

# Unveiling the Essential Features of an Enneagram Coaching System for Teacher Instructional Abilities Development: A Survey Analysis Approach

Waralee Chimthongdee,  
Prakob Koraneekij and Jaitip Na-songkhla  
Chulalongkorn University, Thailand  
Corresponding Author, E-mail: kruwaralee@gmail.com

\*\*\*\*\*

## Abstracts

This study aimed to investigate teachers' perceived features of an e-coaching system and examine any differences in preferences based on teacher Enneagram personality types. The study included 386 participants selected through multistage random sampling. Online survey questionnaires were utilized to collect data on participants' demographic information and their perceived preferences for e-coaching system features. Descriptive statistics and ANOVA were employed to analyze the data. The results revealed four main categories of perceived e-coaching features: 1) well-documented teacher resource library, 2) coaching appointment management tool, 3) tracking tool, 4) learning sharing, and 5) system accessibility. Multiple comparison analyses indicated that preferences for the tracking tool and learning sharing categories varied based on respondents' Enneagram types at a significant level at 0.05, while no significant differences were observed for the other three categories.

**Keywords:** Enneagram Personality; E-Coaching; Instructional Ability

## Introduction

In the rapidly evolving landscape of education, the role of teachers has become increasingly complex and demanding (Sharma, 2017: 10-14). To meet the challenges of this ever-changing environment, teachers require continuous professional growth and development (Noom-Ura, 2013: 139-147). Traditionally, professional development opportunities for teachers have often been limited to occasional workshops or one-size-fits-all training sessions, which may not effectively address the specific needs and contexts of individual teachers (Rogers & Soyka, 2004: 7-22).

However, with the advent of technology, new avenues for teacher professional development have emerged, providing promising possibilities for personalized and ongoing support. E-coaching systems, which leverage digital platforms and communication technologies, offer unique opportunities to provide targeted guidance, feedback, and support to teachers in their professional journey (Boyce & Clutterbuck, 2010: 285-315). These systems enable teachers to engage in reflective practice, collaborate with peers, access resources, and receive individualized coaching remotely, transcending the limitations of time and geographical constraints (Anthony et al., 2011: 46-64).

E-coaching systems offer several advantages over traditional professional development approaches. Firstly, they provide teachers with the flexibility to engage in professional learning at their own pace, enabling them to balance their teaching responsibilities with ongoing professional development (Ochoa & Gutierrez, 2018: 16-23.). Secondly, e-coaching systems have the potential to facilitate personalized learning experiences, as they can be tailored to meet

the unique needs, interests, and goals of individual teachers (Morris et al., 2021:1). Through the use of data analytics and adaptive technologies, e-coaching systems can offer targeted and evidence-based support, guiding teachers towards areas of improvement and growth (Sutarto et al., 2020: 207-224). Moreover, e-coaching systems have the potential to foster a sense of community and collaboration among teachers, transcending the boundaries of physical locations and facilitating the sharing of best practices (Anthony et al., 2011: 46-64). Through online platforms and communication tools, teachers can engage in virtual communities of practice, exchange ideas, and receive feedback from peers and experienced coaches (Neerincx et al., 2013:1). This collaborative aspect of e-coaching systems enhances professional learning and promotes a culture of continuous improvement within the teaching profession.

Despite the numerous advantages offered by e-coaching systems, it is important to acknowledge their limitations. Most e-coaching systems lack of personalized and holistic support that teachers may receive solely through digital platforms (Killion, 2012: 273-295). While e-coaching systems can provide targeted guidance and resources based on data analytics and adaptive technologies, they may not fully address the individual emotional and psychological needs of teachers (Neerincx et al., 2013:1). Teaching is a deeply human profession, and teachers often require support that goes beyond the technical and instructional aspects of their work.

This is where the integration of Enneagram principles can serve as a valuable solution. The Enneagram offers a framework for understanding personality patterns, motivations, and underlying fears and desires (Riso & Hudson, 2000:1). By integrating Enneagram principles into e-coaching systems, teachers can develop a deeper level of self-awareness, exploring their strengths, challenges, and areas for growth in a holistic manner (Thomson, 2009: 138). The Enneagram framework can help teachers identify their emotional triggers, biases, and blind spots, enabling them to enhance their instructional abilities and overcome personal limitations (McGuinness, 2017:1).

Additionally, the Enneagram fosters empathy and understanding of others, which is crucial for effective teaching and collaboration (Asdornnithee, 2010: 87). By recognizing and appreciating the diverse perspectives and motivations of colleagues and students, teachers can create inclusive learning environments and tailor their instructional approaches to meet the needs of a diverse student body (Luckcock, 2007: 127-145). The integration of Enneagram principles into e-coaching systems can provide opportunities for teachers to deepen their understanding of themselves and others, facilitating meaningful connections and collaboration within virtual communities of practice (Clutterbuck, 2022:1).

Furthermore, the Enneagram's emphasis on personal growth and transformative learning aligns with the ongoing professional development goals of teachers. By engaging in self-reflection and challenging ingrained patterns, teachers can continuously refine their instructional practices, enhance their job satisfaction, and develop a greater sense of fulfilment in their profession (Wagner, 2010:1). Integrating Enneagram principles into e-coaching systems can support teachers in their personal growth journeys, promoting a holistic approach to professional development that goes beyond the acquisition of technical skills.

Given the benefits of Enneagram in e-coaching system, this paper aimed to explore teachers' perceived features of an e-coaching system based on their Enneagram personality types.

## Research Objectives

1. To explore teachers' perceived features of an e-coaching system
2. To compare perceived features based on teacher Enneagram personality types

## Literature Review

### Teacher Instructional Abilities Components

Teacher instructional abilities play a crucial role in the education system, as they directly impact students' learning outcomes and overall educational quality (Susilawati & Nilakusmawati, 2018:1). The effectiveness of teachers lies in their competence to impart knowledge, manage classrooms, assess student performance, and create learning environments that foster growth and development (Cimer, 2007: 20-44).

The components of teachers' instructional abilities have changed in response to global, societal, and educational policy changes. These changes include educational reforms that require teachers to utilize learner-centred teaching approaches, emphasize appropriate assessment and evaluation, develop and utilize instructional technology, and foster advanced skills in students for the 21st century (Brown et al., 2011:1). Teachers' instructional abilities may vary and evolve with global changes, but they can be grouped and summarized into important components that establish standards for teachers' professional practices (Coppola, 1996: 1-9; Magen-Nagar & Peled, 2013: 1-34; Noble, 2012:1; Rector, 2016:1; Villalon, 2016: 429-439), as follows.

**1. Application and evaluation of the curriculum:** Teachers should be able to effectively apply and evaluate the curriculum to ensure that learning outcomes are met.

**2. Development of lesson plans for 21st-century learning:** Teachers should be able to design and develop effective lesson plans that incorporate 21st-century skills, promote communication, classroom management, and utilize research activities in the classroom.

**3. Assessment and evaluation:** Teachers should have the ability to measure and assess student learning outcomes using various methods. They should be skilled in creating and using assessment tools to evaluate student learning and inform instructional development.

**4. Selection and development of learning resources:** Teachers should be able to select and develop appropriate learning resources, including multimedia and information and communication technology (ICT) tools to enhance student learning.

**5. Differentiated instruction and individual support:** Teachers should be able to manage diverse learners, create a supportive learning environment, provide individualized guidance and support to students, and foster a positive atmosphere in the classroom.

### Theoretical Foundations of the Enneagram

The Enneagram presents a comprehensive framework for understanding personality patterns and motivations. It classifies individuals into nine distinct types based on their dominant motivations, core fears, and underlying desires (Riso & Hudson, 2000:1). The Enneagram emphasizes self-awareness, offering insights into an individual's habitual patterns, strengths, challenges, and areas for growth. By understanding one's Enneagram type, teachers can gain valuable insights into their instructional practices and make targeted improvements (Northern, 2021:1).

### **1. Self-Awareness and Instructional Improvement**

The Enneagram's focus on self-awareness has been identified as a key benefit for teachers. By exploring their Enneagram type, teachers can gain deeper insights into their instructional approaches, reactions to stressors, and biases. This heightened self-awareness enables them to identify and address their limitations, leading to enhanced instructional practices and increased student engagement (Gardner, 2021:1). Furthermore, self-awareness facilitates reflective practice, empowering teachers to critically evaluate their pedagogical choices and adapt their strategies to meet the needs of diverse learners (Badger).

### **2. Empathy and Understanding of Others**

Coaching teachers using Enneagram principles also contributes to the development of empathy and understanding of others. By exploring the Enneagram types of their colleagues and students, teachers can gain a deeper appreciation for diverse perspectives and motivations. This understanding allows teachers to foster inclusive learning environments that accommodate the needs and preferences of their students (Kilag et al., 2023: 172-181). Additionally, the Enneagram serves as a tool for enhancing communication and collaboration among teachers, leading to more effective professional learning communities (Lee, 2015: 235-246).

### **3. Personal Growth and Transformative Learning**

The Enneagram's emphasis on personal growth aligns with coaching goals of fostering transformative learning experiences. By promoting deep self-reflection and challenging ingrained patterns, the Enneagram enables teachers to expand their instructional repertoire and cultivate a growth mindset. This personal growth journey leads to increased job satisfaction, professional fulfilment, and resilience in the face of challenges (Penn-Edwards et al., 2016: 10-21). Moreover, the Enneagram offers teachers the opportunity to develop a holistic understanding of themselves, integrating their personal and professional identities to create a more authentic teaching practice (Thornton, 1996: 42-55).

### **The Nine Enneagram Personality Types**

Below are brief descriptions of the nine Enneagram personality types (Riso & Hudson, 2000:1)

**Type 1 - The Perfectionist/Reformer:** They have a strong internal drive to do things right and hold themselves to high standards. They are principled and organized and often strive for perfection. They are motivated by a desire for integrity and can be critical of themselves and others.

**Type 2 - The Helper/Giver:** They are empathetic, warm, and nurturing individuals who have a deep need to be loved and appreciated. They often put others' needs before their own and seek validation through helping and supporting others.

**Type 3 - The Achiever/Performer:** They are ambitious, self-assured, and success-oriented. They are driven by a desire to achieve their goals, excel in their chosen fields, and be recognized for their accomplishments. They are often adaptable and highly focused on their public image.

**Type 4 - The Individualist/Romantic:** They are introspective, expressive, and value authenticity. They have a deep longing to find their unique identity and meaning in life. They can experience intense emotions and are often drawn to creative pursuits.

**Type 5 - The Investigator/Observer:** They are analytical, curious, and seek

knowledge and understanding. They have a strong need for privacy and can withdraw emotionally to conserve their energy. They are often independent thinkers and enjoy diving deep into intellectual pursuits.

**Type 6 - The Loyalist/Skeptic:** They are loyal, responsible, and value security and guidance. They can be cautious and seek support and reassurance from others. They have a strong sense of loyalty and can also experience anxiety and doubt.

**Type 7 - The Enthusiast/Epicure:** They are adventurous, spontaneous, and seek new experiences and possibilities. They are optimistic and enjoy staying busy and avoiding pain or limitations. They have a fear of missing out and can struggle with commitment.

**Type 8 - The Challenger/Protector:** They are assertive, confident, and value control and power. They have a strong desire to protect themselves and others from vulnerability and injustice. They can be direct and confrontational in their communication.

**Type 9 - The Peacemaker/Mediator:** They are easygoing, agreeable, and seek inner and outer harmony. They often avoid conflict and strive to maintain peace and comfort. They can struggle with indecisiveness and have a tendency to merge with others' agendas.

## Research Methodology

The survey research method was employed in this study. The data was collected using online questionnaires. The data collection duration was approximately one month, specifically from March to April 2023.

### Sample

The respondents for this study were selected through a multi-stage sampling procedure. Initially, the researchers divided the regions into five distinct parts, namely the northern, northeastern, central, and eastern regions. Subsequently, a random selection was conducted, resulting in the inclusion of 15 provinces in the study. Within each selected province, four schools were randomly chosen, yielding a total of 60 schools. From each of these selected schools, eight respondents were randomly selected as participants, thereby establishing a cumulative sample size of 480 individuals.

Following data collection, the researchers carefully examined the questionnaire responses and eliminated any invalid or incomplete submissions. Consequently, the final analysis was based on a total of 386 valid questionnaires from the respondents, which constituted the dataset for further analysis.

### Research instruments

The research instrument employed in this study consisted of survey questionnaires, which were developed based on existing literature related to coaching, enneagram principles, and information and communication technology (ICT). The questionnaires encompassed three distinct sections: 1) respondent demographic information, 2) enneagram type identifier, and 3) preference of coaching system features.

To ensure the validity of the questionnaires, three experts were invited to evaluate the appropriateness and relevance of the content. The evaluation was conducted using the Index of Consistency (IOC). The results obtained from the IOC analysis revealed that the consistency indices for all the questions ranged from 0.67 to 1.00, indicating a satisfactory level of consistency and content validity.

Next, a pilot study was conducted to assess the questionnaires' reliability among a sample of 30 respondents who had similar characteristics to the target population. Following

the pilot study, the researchers employed Cronbach's alpha coefficient to measure the reliability of the questionnaires. The results demonstrated a high degree of reliability, with an alpha coefficient value of 0.92, which further affirmed the questionnaires' consistency and reliability, thereby validating its appropriateness for data collection purposes.

### Data analysis

Descriptive statistics were employed to analyze the respondents' demographic information. The researchers also used ANOVA to explore the respondents' preference for e-coaching system features based on their Enneagram personality types.

## Research Findings

### Part 1: Demographic information of the respondents

Based on Table 1, a large majority of the participants in the study were female, comprising 87.00% of the total sample. In terms of age distribution, the highest proportion of respondents fell within the 25-35 age range, accounting for 36.8% of the participants. Additionally, a notable segment of teachers reported a teaching workload of 21-25 hours per week, making up 27.50% of the sample. With respect to teaching experience, the majority of teachers had accumulated 6-10 years of experience, representing 22.08% of the respondents.

Remarkably, when we looked at the Enneagram types of the respondents, it was found that Type 2 – The Helper was the most prevalent type, comprising 29.80% of the participants. For a comprehensive overview of the remaining demographic information of the respondents, please consult Table 1.

**Table 1** Respondents' demographic information

Data	Categories	Number	Percentage
Gender	Male	50	13.00
	Female	336	87.00
Total		386	100.00
Age	Below 25 years	40	10.40
	25-30 years	71	18.40
	31-35 years	71	18.40
	36-40 years	58	15.00
	41-45 years	63	16.30
	46-50 years	37	9.60
	Above 50 years	46	11.90
Total		386	100.00
Teaching hours per week	1-5 hours	27	7.00
	6-10 hours	50	13.00
	11-15 hours	32	8.30
	16-20 hours	78	20.20
	21-25 hours	106	27.50
	26-30 hours	93	24.10
Total		386	100.00
Teaching experience	Below 1 year	14	3.60
	1-2 years	48	12.40
	3-5 years	61	15.80

Data	Categories	Number	Percentage
	6-10 years	88	22.80
	11-15 years	62	16.10
	16-20 years	43	11.10
	Above 20 years	70	18.10
Total		386	100.00
Enneagram Personality Type	Type 1	14	3.60
	Type 2	115	29.80
	Type 3	33	8.50
	Type 4	27	7.00
	Type 5	30	7.80
	Type 6	52	13.50
	Type 7	44	11.40
	Type 8	41	10.60
	Type 9	30	7.80
Total		386	100.00

## Part 2 Respondents' preferences of features of an e-coaching system

### Category 1. Well-documented teacher resource library

The research findings presented in Table 2 highlight the feature preferences of an e-coaching system among teachers. The data revealed that teachers expressed a strong preference for a well-documented teacher resource library, with a mean rating of 4.17 (SD = 0.74). This indicates that teachers highly value access to a comprehensive collection of resources that can support their teaching practices.

Collaborative lesson planning (mean = 4.02; SD = 0.79) also received a positive rating, albeit slightly lower than the resource library. This suggests that teachers appreciate the opportunity to collaborate with their peers in planning lessons. The e-coaching system should facilitate easy and effective collaboration among teachers to foster a supportive professional community.

### Category 2: Coaching appointment management tool

The Coaching appointment management tool received a moderate rating from the teachers, with a mean score of 3.70 (SD = 0.91). While it indicates a reasonable level of interest, there is room for improvement. An effective coaching appointment management tool should provide features such as scheduling, reminders, and flexibility to accommodate different preferences and availability.

Google and iCloud calendar integration (mean = 3.62; SD = 0.96) scored slightly lower, indicating that teachers see value in integrating the e-coaching system with their existing calendars. Seamless integration with widely used calendar platforms can enhance convenience and streamline the scheduling process.

### Category 3: Tracking and Engagement Tools

The Performance tracking (Progress bar) feature received a moderate rating, with a mean score of 3.62 (SD = 0.95). This suggests that while teachers appreciate the ability to track their progress, there might be room for improvement in how this feature is implemented. The e-coaching system should provide clear and actionable data to help teachers monitor their growth and identify areas for improvement.

The real-time formative assessment tool (mean = 3.87; SD = 0.81) was rated higher, indicating that teachers value the ability to assess students' learning in real time. An effective e-coaching system should provide teachers with immediate feedback and support their formative assessment practices to inform instruction effectively.

Gamification (rewards, badges, and other incentives) received a slightly lower mean score of 3.50 (SD = 0.90). While it indicates some level of interest, teachers may not consider gamification as critical as other features. Incorporating gamified elements in the e-coaching system could provide additional motivation and engagement for teachers, potentially increasing their usage and participation.

#### **Category 4: Learning Sharing**

The Online discussion board feature (mean = 3.75; SD = 0.84) received a moderate rating, indicating that teachers value opportunities for online discussion and knowledge sharing. A well-designed discussion board within the e-coaching system can foster collaboration, provide a platform for sharing ideas and experiences, and facilitate peer-to-peer support.

Instructional best practice sharing (mean = 3.87; SD = 0.83) scored slightly higher, suggesting that teachers highly value access to instructional best practices. The e-coaching system should provide a platform for teachers to share successful strategies and learn from their colleagues, promoting continuous improvement and professional growth.

#### **Category 5: System accessibility**

Teachers expressed a high preference for system accessibility features. Ubiquitous system access received a mean score of 4.03 (SD = 0.79), indicating the importance of being able to access the e-coaching system from various devices and locations. The system should be easily accessible to teachers whenever and wherever they need it.

Mobile responsiveness (seamless device integration) (mean = 4.06; SD = 0.79) and Single Sign-On (mean = 4.08; SD = 0.84) were rated similarly, reflecting the significance of providing a user-friendly experience across different devices and platforms. Teachers appreciate the convenience of seamless integration and avoid the need for multiple logins.

Continuous support received a mean score of 3.98 (SD = 0.92), indicating that teachers highly value having ongoing support available when using the e-coaching system. A reliable and responsive helpdesk can address technical issues promptly and provide assistance whenever teachers require it.

**Table 2** Respondents' preferences on features of an e-coaching system

<b>Feature Preferences</b>	<b>Mean</b>	<b>SD</b>
1. Well-documented teacher resource library		
Teacher resource library	4.17	0.74
Collaborative lesson planning	4.02	0.79
2. Coaching appointment management tool		
Coaching appointment management tool	3.70	0.91
Google and iCloud calendar integration	3.62	0.96
3. Tracking Tool		
Performance tracking (Progress bar)	3.62	0.95
Real-time formative assessment tool	3.87	0.81
Gamification (rewards, badges and other incentives)	3.50	0.90



Feature Preferences	Mean	SD
4. Learning Sharing		
Online discussion board	3.75	0.84
Instructional best practice sharing	3.87	0.83
5. System accessibility		
Ubiquitous system access	4.03	0.79
Mobile responsiveness (seamless device integration)	4.06	0.79
Single Sign On	4.08	0.84
Continuous support/24/7 teacher helpdesk	3.98	0.92

Table 3 shows the respondents' feature preferences of an e-coaching system. The data revealed that the respondents with different Enneagram personality types had different preferences on tracking tools and learning sharing features at a significant level at 0.05. However, they showed no differences on preferences on features 1) well-documented teacher resource library, 2) coaching appointment management tools, and 3) system accessibility.

**Table 3 Compare Mean of feature between Personalities type**

System Feature	Source of variance	Sum of Squares	df	Mean Square	F	P
1. Well documented teacher resource library	Between Groups	18.680	8	2.335	18.727	.091
	Within Groups	47.005	377	.125		
	Total	65.685	385			
2. Coaching appointment management tools	Between Groups	19.139	8	2.392	19.319	.074
	Within Groups	46.687	377	.124		
	Total	65.826	385			
3. Tracking tools	Between Groups	19.032	8	2.379	27.864	.001*
	Within Groups	32.188	377	.085		
	Total	51.220	385			
4. Learning sharing	Between Groups	31.659	8	3.957	31.591	.001*
	Within Groups	47.225	377	.125		
	Total	78.884	385			
5. System accessibility	Between Groups	4.831	8	.604	10.107	.038
	Within Groups	22.526	377	.060		
	Total	27.358	385			

Based on the findings presented in Table 4, the results of the multiple comparison analysis conducted on each Enneagram personality type revealed significant differences in the preferences for the tracking tool feature of the e-coaching system. Specifically, there were 11 pairs of Enneagram personality types that showed divergent preferences for this feature, indicating that certain groups within the sample had distinct preferences at a significance level of 0.05. Additionally, the analysis demonstrated that respondents with different Enneagram personality types (16 pairs) also exhibited significant differences in their preferences for the learning sharing feature of the e-coaching system, again at a significance level of 0.05.



## Discussions

The data of this was from 386 respondents. Remarkably, when we looked at the Enneagram types of the respondents, Type 2 – The Helper was the most prevalent type, comprising 29.80% of the participants. This finding is worth discussing. Type Two (The Helper) could potentially be a common Enneagram type among teachers in any school. This is because teaching is a profession that often attracts individuals who have a strong desire to help others and make a positive impact on their students' lives (Kyriacou & Benmansour, 1999: 69-72). Type Twos are known for their empathetic and caring nature, and these qualities can align well with the nurturing and supportive role of a teacher (Riso & Hudson, 2000:1). Teachers often dedicate themselves to the well-being and success of their students, going above and beyond to provide assistance and support. Type Twos, with their natural inclination to be helpful and attentive to the needs of others, may find satisfaction and fulfilment in the teaching profession (Riso & Hudson, 2000:1). However, it is important to note that this is not based on empirical data or research specifically focused on the prevalence of Enneagram types among teachers. The distribution of Enneagram types can vary greatly, and teachers can belong to any Enneagram type, each bringing their unique strengths and perspectives to the profession.

Looking at teachers' preferences of an e-coaching system, the data revealed that teachers expressed a strong preference for a well-documented teacher resource library, with a mean rating of 4.17 (SD = 0.74), which aligns with the professional needs and requirements of teachers (Lee, 2005: 39-49). Teachers often encounter various challenges and seek resources to enhance their instructional strategies, develop new approaches, and keep up with advancements in their field (Busby et al., 2012: 27-35). Teachers often face time constraints in searching for and curating relevant materials, so a well-documented resource library can significantly support their instructional practices. Collaborative lesson planning also received a relatively high mean score (mean = 4.02). This finding is consistent with studies highlighting the benefits of collaborative practices among teachers (Martin, 2008:1). Collaborative lesson planning allows teachers to share ideas, expertise, and instructional strategies, leading to improved pedagogical approaches and increased professional growth.

In the coaching appointment management tool category, the mean score (mean = 3.70) indicates that teachers consider this feature important but perhaps not as critical as the aforementioned categories. Literature on e-coaching and online professional development supports the value of efficient appointment management tools, as they enable teachers to schedule coaching sessions at their convenience and ensure timely support (Rossett & Marino, 2005:46). The inclusion of Google and iCloud calendar integration within the Coaching appointment management tool category received a slightly lower mean score (mean = 3.62). Although this feature offers convenience and synchronicity with teachers' existing calendars, its relatively lower rating suggests that it may be perceived as less crucial in comparison to other features. Nonetheless, integration with popular calendar tools can streamline teachers' scheduling processes and enhance their overall experience with the e-coaching system (Hess, 2014: 510-513).

The tracking tool category revealed mixed preferences among teachers. While the mean score for real-time formative assessment tool (mean = 3.87) indicates its importance in supporting teachers' ongoing assessment practices, the mean score for performance tracking with a progress bar (mean = 3.62) suggests a slightly lower preference. Previous research emphasizes the significance of formative assessment and immediate feedback for student

learning (Elmahdi et al., 2018: 182-188). However, the relatively lower score for performance tracking may indicate that teachers prioritize other features over detailed progress tracking in the context of an e-coaching system. The moderate mean score for gamification (mean = 3.50) indicates that teachers are somewhat interested in incorporating game elements into the e-coaching system. While gamification has gained attention as a potential strategy to increase student motivation and engagement (Hamari et al., 2014:1), its application within e-coaching systems for teachers is still an evolving area of research. Further exploration is needed to fully understand how gamification elements can effectively support teacher professional development.

The Learning Sharing category received relatively high mean scores for both Online discussion board (mean = 3.75) and instructional best practice sharing (mean = 3.87). These findings are consistent with studies emphasizing the importance of social interaction and collaborative learning in online environments (Stoetzel & Shedrow, 2020: 88). Online discussion boards and platforms that facilitate the sharing of instructional best practices provide opportunities for teachers to engage in reflective dialogue, exchange ideas, and learn from one another. Regarding System accessibility, the mean scores indicate that teachers highly value accessibility features. The mean scores for ubiquitous system access (mean = 4.03), mobile responsiveness (mean = 4.06), and single sign on (mean = 4.08) highlight the importance of a seamless user experience and flexible access to the e-coaching system. Previous research supports the notion that teachers expect technology tools to be easily accessible, adaptable to different devices, and integrated with existing login processes (Lieberman et al., 2006: 1-8).

## Conclusion

Based on the research finding, it is evident that an effective e-coaching system should prioritize features such as a comprehensive resource library, collaborative planning tools, seamless calendar integration, real-time formative assessments, and platforms for learning sharing. Additionally, the system should be easily accessible, responsive across devices, and offer continuous support to ensure a positive user experience for teachers. These findings provide valuable insights for the design and development of e-coaching systems that cater to the needs and preferences of teachers, ultimately enhancing their teaching practices and improving student learning outcomes.

## References

- Anthony, A. B., Gimbert, B. G., Fultz, D. M., & Parker, R. A. (2011). Examining the relationship between e-coaching and the self-efficacy of novice teachers seeking certification through alternative routes. *Journal of the National Association for Alternative Certification*, 6(1), 46-64.
- Asdornnithee, S. (2010). When a Five wants to grow: Using autoethnography to examine inner changes through the eyes of the Enneagram. *The Enneagram Journal*, 3(1), 87.
- Boyce, L. A., & Clutterbuck, D. (2010). E-Coaching: Accept it, It's Here, and It's Evolving! *Advancing executive coaching: Setting the course for successful leadership coaching*, 285-315.
- Brown, C. A., Neal, R. E., & Fine, B. (2011). Using 21st century thinking skills applied to the TPACK instructional model. annual meeting of the AECT International Convention, Hyatt Regency Jacksonville Riverfront, Jacksonville, FL,
- Busby, R., Ingram, R., Bowron, R., Oliver, J., & Lyons, B. (2012). Teaching elementary children with autism: Addressing teacher challenges and preparation needs. *The Rural Educator*, 33(2), 27-35.
- Cimer, A. (2007). Effective teaching in science: A review of literature. *Journal of Turkish science education*, 4(1), 20-44.
- Clutterbuck, D. (2022). *Coaching and Mentoring: A Journey Through the Models, Theories, Frameworks and Narratives of David Clutterbuck*. Taylor & Francis.
- Coppola, B. P. (1996). Progress in Practice: The Scholarship of Teaching. *The Chemical Educator*, 1(3), 1-9.
- Elmahdi, I., Al-Hattami, A., & Fawzi, H. (2018). Using Technology for Formative Assessment to Improve Students' Learning. *Turkish Online Journal of Educational Technology-TOJET*, 17(2), 182-188.
- Gardner, D. J. (2021). *Educational Leaders' Perceptions of the Impact of MBTI Professional Development on Leadership Practices in One School Division in Virginia Virginia Tech*].
- Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work?--a literature review of empirical studies on gamification. 2014 47th Hawaii international conference on system sciences,
- Hess, A. N. (2014). Scheduling research consultations with YouCanBook. me: Low effort, high yield. *College & Research Libraries News*, 75(9), 510-513.
- Kilag, O. K. T., Guerrero, L. P., Abella, J. L., Samutya, M. M., Arcillo, M. T., & Asentado, D. E. (2023). Enhancing Educational Leadership: Exploring the Enneagram's Impact on Interpersonal Relationships. *AMERICAN JOURNAL OF SCIENCE AND LEARNING FOR DEVELOPMENT*, 2(6), 172-181.
- Killion, J. (2012). Coaching in the K-12 context. *The SAGE handbook of mentoring and coaching in education*, 273-295.
- Kyriacou, C., & Benmansour, N. (1999). Motivation to become a teacher of a foreign language. *Language Learning Journal*, 19(1), 69-72.
- Lee, H.-J. (2005). Developing a Professional Development Program Model Based on Teachers' Needs. *Professional educator*, 27, 39-49.
- Lee, M.-R. (2015). A study on the effects of enneagram group counseling on nursing students. *International Journal of Bio-Science and Bio-Technology*, 7(5), 235-246.

- Lieberman, H., Paternò, F., Klann, M., & Wulf, V. (2006). End-user development: An emerging paradigm. In *End user development* (pp. 1-8). Springer.
- Luckcock, T. (2007). Theoretical Resource: The soul of teaching and professional learning: an appreciative inquiry into the Enneagram of reflective practice. *Educational Action Research*, 15(1), 127-145.
- Magen-Nagar, N., & Peled, B. (2013). Characteristics of Israeli school teachers in computer-based learning environments. *Journal of educators online*, 10(1), 1-34.
- Martin, P. C. (2008). *Collaborative practices among teachers to serve low-achieving high school ESL students* [The George Washington University].
- McGuinness, M. (2017). An introduction to the Enneagram.
- Morris, J., Song, Y., Soloway, E., & Norris, C. (2021). Teacher professional development in STEM education. *Journal of Educational Technology & Society*, 24(4).
- Neerinx, M., Paulussen, T., & Theunissen, N. (2013). *E-coaching on teacher's competencies and situated lessons: The example of sex education*. Soesterberg: TNO.
- Noble, A. C. (2012). Examining the Instructional Utility of Curriculum Based Measurement in Achievement Evaluations.
- Noom-Ura, S. (2013). English-Teaching Problems in Thailand and Thai Teachers' Professional Development Needs. *English Language Teaching*, 6(11), 139-147.
- Northern, S. J. (2021). *Examining the Effects of a Curriculum-Based Professional Learning Community on Teacher Efficacy Toward Inquiry-Based Science Instruction* [Western Kentucky University].
- Ochoa, S. F., & Gutierrez, F. J. (2018). Architecting e-coaching systems: a first step for dealing with their intrinsic design complexity. *Computer*, 51(3), 16-23.
- Penn-Edwards, S., Donnison, S., & Albion, L. (2016). Developing the inner teacher: guiding the reflective practice of first year preservice teachers. *International Journal of Pedagogies and Learning*, 11(1), 10-21.
- Rector, W. J. (2016). *Teachers' perceptions about response to intervention reading strategies for at-risk students* [Walden University].
- Riso, D. R., & Hudson, R. (2000). *Understanding the enneagram: The practical guide to personality types*. Houghton Mifflin Harcourt.
- Rogers, J. R., & Soyka, K. M. (2004). "One size fits all": An existential-constructivist perspective on the crisis intervention approach with suicidal individuals. *Journal of Contemporary Psychotherapy*, 34, 7-22.
- Rossett, A., & Marino, G. (2005). If coaching is good, then e-coaching is. *T AND D*, 59(11), 46.
- Sharma, M. (2017). Teacher in a digital era. *Global Journal of Computer Science and Technology*, 17(3), 10-14.
- Stoetzel, L., & Shedrow, S. (2020). Coaching our coaches: How online learning can address the gap in preparing K-12 instructional coaches. *Teaching and Teacher Education*, 88, 102959. <https://doi.org/https://doi.org/10.1016/j.tate.2019.102959>
- Susilawati, M., & Nilakusmawati, D. P. E. (2018). Effectiveness of problem-based learning to optimize student learning outcomes in regression analysis course. *Journal of Physics: Conference Series*,
- Sutarto, A. P., Khairai, K. M., & Wahab, M. N. A. (2020). Assessment of stress among assembly-line workers: correlation between subjective and objective physiological measures. *International Journal of Human Factors and Ergonomics*, 7(3), 207-224.

- Thomson, C. (2009). Enneagram Styles, Coaching, and The Use of Metaphor. *The Enneagram Journal*, 2(1), 138.
- Thornton, P. J. (1996). The physiological, psychological and work stress of primary school principals. *International Journal of Educational Management*, 10(6), 42-55.
- Villalon, J. J. (2016). Lesson study: Its influence on planning, instruction, and self-confidence of pre-service mathematics teachers. *US-China Education Review B*, 6(7), 429-439.
- Wagner, J. P. (2010). *Nine lenses on the world: The Enneagram perspective*. Enneagram Studies and Applications.