



RESEARCH PAPER

Effect of Motivational Techniques used by Departmental Heads on University Teachers' Job Performance

¹Dr. Rukhsana Sardar, ²Dr. Asad Ali Manzoor* and Fakahr-UL-Zaman

1. Lecturer, Department of Education, University of Narowal, Punjab, Pakistan
2. Lecturer, Department of Education, University of Narowal, Punjab, Pakistan
3. Visiting Lecturer, Department of Education, University of Narowal, Punjab, Pakistan

***Corresponding Author:** asad.manzoor@uon.edu.pk

ABSTRACT

The primary aim of the study was to measure the effect of motivational techniques used by departmental heads of public and private sector university on their teachers' job performance. Apart of the study intends to identify the most frequently used motivational techniques by departmental heads. The researchers used quantitative research design to conduct the study. Under the umbrella of quantitative research, the cross-sectional research design was used. The researchers used multi stage simple random sampling to select the universities and their teachers. One-way ANOVA was used to measure the effect of motivational techniques on teachers' job performance the results of the study show that most of the time Head teachers have used trust as a motivation technique more than other techniques to enhance teacher's performance. The study also revealed a near negligible positive correlation existing between head teachers' desirous techniques and teachers job performance. The study recommends that head teachers' need to use all motivational techniques regularly to enhance job performance of university teachers.

KEYWORDS Job Performance, Motivation, Motivational Techniques

Introduction

Motivation is one of the most important components that define the quality of work done by a person. There are different ways in which motivation may be expressed, including praise, stimuli, rewards or incentives, and punishment. An increasing number of policymakers claim that improving the working atmosphere for teachers is one of the most important prerequisites for the better functioning of the education system. In this regard, leaders should gear their forces to create the best possible working conditions. Being able to direct, impact, or motivate the subordinates is of paramount importance to the leader. Whether they are managers of a business or administrators of a school, their success, as well as their subordinates' progress and performance, directly depends on the approach to leadership chosen by those in power (Abdullah et al., 2019).

Leaders in the current workplace often use motivating approaches to inspire teachers to achieve their potential, either as unique individuals or as a team, with the aim of achieving the best educational results in the most effective way possible. Originally, the concept of motivation implied an external source, but it currently assumes motivation stemming from the differences between any two people. The responsibility of institutional leaders is to recognize these differences and make the most of them (Arslan, 2018).

Psychologists have developed the concept of motivation to explain individual behavior. Motivation is the key to putting extraordinary effort into achieving organizational goals based on the need to meet personal needs. The process involves

three essential steps: awakening, leading, and maintaining behavior. Arousal is the desire and energy to act, direction reflects the choice of specific actions, and retention is the continuation of these actions until the outcome is as desired (Beckers et al., 2019)

Motivation leads to a favorable work environment. This is possible due to increased desire and ability to work. According to the course, as a force, motivation mobilizes an individual's efforts to achieve a specific goal. The motivation of employees is characterized by voluntary cooperation, desire to work, and increased confidence. Motivation meets employees' needs and helps them feel part of society and an organization with shared goals. Due to this, the level of use of workers' knowledge and experience is at an optimal level, which contributes to increased productivity and efficiency of the organization (Bergamin et al., 2019).

According to Broadbent and Poon (2015), motivation is the concept of processes, instinctive and rational, people use to satisfy basic drives, needs, and personal goals, which activation and energization bring human behavior. To motivate means to place in possession of means, ways, and opportunities. The great leader knows it is their responsibility to ensure an extremely motivating environment for followers. At the same time, teacher motivation depends on whether they desire to take action. Motivation is the ultimate present we have that dictates every part of our life. Many people don't know how to get this force under control. The right motivation technique might be the key to success, even for an already experienced and qualified individual. The lack of proper driving leads to decreased enthusiasm. People with a clear vision are in charge of their path, and people without vision are driven by external factors. The motivation technique switches these concepts. It is one of the vital skills for the leaders to understand how to motivate his or her subordinates because the success of an organization may depend on it (Bater & Jordan, 2017).

Therefore, in any developing country such as Pakistan, an educational system should become a basis of its further competition with other countries. A well-established structure can hardly be operated or even survive without highly motivated personnel, and teachers are among them. According to du Toit-Brits (2019) Teachers must be motivated in order to perform. Motivation is a set of mechanisms that promote actions to a certain purpose, especially when there was no or little movement to these objects before. There are inner sources as well as external motivators and stimulators. Generally speaking, if teachers increase their motivation, they would work better, thus improve the whole educational system.

Finding ways to motivate ourselves, a sense of meaning and purpose that we can bring into our own lives through simple motivational tricks will help us develop a vision and motivation in life, which finally takes us towards joyful and successful life. whereas; performance is the function of ability, given opportunities and the motivation or willingness to do something. Organizational performance as defined by Ivancevich in 2005 refers to the goods or services produced through employee-task completion reflecting an organization's objectives. Therefore, this study seeks to investigate the motivational strategies that department heads at public and private universities are using and their influence on teacher performance.

Literature Review

Motivation is too broad of a phenomenon, and many factors can be related to it. Furthermore, motivating student one of the most complicated things in teaching. A student's desire to learn can be influenced by different factors, either environmental or

personally related ones. Within this, there are the various factors including needs, goals, beliefs and attributes of self (predisposition), expectations both long-term and short term on consequences and feelings about actions as well as rewards or incentives. This knowledge should be used effectively to create that motivational environment in your classroom. At the heart of developing this environment is the teacher, whose motivation plays a key role in motivating students who are not self-motivated and in sharing its teaching objectives closely associated with educational institutions dominant goals (Engelschalk et al., 2016).

Concept of Motivation

"Motivation is the term used to describe those processes, both instinctive and rational, by which people feel compelled and decide to act in a certain way (Gandomkar & Sandars, 2018). Geng et al. (2019) defined the motivation, simply by why behaviors do arise to which is basically known as broader sense or meaning of explanation such as the speech like A, B act because C acts so. Most educators view motivation as a prerequisite for learning, with behaviorists indicating that it was one of the outcomes of learning and therefore ought to be learned.

Needs

Need: arises only when there is a lack or a shortage of essential element for the organism to maintain its equilibrium. Types of Needs: For instance, food, water are Physiological Needs Take the "Interaction with people" as an example of social need. Your other social needs could be to gain prestige, money, status trained affection and self-esteem. You come to know about your needs only when you don't get them. In broader terms, needs are classified as primary, basic or physiological needs or secondary and social needs (Grunschel et al., 2016).

Motives

Motive refers to goal-oriented action (or) the internal conditions that incite an organism to behave in particular ways. The term is most often used to describe some kind of internal state in an individual that not just motivates, but predisposes him or her into doing something for a particular purpose. They can be defined as those impulses directing human action towards the end. At its core, a motive answers the question of why out of different potential behaviors a person will choose to perform this specific one (Grunschel et al., 2016)

Goal

A goal is what you think will meet a need or want. Most of our activities are to fulfill behaviors or needs and, therefore, goals. But occasionally, what motivates us to act is not an external result we wish to obtain but an internal impetus. Finally, these acts are in and of themselves highly rewarding and pleasurable (Jossberger et al., 2018).

Drive

Psychological feelings that can or don't start with physiological grounds. These thoughts are what the person genuinely desires and/or wants; they present a reflection of powerful internal urges (Kilis & Yildirim, 2018).

Characteristics of Motivation

Another is morale which is defined as the spirit and overall attitude among employees or simply how they feel about coming to work. If workers are happy, friendly and self-confident then high morale is visible. On the contrary low moral can be recognize by if your employees are not happy, they are often uncomfortable or annoyed and dissatisfied as well. If morale high, motivation also high. If morale low, then it is the same with a level of motivation as well. In layman's language, morale represents an individual attitude satisfied with happiness and a good feeling which includes zeal, hope and confidence (Kim et al., 2018).

Importance of Motivation

It is essential to maintain the quality of all services in organizations for its successful accomplishment of objectives. And that for many managers is a significant challenge. How do you create the desire to want it? There are many theories related to motivation and some of them may be inter-twined, however, it seems that the two central types of motivation get mixed: the one which is given by the job itself and the other one to immerse into a new activity. This is necessary in both cases for multiple reasons and managers have to reflect on their impact which will consist of several different types (Lengua, 2003).

The reason for its importance is that an individual could know everything in the world and have all of the skills and abilities necessary to dominate their job, but they would not perform at their fullest if they lacked intrinsic motivation. Again, employees have needs that must also be met to avoid demotivation. This will lead workers misbehave and take negative actions such as absenteeism, doing poor quality work, showing up late to work, miss deadliness and express aggravation; resulting declines in organizations performance and reputation. Organizations will then need to employ a mixture of incentives such as intrinsic and extrinsic motivators and more systematic approaches focused on performance management, in order to both retain existing personnel and acquire new ones whilst motivating them to enhance their effort, satisfaction and commitment (Mahlab, 2020).

Types of Motivation

Extrinsic Motivators

External motivators which arise from the rewards such as salary, work atmosphere, job security and promotions etc by his organization. And also it may extend to colleagues of an individual as well... individuals have no contractual control over such rewards because they are actual items and conventionally, the organization stipulates who gets what (Metallidou & Vlachou, 2007).

Intrinsic Motivators

These motivators are based on the relationship of an individual with his job and also caring for personal needs and wants. These are performance-related rewards e.g. accomplishing goals, receiving attention or awareness, accepting additional responsibilities and being given more opportunities for promotion (Miele & Scholer, 2018).

Performance Management Approaches

Structured approach by which an organization is run to engage and enable employees, both individually and together, in the pursuit of achieving its organizational mission and shared goals. These methods include planning the work and setting expectations, monitoring performance on a regular basis, developing employee's skills and abilities, rating performance periodically and rewarding or recognizing high performers (Mitchell et al., 2012).

Teacher's Job Performance

Performance in terms of job is such a critical issue that has been focused and carried out by scientists since many years. It comprises of two distinct types of employee behavior that are essential for the accomplishment of an organization: The first type is the task performance comprises not only those activities that are directly related to output generation but different kinds of novel, unpredictable tasks focused on supporting or expanding core technological processes within organizations. Formal organizations often, but not always, reward and sanction these behaviors. On the other hand, Contextual performance involves all those regulations which lead to enhance well-being but are beyond employees' core job responsibilities. Nevertheless, these acts having a positive effect on developing social, psychological, and organizational contexts. Essential drivers: These terms refer to the task activities and processes made possible by them. It is sometimes divided into two specific dimensions: interpersonal facilitation and job dedication (Schwinger & Stiensmeier-Pelster, 2012).

Research Methodology

The researchers used a descriptive survey aimed at collecting comprehensive knowledge of the motivational techniques used by institutional heads and their corresponding influence on teacher performance. It employed a cross-sectional design whereby data was obtained as at one point in time from different or varied categories of respondents. Its objectives were to investigate the partnership among two variables including motivational strategies adopted by school leaders and outcomes achieved by teachers.

Population

Population of the Study The population for this study consisted all the universities in Lahore city public and private sectors. Similarly, it all department of head-of-the-units under the universities were taken as population for this study.

Sampling Technique

The study used a multi-stage random sampling technique. "At first, six universities from Lahore were chosen on merit basis from both public and private sectors," he added. This sampling strategy included selecting three universities in each sector, randomly. Secondly, in each of the selected universities, three faculties were chosen at random also. Speaking stage This was to ensure that I had varied representation across the academic board. Then in the third stage, three departments from each faculty chosen at previous stage were randomly selected. This complex design was created to enable the most comprehensive sampling strategy from all universities that had faculties or departments participating in this study.

Data Collection and Analysis

Two different self-developed questionnaire one for motivational techniques and other is for job performance were used to collect the data of this study. The reliability and validity of the research instrument was ensured through piloting on the same nature of respondents. The researcher ensure the participants that, their identity will be kept anonymous and never be revealed at any stage of this research. Data was analyzed by different statistical techniques i.e. descriptive statistics and one-way ANOVA the nature of data and in association to objectives of the study. Table showing the statistics to be analyzed of proposed data was prepared.

Data Analysis and Interpretation

This was related to focusing on how research questions and study objectives are aligned with the chosen methodologies. This layout of the chapter was intended to provide an easy path connected reading these links. The data instruments were two in number; The first instrument was employed in collecting information about the teaching motivational strategies, it is distributed to all departments heads in different public and private university. The second device aimed to measure the conduct of teachers by contacting a group of students selected at random from other departments within the university.

Descriptive analytics was used to interpret the motivating methods used by departmental heads in public and private institutions. The Pearson product-moment correlation coefficient (r) was also computed between the motivational techniques employed by department heads and the performance of teachers at 0.49. Moreover $r=.56$ (+ significant; $N =75$, $p <.01$), both figures indicate a relatively strong relationship.

Independently, presence gender differences of heads department by using Independent Sample t-test to investigate whether the motivational techniques significantly differ among them or not. Independent sample t-test and One-way ANOVA were also applied to compare the motivational techniques between heads of public & private universities.

The main objective of this part was, therefore, to methodically investigate and evaluate the data derived from these tools stepwise in order to adequately deal with all research questions and objectives associated with the conduction of this study as presented.

Results and Discussion

Table 1
Mean and Standard Deviation of Motivational Techniques used by the heads of Public and Private Universities

Factors of Motivational Technique	N	Mean	Standard Deviation
Growth Opportunities	54	2.9259	1.04343
Career Development	54	3.7222	1.15606
Empathy with Employees	54	3.3056	.72142
Personal Support for Employees	54	3.6620	.60687
Praise and Recognition	54	3.6250	.78119
Incentives & Rewards	54	3.6204	.75664
Working Environment	54	3.8611	.90812

Employment Security	54	3.6852	.78486
Respect for Employees	54	3.5617	.77655
Status	54	4.5000	.69364
Promotion	54	4.5741	.49913
Trust	54	4.6852	.41546

The scale assessed how head teachers employ various motivational techniques. According to Table 1, the mean and standard deviation for the motivational technique 'opportunity and growth' are 2.9259 and 1.04343 respectively. This suggests that head teachers use this technique infrequently compared to others.

For empathy with employees, the mean and standard deviation are 3.3056 and 1.15606. This indicates that head teachers frequently employ this technique compared to 'opportunity and growth'.

Regarding treating employees with respect, the mean and standard deviation are 3.5617 and 0.77655. This mean suggests that head teachers often utilize this technique compared to both 'opportunity and growth' and empathy with employees.

The mean of rewards and incentives 3.6204, with a standard deviation corresponding to S.D.=0.75664, support the conclusion that head teachers frequently use this style". Also, this way is using more than other ways like giving a chance to grow, understand with employees and treating the employee directly.

With regards to career development the mean of 3.7222 with a standard deviation of 1.15606 indicates that this motivational technique is really used among head teacher. Broadly speaking, this technique appears to be common when all other motivational methods (i.e., expanding opportunities for development, showing empathy with employees' situations, treating people fairly and respectfully giving rewards and incentives being personally supportive giving recognition) are compared. For the third aspect (security of employment), the mean is 3.6852 where the standard deviation is 0.78486. Later the reports showed a moderately positive perception of overall stability within their employment from those 30.6 percent of respondents.

This indicates that head teachers commonly employ this particular motivational technique more frequently than others such as providing opportunities for growth, showing empathy towards employees, treating them with respect, offering rewards and incentives, providing personal support, giving recognition and praise, and focusing on career development. Regarding the working environment, the average rating is 3.8611 with a standard deviation of 0.90812. This suggests that the said motivational approach is consistently implemented by head teachers in comparison to other methods like fostering opportunity for growth, demonstrating empathy, showing respect, offering rewards, providing personal support, giving recognition, promoting career development, and ensuring job security.

On the status, mean is 4.5000 and standard deviation for that row are equal to 0.69364 as well. From this, head teachers can be seen to apply extrinsic motivation much more than they use opportunity for growth, empathy with employees, treating employees with respect, rewards and incentives, personal support accountability by recognition & praise career development security of employment working conditions.

For promotion, the respective mean and standard deviation are 4.5741 and 0.49913 (respectively) This means that head teachers use this motivational technique more often than opportunity for growth, empathy with employees, treating employees

with respect, rewards and incentives, personal support by the superiors or colleagues senior to them in office hierarchy., recognition and praise whereas somewhat less often than career development, security of employment; working environment culture and status.

The mean of trust is 4.6852 and has a standard deviation of 0.41546 This particular model of motivation has a higher mean value, which indicates that it is used more consistently by the head teachers than other techniques. This implies that they use this method to boost the performance of teachers as opposed to other motivational plans extensively

Table 2
Means, Standard Deviation and Inter-correlations for Scores between head teachers' motivational techniques and the performance of the teachers

Measure	Mean	SDs	1	2
Motivational Techniques	115.22	12.302	-	
Teachers' performance	17.84	8.614		0.325

**p≤0.05 (Sig. 2-tailed)

Now the study examined relations between head teachers' motivational methods, as assessed by the Motivational Techniques Questionnaire and teacher performance, according to Teacher's Performance Questionnaire using Pearson Product Moment Correlation Coefficient. Preliminary analyses were also conducted which indicated that all assumptions of normality, linearity and homoscedasticity had been fulfilled. Results demonstrated a small positive correlation between the variables, $r = 0.325$, $p \leq 0.05$, which implies that modestly greater amounts of motivational techniques were associated with somewhat higher levels of teacher performance. Based from these analyses, this study concludes that there is a small positive correlation between how head teachers use motivation techniques and the resulting performance level of their teachers.

It is the motivation that drives our emotions, thoughts and actions. It is a pattern in which inspired people eagerly deploy their attempts, continuously try for their objectives until they accomplish them. A t-test was run to determine how head teachers at both public and private universities of Lahore use motivational techniques for the increased performance of teacher. We pay particular emphasis here upon the understanding of the impact in terms of teacher effectiveness.

Discussion

People work for all kinds of reasons. These may be acquiring financial benefits, occasional challenges and having a guarantee of safety. Each person wants something different from the job they have in an organization, that affects their motivation significantly as well. Motivation is really important to any organization because productivity and quality of work are directly affected by it. A critical factor in determining whether an organization is highly successful than another or if others are relatively less successful is how well do they motivate its members to remain productive Trautner and Schwinge (2020) in their study also support the above argument. And finally, it is important that leaders understand as to what motivates each individual irrespective job based context in order to have motivated and producing workforce as also stated in the research study of (Trenshaw et al., 2016).

Thus it was also noted that trust 'was the most commonly employed of all these techniques by head teachers, with comparatively few reports of applied growth opportunities, empathy, respect, rewards or personal support and face-to-face recognition meted out in schools'. In addition, to ascertain the extent of the relationship between these motivational strategies and teachers' overall performance in carrying out their duties, a correlation method referred to as Pearson Product Moment Correlation (r) was also considered. The study results further showed that there was a simple positive correlation between motivational strategies adopted by head teachers as well as the performance of their teachers. The results showed that there was a weak positive relationship between the motivation strategies implemented by head teachers and overall teacher's performance as also stated in the study conducted by (Wang & Hou, 2015).

An independent sample t test was also used to determine whether male and female head teachers vary in the motivation approach they use improve performance among teacher's. The results also showed that, for instance, these techniques were not used to the benefit of improving their teacher's performance among male and female head teachers as there was no statistically significant difference these findings also support the findings of the study (Engelschalk et al., 2016).

This research sought to examine the use of different motivational strategies by head teachers in public as compared with private universities to enhance teacher performance. The researchers used an independent sample t -test to analyze the results. Results are indicating that public and private university teachers do not differ significantly as for motivational techniques like opportunity available to grow, career building steps, empathy gesture toward employees' problem, personal support given or recognition and praise offered to the employees; rewarding practices encouragement incentives provided, working environment-relaxation etc., safe guard of employees' policies or treating them with respect and status. However, public and private university teachers differed significantly in their use of motivational techniques for promotion and trust the similar findings were also part of the study by (Grunschel et al., 2016).

Conclusion

On the basis of above discussion, it can be concluded that most of the time Head teachers have used trust as a motivation technique more than other techniques to enhance teacher's performance. The study also revealed a near negligible positive correlation existing between head teachers' desirous techniques and teachers job performance. An interesting fact is that as for gender differences, the study indicates no substantial gap in motivational practices between male and female teachers based on a number of factors such as opportunity to grow, career development, empathy with employees, personal support and recognition and praise provision rewards and incentives working environment employee safety treatment status promotion trust. Similarly, motivational techniques used by teachers that came from public and private universities did not significantly vary on the opportunity for growth, career development or salary promotion; empathy with employees or their concerns; personal support as well as due regard to his/her dignity. recognition and praise; rewards and incentives based on performance; working conditions (working hours); employee security status of work – either he/she is trustful job holder/responsible worker etc.-one who can be fully trusted foster children of loyalty. expectations significant others have a say in one's appointment fair treatment. However, a significant difference in the experience between public and private university teachers was found when comparing promotion and trust.

Recommendations

On the basis of above conclusions, following recommendations can be suggested;

1. Head teachers need to use all motivational techniques instead of using a single or dominant one to keep motivating all the teachers.
2. The departmental heads need to be polite, friendly and guide for their teachers so that, teachers may be motivated and work beyond their capacity.
3. Departmental heads in Public sector universities may need to provide rapid opportunities of promotion to their teachers to enhance their job performance and to avoid job switching.

References

- Abdullah, J., Mohd-Isa, W. N., & Samsudin, M. A. (2019). Virtual reality to improve group work skill and self-directed learning in problem-based learning narratives. *Virtual Reality, 23*(4), 461-471.
- Arslan, G. (2018). School-based social exclusion, affective wellbeing, and mental health problems in adolescents: A study of mediator and moderator role of academic self-regulation. *Child indicators research, 11*(3), 963-980.
- Bater, L. R., & Jordan, S. S. (2017). Child routines and self-regulation serially mediate parenting practices and externalizing problems in preschool children. *Child & Youth Care Forum*,
- Beckers, J., Dolmans, D. H., Knapen, M. M., & Van Merriënboer, J. J. (2019). Walking the tightrope with an e-portfolio: Imbalance between support and autonomy hampers self-directed learning. *Journal of Vocational Education & Training, 71*(2), 260-288.
- Bergamin, P. B., Bosch, C., Du Toit, A., Goede, R., Golightly, A., Johnson, D. W., . . . Lubbe, A. (2019). *Self-Directed Learning for the 21st Century: Implications for Higher Education*. AOSIS.
- Broadbent, J., & Poon, W. L. (2015). Self-regulated learning strategies & academic achievement in online higher education learning environments: A systematic review. *The Internet and Higher Education, 27*, 1-13.
- du Toit-Brits, C. (2019). A focus on self-directed learning: The role that educators' expectations play in the enhancement of students' self-directedness. *South African Journal of Education, 39*(2). 106-121
- Engelschalk, T., Steuer, G., & Dresel, M. (2016). Effectiveness of motivational regulation: Dependence on specific motivational problems. *Learning and individual differences, 52*, 72-78.
- Gandomkar, R., & Sandars, J. (2018). Clearing the confusion about self-directed learning and self-regulated learning. *Medical Teacher, 40*(8), 862-863.
- Geng, S., Law, K. M., & Niu, B. (2019). Investigating self-directed learning and technology readiness in blending learning environment. *International Journal of Educational Technology in Higher Education, 16*(1), 1-22.
- Grunschel, C., Schwinger, M., Steinmayr, R., & Fries, S. (2016). Effects of using motivational regulation strategies on students' academic procrastination, academic performance, and well-being. *Learning and individual differences, 49*, 162-170.
- Jossberger, H., Brand-Gruwel, S., van de Wiel, M. W., & Boshuizen, H. (2018). Learning in workplace simulations in vocational education: A student perspective. *Vocations and Learning, 11*(2), 179-204.
- Kilis, S., & Yıldırım, Z. (2018). Investigation of community of inquiry framework in regard to self-regulation, metacognition and motivation. *Computers & Education, 126*, 53-64.

- Kim, Y.-e., Brady, A. C., & Wolters, C. A. (2018). Development and validation of the brief regulation of motivation scale. *Learning and Individual Differences, 67*, 259-265.
- Lengua, L. J. (2003). Associations among emotionality, self-regulation, adjustment problems, and positive adjustment in middle childhood. *Journal of Applied Developmental Psychology, 24*(5), 595-618.
- Mahlaba, S. (2020). Reasons why self-directed learning is important in south africa during the Covid-19 pandemic. *South African Journal of Higher Education, 34*(6), 120-136.
- Metallidou, P., & Vlachou, A. (2007). Motivational beliefs, cognitive engagement, and achievement in language and mathematics in elementary school children. *International journal of psychology, 42*(1), 2-15.
- Miele, D. B., & Scholer, A. A. (2018). The role of metamotivational monitoring in motivation regulation. *Educational Psychologist, 53*(1), 1-21.
- Mitchell, J. I., Gagné, M., Beaudry, A., & Dyer, L. (2012). The role of perceived organizational support, distributive justice and motivation in reactions to new information technology. *Computers in Human Behavior, 28*(2), 729-738.
- Schwinger, M., & Stiensmeier-Pelster, J. (2012). Effects of motivational regulation on effort and achievement: A mediation model. *International Journal of Educational Research, 56*, 35-47.
- Trautner, M., & Schwinge, M. (2020). Integrating the concepts self-efficacy and motivation regulation: How do self-efficacy beliefs for motivation regulation influence self-regulatory success? *Learning and Individual Differences, 80*, 101890.
- Trenshaw, K. F., Revelo, R. A., Earl, K. A., & Herman, G. L. (2016). Using self-determination theory principles to promote engineering students' intrinsic motivation to learn. *International Journal of Engineering Education, 32*(3), 1194-1207.
- Wang, W.-T., & Hou, Y.-P. (2015). Motivations of employees' knowledge sharing behaviors: A self-determination perspective. *Information and Organization, 25*(1), 1-26.