasses learning requirements, success opportunities, and personal control. Satisfaction is about the reinforcement and conditioning of learning. It is divided into intrinsic reinforcement, extrinsic rewards, and equity.

Keller's (2010) model is classroom oriented, as it highlights the role of the teacher in employing MS. It also gives guidelines on classroom motivational

practices. The teacher should gain the students' attention from the start of the lesson. Strategies include perceptual arousal through an element that teases their curiosity. A second strategy is inquiry arousal when the student is eager to know more about the topic. Variation is very important to maintain attention, since repeating the same strategies will not be appealing to students. After raising their curiosity, students need to perceive the relevance of the content presented. Relevance is about relating the content of the lesson to the students' learning goals, such as relating it to a future job or a travel experience in an English-speaking country. Another strategy would be to use familiar examples that are linked to the students' interests, such as cartoons, Harry Potter stories, or any themes that pertain to their daily experiences. The third element for motivation is confidence. This is achieved when students have a potential chance for success. Students often fear failure and lose confidence when they struggle to understand the teacher's expectations or the learning requirements. By clearly stating the objectives and providing opportunities for success, students can easily build confidence and overcome any challenges. When students are paying attention, are interested in the lesson, and are confident, they will succeed, they are motivated to learn. However, satisfaction is important to maintain their motivation. Satisfaction refers to students' feelings following the learning experience. Students' efforts should be recognized and valued in order to acknowledge their intrinsic feelings of satisfaction and treat them equally. Tangible rewards are also effective either in the form of plus points or a symbolic certificate, for instance.

The ARCS model connects L2 motivation theories that focus mainly on the learner with motivational instructional design models that consider the role of the teacher, the teaching materials, and the learning environment. It is systematic and can be followed by teachers as a guideline for planning their lessons, as well as by researchers who investigate teachers' use of MS and students' perception of these MS in terms of their attention, relevance, confidence, and satisfaction.

2.3 The ARCS model in L2 learning research

The ARCS model has been applied in the area of L2 learning (Maeng and Lee 2015; Karimi and Zade 2019; Min and Chon 2020). However, it was not used in the European context, hence the originality of the present research.

Maeng and Lee (2015) conducted a study on Korean in-service teachers' use of MS. Ten microteaching videos were randomly selected and analyzed according to the ARCS strategies. The findings indicated that attention-getting strategies were strongly used. Teachers did not properly use strategies related to goal-orientation, learning requirements, personal control, and equity. Indeed, the authors put forward the following suggestions. First, teachers should be trained on how to use motivational strategies effectively in their classes. Second, teachers should be reflective on their use of MS and should be open to receiving feedback from their

colleagues. Third, the model should be tailored to teachers' language proficiency, since those with a higher L2 proficiency level were found to have integrated more strategies into their teaching than teachers with a lower English proficiency who tended to use their L1 quite often.

Karimi and Zade (2019) studied the effect of a professional development course based on Keller's model on EFL teachers' use of MS in Iran. The researchers used two questionnaires and class observation for data collection. Regardless of their teaching experience, teachers developed their skills in applying MS after the training. The results also indicated the positive effect of teachers' use of MS on their students' motivation.

Min and Chon (2020) investigated Korean teachers' use of MS and how it affects their students. Both teachers and students participated in a survey study. Eight students were later interviewed to assess their teachers' motivational practices. The findings indicated that the students did not perceive the MS used by their teachers, and their perception of MS largely depended on their proficiency level. Students with a low proficiency level did not value their teachers' use of MS, regardless of their teachers' efforts. Raising students' attention and boosting their confidence were the main predictors in increasing students' proficiency level. It was suggested that MS should be implemented to support communicative language teaching and help fulfill students' professional goals.

2.4 EFL instruction and research in Hungary

Hungary has a reputation of not being particularly successful in foreign language teaching and learning, although some Hungarian scholars would argue that the situation has improved considerably since the 1990s (for an overview of the effectiveness of foreign language teaching in Hungary, see Einhorn 2012; 2015). The causes of this relative failure are not entirely clear, but usually methodological shortcomings of teachers combined with negative attitudes and anxieties of language learners are cited as primary reasons. In this context, the study of motivation is of primary importance, as the results may give clues to what should be improved in classroom teaching.

In Hungary, a variety of foreign language learning programs exist that schools can choose from. This leads to very different learning experiences for students. In the schools that were involved in this study, students had four English classes of 45 minutes per week. Language teaching in Hungary still tends to be grammar-focused, and there is a lot of pressure on high school students to pass a B2 level language exam, as it is a requirement for a degree from Hungarian universities. Although there is no compulsory foreign language to be studied, students in secondary schools are required to study two foreign languages (Csizér 2020). The most frequently learned foreign language is English.

Language learning motivation has been widely researched in the Hungarian

context, with a dominance of cross-sectional questionnaire studies (Medgyes and Nikolov 2014). Studies that involved students pale in comparison to those involving teachers (Heitzmann 2008; Illés and Csizér 2010; Csizér and Magid 2014; Csizér and Kálmán 2019). The main finding of these studies was that teachers did not consider that it was their duty to motivate students. In her review of L2 motivation research in Hungary, Csizér (2012) called for more classroom-oriented research. The present study involves both teachers and students, using a triangulation model that has not been applied in the Hungarian context before.

3. Research questions

Considering the theoretical background stated above and the previous research reviewed, this study seeks to answer the following research questions:

1. What are the motivational strategies that teachers use most often in Hungarian classrooms?
2. Does students' perception of motivational strategies align with their teachers' actual use of motivational strategies?
3. How do students' proficiency levels influence their perception of motivation?
4. What is the relationship between the teachers' self-reported use of MS (assessed by the questionnaire) and their classroom practice (in-class and online observation)?

4. Methodology

The data were collected through the Hungarian translation of the IMMS questionnaire, which was shared via a Google form and through the MOLT observation scheme. Class observations were carried out initially in face-to-face instruction. During the data collection, the Hungarian government ordered the closure of schools due to COVID-19, hence the shift to remote instruction. Observations were done online via both Zoom and Google Classroom.

4.1 Participants

The participating teachers and students were recruited from two state high schools in a southern city in Hungary. Both schools have a high reputation in the city, and the students are probably above average both in terms of academic achievement and motivation. Teachers were selected through a snowball effect via a Google form shared on a Facebook group of teachers of English in Hungary. The teachers helped get their students' parental consent to participate in the study.

The participating students were 117 learners of English between 14 and 18 years of age. They had different levels of English proficiency (pre-intermediate, intermediate, upper-intermediate, and advanced). The students' proficiency levels were measured following their grades. The student participants were all Hungarians, and all spoke Hungarian as their first language. Most students also studied German as their second foreign language besides English. Demographic information about the participating students is detailed in Table 1.

Table 1. Information on the students

Gender	Male	38
	Female	79
Age	14–18	
Grade	1–5	
Level	9–12	

Sixty-two English teachers between 23 and 63 years of age took part in this study. Their teaching experience ranged from 2 to 40 years. Demographic information about the participating teachers is summed up in Table 2.

Table 2. Information on the teachers

Gender	Male	6
	Female	56
Age	Less than 30 years old	4
	30–39 years old	8
	40–49 years old	31
	More than 50 years old	19
Teaching experience	Less than 10 years	8
	10–19 years	21
	20–29 years	22
	30–40 years	11

4.2 Instruments

Two instruments were employed for data collection to answer the research questions of the study: (a) the Instructional Materials Motivational Survey (IMMS) questionnaire, which had a student- and a teacher-version, and (b) the Motivational Orientation of Language Teaching (MOLT) classroom observation scheme.

(a) Questionnaire: Instructional Materials Motivational Survey (IMMS)

The IMMS was designed by Keller (2010). It contains items representing the four categories of Keller's (2010) ARCS model: attention, relevance, confidence, and satisfaction. The adapted version, used by Min and Chon (2020), follows a 5-point Likert scale from not true (1) to very true (5). Each category of the ARCS model is represented through 10 items that are ordered randomly. The attention items ask about the strategies that teachers use to capture students' attention and raise their interest. The relevance items ask about the strategies that teachers use to meet students' goals and relate to their prior knowledge. The confidence items explore the strategies used to boost students' confidence that they will succeed. The satisfaction scale is measured in terms of positive feedback and rewards.

Two complementary questionnaires were designed for teachers and students. The first part of the questionnaire collected demographic data for the students (age, grade, gender) and the teachers (age, gender, years of experience). The second part asked the students to rate their teacher's use of MS. The teachers were also asked to report on their use of MS. The questionnaire was administered in Hungarian, the participants' native language, to guarantee the reliability of answers.

(b) The MOLT classroom observation scheme

The minute-by-minute MOLT is an observation scheme that consists of 25 variables that report teachers' motivational practice and students' motivated behavior. It was employed in several previous studies (Guilloteaux and Dörnyei 2008; Papi and Abdollahzadeh 2012; Moskovsky et al. 2013; Hennebry-Leung and Xiao 2020). Teachers' motivational instruction is presented in four categories: teacher discourse, activity design, participation structure, and encouraging positive and retrospective self-evaluation. Students' motivational behavior is categorized into attention, engagement, and volunteering. It is based on Dörnyei's (2001) theory of motivational strategies as well as Spada and Fröhlich's (1995) observation scheme.

In our study, two classes were observed in each grade. The five participating teachers argued that the students were used to being observed, as they often had teacher trainees or other teachers visiting their classes; hence, they were behaving as usual. Following the study of Guilloteaux and Dörnyei (2008), the teachers' and students' motivational behaviors were observed and recorded minute by minute. As to the coding of different events happening within one minute, the observer followed Spada and Fröhlich's (1995) coding rule that only the event that lasted the longest during a minute should be recorded. The same scheme was used both in classroom and online observation. However, the students' motivational behavior could not be reported in the online setting, since most students turned their cameras off.

5. Data collection and analysis

The data were collected during the fall semester of the academic year 2020-2021. The teachers received the Hungarian version of the questionnaire via email. The questionnaires were then distributed to the students through a Google form. Since new restrictions related to COVID-19 were introduced, half of the lessons were observed online through Google Classroom or Zoom.

A factor analysis was conducted with SPSS 24.0 to sketch out the main MS used (Appendix A). The Bartlett's test of sphericity was significant (4161.832), which suggests that the factor analytic model is applicable to the data. The Kaiser-Meyer-Olkin (KMO) measure (.862) indicates a strong relationship among variables. The number of items with factor loadings above .4 is 24. The reliability with Cronbach's alpha for each factor demonstrated high internal consistency, as values were $>.70$ on all the four factors: satisfaction-generating strategies (.829), attention-getting strategies (.778), relevance-producing strategies (.907), and confidence-building strategies (.701). The first factor was labelled as satisfaction-generating strategies. It contained six items, such as rewards and positive reinforcement. It accounted for 32.45% of the variance in the data. The second factor accounted for 6.64% of the variance in the data and included six items labelled as attention-getting strategies, such as perceptual arousal and variability. The third factor accounted for 5.23% of the variance and included seven items, such as goal-orientation and familiarity, which were labelled as relevance-producing strategies loaded on it. The fourth element accounted for 4.46% of the variance and included five items that were labelled as confidence-building strategies loaded on it. They included items such as success opportunities and personal control.

After the factor analysis, more statistical analyses were carried out to calculate descriptive statistics (means and standard deviation) on the four categories of MS for both the students and the teachers. Then, independent t-tests were conducted to identify any significant difference between the students' and the teachers' perception of MS. Repeated measures one-way ANOVA was conducted within the teacher group and then the student group to identify any differences among the four MS categories. One-way MANOVA was also conducted to look for a correlation between the learners' proficiency levels and their perception of MS.

For the data collected through the MOLT classroom observation scheme, the analyses followed Guilloteaux and Dörnyei's (2008) method. During the observation, the researcher put tally marks indicating the number of minutes for each motivational behavior or practice. The sums of these marks (i.e. the minutes for each practice) were entered and computed in an Excel sheet. Since some teachers started late or ended the lesson early, the length of observed lessons differed. Thus, the scores were divided by the actual length of the class and multiplied by 100 to obtain standard scores. The observation results were first analyzed to identify the most common MS strategies used and to reveal whether there were any

differences between the teachers' use of MS in in-person classes and online classes. Then, z-scores were computed to compare observation results with the teachers' questionnaire results. To make the comparison of observation and questionnaire results possible, the MOLT items were categorized according to the ARCS model, as shown in Table 3.

Table 3. Correspondence of the MOLT items into the ARCS categories

Attention	Relevance	Confidence	Satisfaction
social chat	signposting	scaffolding	tangible rewards
arousing curiosity	stating purpose	promoting cooperation	individual competition
creative element	establishing relevance	promoting autonomy	team competition
attention	promoting integrative values	pair work	neutral feedback
engagement	promoting instrumental values	group work	process feedback
volunteering	referential questions	intellectual challenge	self/peer correction
	personalization	tangible task product	effective praise
			class applause

6. Results

6.1 Questionnaire results

For the first research question, repeated measures one-way ANOVA was conducted to ascertain whether there was a difference in the use of MS within the teacher group (Table 4). There were significant differences between the four categories of MS ($F(.270) = 53,281, p < .001$), and follow-up pairwise comparisons indicated that satisfaction-generating strategies were the most frequently used ($M = 4.59$), while relevance-producing strategies were used least frequently ($M = 3.83$). Relevance and confidence are not significantly different from each other but significantly different from attention and satisfaction. The use of attention-getting strategies and satisfaction-generating strategies are significantly different from each other.

Table 4. Pairwise comparisons for teachers

(I) MS	(J) MS	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
Attention	Relevance	.431*	.081	.000	.211	.652
	Confidence	.177*	.061	.030	.011	.342
	Satisfaction	-.338*	.062	.000	-.507	-.169
Relevance	Attention	-.431*	.081	.000	-.652	-.211
	Confidence	-.254	.095	.056	-.513	.004
	Satisfaction	-.769*	.093	.000	-1.024	-.515
Confidence	Attention	-.177*	.061	.030	-.342	-.011
	Relevance	.254	.095	.056	-.004	.513
	Satisfaction	-.515*	.046	.000	-.640	-.389
Satisfaction	Attention	.338*	.062	.000	.169	.507
	Relevance	.769*	.093	.000	.515	1.024
	Confidence	.515*	.046	.000	.389	.640

*p<.05

b. Bonferroni correction

Additional results related to the way the students valued the use of MS were found through repeated measures one-way ANOVA. They indicated that the students perceived the four MS categories differently ($F(0, 390) = 59,390, p < .001$). Bonferroni post-hoc tests and pairwise comparisons indicated that there were significant differences between all subscales in the way the learners perceived the execution of the teachers' MS, except for relevance and confidence; the latter were not significantly different from each other (Table 5).

Table 5. Pairwise comparisons for students

(I) MS	(J) MS	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
Attention	Relevance	,558*	,057	,000	,405	,711
	Confidence	,383*	,068	,000	,202	,564
	Satisfaction	-,176*	,048	,002	-,305	-,047
Relevance	Attention	-,558*	,057	,000	-,711	-,405
	Confidence	-,175	,070	,083	-,363	,013
	Satisfaction	-,734*	,062	,000	-,901	-,567
Confidence	Attention	-,383*	,068	,000	-,564	-,202
	Relevance	,175	,070	,083	-,013	,363
	Satisfaction	-,559*	,059	,000	-,718	-,400
Satisfaction	Attention	,176*	,048	,002	,047	,305
	Relevance	,734*	,062	,000	,567	,901
	Confidence	,559*	,059	,000	,400	,718

*p<.05

b. Bonferroni correction

As to the second research question, there were significant differences between the students' perception of motivational strategies and those of the teachers ($p < .05$) for confidence and satisfaction. The difference between the students' and the teachers' view of attention-getting strategies and relevance-producing strategies was not significant. The teachers' scores were still higher than the students' scores for all ARCS categories and followed the same frequency pattern (Table 6).

Table 6. Teachers' and students' perceptions of motivational strategies

Strategies	Teachers (N=62)		Students (N=117)		T-test
	M	SD	M	SD	Sig.
Attention-getting	4.26	0.87	4.13	0.99	.19
Relevance-producing	3.82	1.05	3.57	1.13	.06
Confidence-building	4.08	0.98	3.74	1.14	.001*
Satisfaction-generating	4.59	0.68	4.30	0.93	.003*

*p < .05

To answer the third research question, one-way MANOVA was conducted to examine the role of L2 learners' proficiency in their perception of MS. There was no significant correlation between the students' English proficiency and the way they perceived their teachers' use of MS.

6.2 Observation results

The MOLT (Motivation Orientation of Language Teaching) observation data shows the frequency of each teacher's motivational practice in in-person and online classes. The average frequency for each motivational strategy used in each of the 14 observed classes was calculated and added to an Excel sheet to calculate frequencies (Appendix B).

Some strategies were underused, such as promoting instrumental values, tangible task product, creative element, and intellectual challenge. It should be noted that elements like tangible rewards and class applause were not used at all. Some elements increased in online classes, such as social chat, stating purpose, referential questions, individual competition, neutral feedback, process feedback, and self- or peer-correction. Other variables were totally absent in online classes, such as promoting instrumental values, promoting cooperation, promoting autonomy, creative element, and team competition. The students' motivated behavior, as measured through attention, engagement, and volunteering, could not be observed in online lessons; hence, it was removed from the analysis. The observer recorded some examples of strategies used by teachers in class (Table 7).

Table 7. MOLT examples

Strategy	Example
Effective praise	You guys are great, so you'll be able to handle that!
Referential questions	Does anyone have a comfort food?
Personalization	Who visited an English-speaking country?
Promoting instrumental values	We are lucky because we need to learn English!
Promoting integrative values	Did you use an Oyster card when you were in London?
Signposting	We are doing grammar review today.
Social chat	Have you had breakfast today?

As one major purpose of the observation was to find out what ARCS categories are used de facto in the classroom, MOLT elements had to be assigned to the four ARCS categories in order to check which category was used most. This was easily done, since Dörnyei's (2001) model, on which the MOLT scheme is based, follows Keller's (1987) model. The MOLT elements were divided into four groups, following the ARCS (see Table 4 above), in order to check which MS category was used more. It was found that attention-getting strategies ranked the highest in both in-person and online classes. These include social chat, arousing curiosity, and creative elements. Then comes relevance-producing strategies, with elements such as signposting, stating purpose, establishing relevance, promoting integrative and instrumental values, referential questions, and personalization.

The confidence-building strategies ranked third, with scaffolding, promoting cooperation or autonomy, pair work, and group work. The least used were satisfaction-generating strategies that include individual or team competition, neutral or process feedback, self or peer-correction, and effective praise (Table 8).

Table 8. In-class vs. online class observation

	Attention	Relevance	Confidence	Satisfaction
Online observation	1.34	0.67	0.43	0.42
In-class observation	0.53	0.36	0.24	0.23

The obtained results were entered into SPSS to obtain standardized z-scores that compare the MS means of the in-person and online class observations with the teachers' questionnaire results (Table 9). For Teacher 1, the z scores for both in-class and online observation are above the mean, while scoring below the average for the questionnaire. This indicates that either the teacher employed more MS during the observations or that he/she underestimated his/her use of MS. Teacher 2 used less MS in the online class but reported using more MS while answering the questionnaire. Teacher 3 also has a higher score for the questionnaire than for both in-class and online observations. It suggests that, together with Teacher 2, they might have the impression that they use MS more frequently or that they do so with classes other than the two observed. Teacher 4 scored below the average for all scores. Teacher 5 scored the lowest for the questionnaire, which might suggest a negative opinion of his/her efforts.

Table 9. Z scores

	In-class observation	Online observation	Questionnaire
Teacher 1	1.25	1.64	-0.40
Teacher 2	0.74	-0.93	0.97
Teacher 3	-0.71	-0.31	0.97
Teacher 4	-1.15	-0.54	-0.18
Teacher 5	-0.13	0.15	-1.37

7. Discussion

The present study investigated English teachers' use of motivational strategies in Hungarian high schools following Keller's (2010) ARCS model. It contributes to the field of English language motivation research in Hungary, as it provides a comparison between students' views and teachers' reported use of MS. The results have implications on the appropriate use of MS to improve language learning motivation.

The first research question aimed to find out the motivational strategies that teachers use most, following the ARCS categories. The teachers reported using all categories with a focus on satisfaction-generating strategies, followed by attention-getting strategies and then confidence-building strategies. The relevance-producing strategies ranked last with a significant difference.

The second question investigated whether students' perception of motivational strategies was aligned with their teachers' actual use of motivational strategies. Both students and teachers ordered the use of MS in the following way: satisfaction, attention, confidence, and relevance, only with a significant difference between relevance and confidence. The teachers reported using MS more frequently than the students reported them, with a significant difference for confidence-building and satisfaction-generating strategies. These findings align with previous studies that concluded that teachers' MS were not perceived by their students (Bernaus and Gardner 2008; Min and Chon 2020). Indeed, the teachers thought that they provided interesting and relevant activities in the classroom, but the students missed these MS. The reason could be related to the generation gap between teenagers and teachers, as they might have different perceptions of what is interesting or relevant. Moreover, the differences between the teachers' reported use of confidence-building and satisfaction-generating strategies and their students' perception were statistically significant. In other words, students do not think that teachers boost their confidence as much as teachers think they do. In a similar vein, teachers tend to overestimate their own attempts at acknowledging students' efforts. This could be attributed to the teacher's teaching style, focusing on the content of the lesson rather than on students' performance. It is also likely that students expect different forms of rewards than those used by their teachers.

The third question explored the influence of students' language proficiency on their perception of MS. The results indicated that there was no correlation between the students' English proficiency and their perception of MS. A possible explanation for this insignificant correlation is the participating students' homogeneity, as they all have high proficiency levels.

The observation results suggest that teachers lay more emphasis on students' attention. Teachers equally pay attention to stating the aims of the lesson and how it relates to previously learnt material. Confidence is ranked third, followed by satisfaction. The MOLT results of this study echo findings of previous studies that

many motivational strategies are underused (Ruesch, Bown, and Dewey 2012; Hsu 2020). The comparison of the observation results to those of questionnaires indicates that the teachers used the ARCS categories differently. In their questionnaire answers, the teachers reported using satisfaction-generating strategies the most, followed by attention, confidence, and then relevance. However, during the observation, the most frequently used strategy was attention, followed by relevance, confidence, and satisfaction, respectively. In addition, the z-score comparison for each teacher highlighted a difference between the questionnaire answers and their actual behavior in class. It should be noted, however, that a teacher's style might vary with different students, just as it differs in online instruction.

These findings may not be applicable to other schools nor to other learning contexts in which attitudes towards learning English are different. In fact, Wong (2014) claimed that MS are culturally bound after comparing her results found in the Chinese context to other contexts, including Hungary, where maintaining a positive learning environment, promoting students' confidence, setting personal goals, and providing a clear presentation of the learning content are classified as the most important strategies (Dörnyei and Csizér 1998).

8. Conclusion

This study aimed to investigate the relationship between the use of MS by teachers of English and students' perception of these strategies. The results indicate that Hungarian high school teachers tend to primarily rely on satisfaction-generating strategies (questionnaire data) and attention-getting strategies (observation data). These seem to be effective strategies, since students have good grades, indicating that they are successful language learners.

It should be noted that although the teachers and the students ranked MS categories in the same order, there was a significant mismatch between the teachers' and the students' perception of confidence-building and satisfaction-generating strategies. For the strategies to be effective in influencing students' motivation, they must be perceived as such by students. In order to evaluate their use of MS, teachers should reflect on their motivational practices. Feedback from learners in the form of direct questions or end-of-term evaluation questionnaires might be insightful. The ARCS framework can also help teachers further enhance their students' motivation if followed in their lesson plans.

The quantitative and qualitative methodology employed in this study yielded interesting results. However, some limitations are worth mentioning. First, the research context was narrow, as it included participants from just two schools that are considered the best in town. Hence, the findings may not be applicable to other contexts, such as less prestigious high schools with mixed-ability students. As suggested by Reeve (2005), motivation is a process, not an end-product.

Since students' motivation may fluctuate over time, it would be interesting to compare results over a whole semester. Moreover, due to teachers' unwillingness to be observed, their tight schedules, and the current COVID situation, only one observation was carried out for each in-person and online class. Indeed, one researcher was the only observer in this study, which might affect the reliability of the observations. Still, the findings of this study give an insight into English teachers' use of MS and students' motivation that could yield further research in the Hungarian context.

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Appendix A: Factor analysis

	Satisfaction-generating strategies	Attention-getting strategies	Relevance-producing strategies	Confidence-building strategies
Explained variance	32.45%	6.64%	5.23%	4.46%
Cronbach's alpha	.829	.778	.907	.701
1. T makes use of a variety of visual and auditory materials.		.422		
5. T asks a lot of questions and takes care in providing answers to my questions.		.508		
7. T varies teaching materials or presentation style, when necessary.		.522		
9. T uses a variety of teaching methods (e.g. singing in English, cooperative learning, project work, discussions).		.737		
10. T changes the tone of voice as needed (e.g. bold, funny, cute).		.479		
17. T uses anecdotes and stories s/he knows during the lessons.		.544		
11. T explains how each lesson is going to benefit us.			.701	
12. T explains what can be learnt from the course.			.640	
13. T explains in detail how successful learning is going to help me.			.573	
18. T clearly explains the relevance of the lesson to what I already know.			.527	
19. T clearly tells me how the new course content is related to what we know.			.579	
20. T explains course objectives and how the course is going to be run.			.634	
23. T tells me about what I will be able to do after successfully completing the lesson.			.589	
27. T allows us to control the pace of learning.				.517
28. T encourages us to study on our own.				.473
32. T allows me opportunities to help peers when I've completed my work.				.581
37. T provides symbolic rewards for students who have successfully completed activities.				.585
39. Exams are always from what I've learnt.				.499
21. T presents clear evaluation criteria before assessment.	.632			
29. T helps us to review and recycle parts of what we have learnt, when needed.	.661			

31.T provides positive response to assignments and problems that I've completed.	.697			
34.T compliments us when we provide the correct answer.	.709			
35. T rewards us when we win games or activities.	.440			
36. T shows personal interest when I work hard or when I complete an assignment successfully.	.563			

Appendix B: MOLT results

MOLT Variables	In-person Class	Online Class
Social Chat	0.52	1.12
Signposting	0.65	0.35
Stating Purpose	0.7	1.20
Establishing Relevance	0.34	0.08
Promoting Integrative Values	0.20	0.04
Promoting Instrumental Values	0.04	0
Arousing Curiosity	0.35	0.06
Scaffolding	0.73	0.23
Promoting Cooperation	0.17	0
Promoting Autonomy	0.43	0
Referential Questions	0.57	0.74
Pair Work	0.25	0.15
Group Work	0.68	0.18
Tangible Rewards	0	0
Personalization	0.24	0.15
Creative Element	0.04	0
Intellectual Challenge	0.05	0.04
Tangible Task Product	0	0.05
Individual Competition	0.37	1.05
Team Competition	0.10	0
Neutral Feedback	0.03	0.12
Process Feedback	0.05	0.24
Self/Peer Correction	0.25	0.62
Effective Praise	0.93	0.71
Class Applause	0	0
Attention	0.36	0
Engagement	0.41	0
Volunteering	0.82	0

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