ISSN (ONLINE):2710-0308 www.irjmss.com ISSN (PRINT):2710-0316
DOI: **10.5281/zenodo.10492434**

Existing Pedagogical Practices at Secondary Level; Emerging Trends Challenges and Opportunities in 21st Century

Habibullah Khan
Ph.D Scholar Alhamd Islamic University, Islamabad.

Ruqaia Koser
Ph.D Scholar Alhamd Islamic University, Islamabad.

Dr. Iffat Basit
Assistant Professor Alhamd Islamic University, Islamabad.

Dr. Quratulain
Head of Department Education Alhamd Islamic University Islamabad.

Received on: 05-07-2023 Accepted on: 10-08-2023

Abstract

This Paper discusses the "existing pedagogical practices at secondary level; Emerging Trends Challenges and Opportunities in 21st Century". The research question for this paper was how the emerging trend in pedagogy capacitates the students and what the challenges and opportunities in 21st century. Population of the study was all 1038 Teachers working at Public Sector Secondary schools in seven Tehsils of District Rawalpindi. The sample size of the study was comprised of 150 Teachers via convenient sampling. An adapted questionnaire was administered through Google doc to collect the data from respondents. Validity of the research instrument was determined through expert opinion and pilot study was carried out in order to check the reliability of tool after adaptation, The collected data was analyzed through Smart PLs Relevant descriptive and inferential statistical techniques were employed including frequency, mean, mode and Standard Deviation.

Keywords: Pedagogy, Emerging trends, Challenges, opportunities

Introduction

Pedagogy, or the science of teaching and learning, is constantly evolving as new research, technologies, and approaches are developed. Here are some of the key emerging trends in pedagogy (Jansen & van der Merwe, 2015) like, personalized learning: which is an approach to education that tailors instruction and content to each student's individual needs and learning style. Personalized learning can take many forms, including adaptive learning software, project-based learning, and competency-based education. Blended learning can

help to increase access to education, enhance student engagement, and provide flexibility for students with different learning needs (Tayebinik & Puteh, 2013).

There are some of the key emerging trends in pedagogy in Southeast Asia that are Technology-Enhanced Learning: Southeast Asia has seen a rapid increase in the use of technology in education in recent years. Technology-enhanced learning involves the use of digital tools and platforms to deliver content, engage students, and provide opportunities for self-paced learning. This approach has gained popularity because it helps to increase student engagement and motivation, and can lead to better learning outcomes (Phuong et al., 2015).

In Pakistan the emerging trends in pedagogy that include Digital Learning which involves the use of digital tools and platforms to deliver content, engage students, and provide opportunities for self-paced learning. This approach has gained popularity because it helps to increase student engagement and motivation, and can lead to better learning outcomes (Grand-Clement, 2017). Blended learning combines traditional classroom teaching with online and digital resources. It can help to increase access to education, enhance student engagement, and provide flexibility for students with different learning needs (Sharma, 2010). The government has also launched several initiatives aimed at promoting project-based learning, including the Project-Based Learning Initiative, which provides funding and resources for schools to implement project-based learning programs (Grant & Branch, 2005). The government has launched several initiatives aimed at promoting skills-based education, including the Prime Minister's Hunarmand Pakistan Program, Inclusive Education and the Special Education Program (Caceres et al., 2010).

Objectives

- To investigate the 21st century pedagogical techniques being practiced by the teachers in classroom
- To investigate the challenges that faced by the teachers during exercising emerging pedagogical techniques in relevance to 21st century
- To explore opportunities that may facilitate teachers in incorporating more innovative pedagogical techniques while teaching.

Statement of the problem

The traditional pedagogical practices employed in secondary education have largely remained unchanged over the years. However, the rapid advancements in technology, evolving societal needs, and changing dynamics of the 21st century pose new challenges and opportunities for educators. To effectively prepare students for the demands of the future, it is crucial to investigate the existing pedagogical practices at the secondary level and identify the emerging trends that can enhance the learning experience. This paper aims to explore the current pedagogical approaches being employed at secondary level, examine the challenges faced by educators in adopting innovative methods, and highlight the opportunities available to reshape instruction applies in line with the requirements of the 21st century. By addressing these aspects, this study will contribute to the ongoing discourse on educational reform and provide valuable insights to educators, policymakers, and researchers seeking to transform secondary education to meet the demands of the rapidly evolving world

ISSN (ONLINE):2710-0308 www.irjmss.com ISSN (PRINT):2710-0316
DOI: **10.5281/zenodo.10492434**

Literature Review

The word Pedagogy came from Greek language "paidagogos" which is combination of two words, Paido means boy or child and agogos means leader. In Greek language a school teacher or educator is called "Pedagogue" (Oyedotun, 2020). Pedagogy, or the science of teaching and learning, is constantly evolving as new research, technologies, and approaches are developed. In recent years, several emerging trends in pedagogy have gained traction around the world, with educators experimenting with new teaching methods and technologies to improve student outcomes. There are some of the key emerging trends in pedagogy in the owrld (Jansen & van der Merwe, 2015) like, personalized learning (Zhang et al., 2020), Amidst contemporary teaching methods, a combination of Blended Learning (Tayebinik & Puteh, 2013), Project-Based Learning (Gentry, 1990), Experiential Learning (Gentry, 1990) and Social and Emotional Learning (Weissberg et al., 2015) is envisioned as a tool for developing student skills such as critical thinking, problem-solving, collaboration, communication, self-awareness, self-management and social awareness. Blended Learning infuses traditional classroom teaching with the use of online and digital resources while Project-Based Learning offers students the opportunity to engage in extended, real-world projects. Experiential Learning, on the other hand, allows learning by doing while Social and Emotional Learning provides an optimal environment for students to learn interpersonal skills..

These emerging trends in pedagogy reflect a shift towards more student-centered, personalized, and experiential approaches to education. As educators continue to experiment with new technologies and teaching methods, it is likely that these trends will continue to evolve and shape the future of education.Pedagogy in Southeast Asia is constantly evolving as new research, technologies, and approaches are developed. In recent years, several emerging trends in pedagogy have gained traction in the region, with educators experimenting with new teaching methods and technologies to improve student outcomes. This approach has gained popularity because it helps to increase student engagement and motivation, and can lead to better learning outcomes (Phuong et al., 2015).

In Pakistan Pedagogy is constantly evolving as new research, technologies, and approaches are developed. In recent years, several emerging trends in pedagogy have gained traction in the country, with educators experimenting with new teaching methods and technologies to improve student outcomes. With the widespread availability of smart phones and internet access, digital learning has become an increasingly popular approach in Pakistan. Digital learning involves the use of digital tools and platforms to deliver content, engage students, and provide opportunities for self-paced learning. This approach has gained popularity because it helps to increase student engagement and motivation, and can lead to better learning outcomes (Grand-Clement, 2017). In its place of the teacher delivering content in the classroom and assigning homework for practice, students learn the content at home through videos or other online resources, and then come to class for discussion and application. This approach can help to increase student engagement and motivation, as well as provide opportunities for more personalized learning (Herreid & Schiller, 2013). Inquiry-based learning (Wang et al., 2010) encourages student-driven and problem-solving-centered education. Students pose questions, examine ideas, and examine evidence to develop deeper

understandings into different concepts, and this style of learning is applicable to many different topics, from science and math to social studies and the arts (Wang et al., 2010). Through this type of education, student motivation and engagement increases, as do critical thinking and problem-solving skills (Wang et al., 2010). Blended learning (Sharma, 2010), meanwhile, is an approach that blends traditional classroom teaching with online and digital resources (Sharma, 2010).

Rawalpindi is at the forefront of educational developments in the country. In recent years, several emerging trends in pedagogy have gained traction, with educators experimenting with new teaching methods and technologies to improve student outcomes. (Mobeen, 2020)**. T**hese emerging trends in pedagogy in Rawalpindi reflect a shift towards more student-centered, technology-enhanced, and practical approaches to education. As educators continue to experiment with new technologies and teaching methods, it is likely that these trends will continue to evolve and shape

Role of research and development on Existing Pedagogical Practices at Secondary Level in Pakistan: Research and development can help to identify gaps in existing pedagogical practices and develop strategies to address them (Parveen, K., et al, 2021). It can also provide insights into the effectiveness of different teaching methods and approaches, and help to identify areas for improvement (Abdullah, N. A., & Mirza, M. S. 2020). R&D can be used to develop new teaching materials and resources that are tailored to the needs of Pakistani students (Sharar, T., & Nawab, A. 2020). This could include textbooks, online resources, and other materials that are designed to meet the specific learning needs of Pakistani students (Sharar, T., & Nawab, A. 2020). R&D can also be used to develop innovative teaching methods and approaches that are more effective than traditional methods (Parveen, K., et al, 2021). This could include the use of technology, such as virtual classrooms, or the use of interactive activities and simulations (Parveen, K., et al, 2021). R&D can also be used to evaluate existing pedagogical practices and identify areas for improvement (Abdullah, N. A., & Mirza, M. S. 2020). This could include conducting surveys or interviews with teachers, students, and parents to gain insights into their experiences with existing pedagogical practices. This information can then be used to develop strategies for improving existing pedagogical practices (Abdullah, N. A., & Mirza, M. S. 2020). Finally, R&D can be used to develop professional development programs for teachers. These programs could focus on topics such as classroom management, assessment techniques, and instructional strategies.

Emerging Pedagogical Trends in Pakistan-Policy and Practices: Pakistan is a rapidly developing country with a growing population and increasing demand for quality education. In 2020, the Government of Pakistan introduced a new national curriculum that aims to promote critical thinking, creativity, and problem-solving skills among students. The new curriculum focuses on developing key competencies such as communication, collaboration, and digital literacy, and includes a greater emphasis on the teaching of STEM (Science, Technology, Engineering, and Mathematics) subjects. The new curriculum also includes a greater focus on Islamic values, citizenship, and environmental education. The quality of teaching is critical to improving student learning outcomes. In recent years, the government

has launched several initiatives aimed at improving the quality of teacher training in Pakistan. The government has introduced the Continuous Professional Development (CPD) program for teachers, which aims to enhance their teaching skills and knowledge. The program includes workshops, training sessions, and online resources for teachers (Khan & Haseeb, 2017). The government has launched several initiatives aimed at promoting private-public partnerships, including the Public-Private Partnership (PPP) policy for education. Under this policy, the government encourages private sector investment in education, and provides incentives such as tax exemptions, land allocation, and financial assistance to private investors (Mahmood, 2013). Skills-Based Education: The government has recognized the importance of skills-based education in preparing students for the job market. The government has launched several initiatives aimed at promoting skills-based education, including the Prime Minister's Hunarmand Pakistan Program, which aims to provide vocational training and skills development to youth. The program focuses on developing key skills such as communication, teamwork, problem-solving, and entrepreneurship (Rizwan et al., 2023). Inclusive Education: The government has also recognized the importance of inclusive education in promoting equity and access to education for all students. These trends continue to evolve and shape the education landscape in Pakistan, it is likely that they will have a significant impact on the future of education in the country

Challenges and Opportunities: Challenges and opportunities abound in the realm of emerging pedagogical trends in Pakistan. To fully realise the potential of these trends, certain issues must be addressed. These include the need to provide teacher training for new teaching methods, find ways to increase access to technology and its availability across communities, developing successful approaches to assessment, and strengthening the relationships between teachers, students, and parents. On the other hand, there are also opportunities to be explored; the ability to provide students with more engaging and interactive lessons, and new and innovative techniques for teaching and assessing students. To make the most of these trends, Pakistani educators must address the challenges that stand in the way of progress.

Challenges

a) Infrastructure: One of the key challenges facing the implementation of emerging pedagogical trends in Pakistan is the lack of adequate infrastructure. Many schools and universities in the country lack basic facilities such as electricity, internet connectivity, and classroom space, which can hinder the implementation of digital learning and other innovative teaching methods.

b) Teacher Training: While the government has launched several initiatives aimed at improving teacher training in Pakistan, there is still a long way to go in terms of providing high-quality training to all teachers. Many teachers lack the necessary skills and knowledge to implement emerging pedagogical trends effectively, which can limit the impact of these trends on student learning outcomes (Saeed et al., 2013)

c) Funding: Another key challenge facing the implementation of emerging pedagogical trends in Pakistan is funding. While the government has launched several initiatives aimed at promoting public-private partnerships and encouraging private sector investment in education, there is still a significant funding gap that must be addressed in order to fully

implement these trends

d) Cultural Barriers: In some cases, cultural barriers may also hinder the implementation of emerging pedagogical trends in Pakistan. For example, there may be resistance to the teaching of certain subjects or the use of certain teaching methods in some parts of the country, which can limit the effectiveness of these trends (Hussain et al., 2019)

Opportunities:

a) Youth Demographic: Pakistan has a large and growing youth population, which presents a significant opportunity for the implementation of emerging pedagogical trends. These trends can help prepare young people for the job market and equip them with the skills and knowledge they need to succeed in a rapidly changing world (Hussain & Ali, 2010)

b) Technology: While the lack of infrastructure is a key challenge facing the implementation of emerging pedagogical trends in Pakistan, the country's growing use of technology also presents significant opportunities. With the increasing availability of digital resources and online learning platforms, there is great potential for the implementation of digital learning and other innovative teaching methods

c) Private-Public Partnerships: The government's policy of encouraging private-public partnerships in the education sector presents significant opportunities for the implementation of emerging pedagogical trends. Private sector investment can help address the funding gap and provide resources and expertise that can be leveraged to improve the quality of education in the country

d) Inclusive Education: The government's initiatives aimed at promoting inclusive education in Pakistan also present significant opportunities for the implementation of emerging pedagogical trends. By providing support and resources for students with disabilities and promoting inclusive practices in schools and universities, these initiatives can help ensure that all students have access to high-quality education

Combating the challenges and leveraging the opportunities presented by emerging pedagogical trends in Pakistan will require a multi-faceted approach that involves government, private sector, and civil society organizations. Here are some key strategies that can be employed

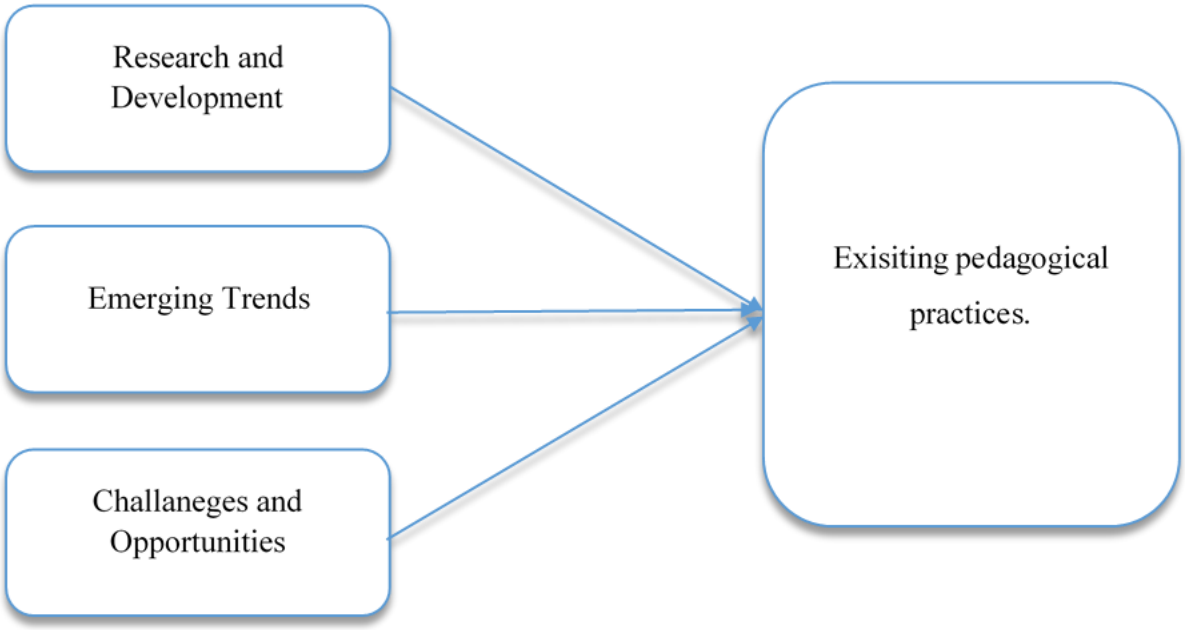
- The government can work to improve access to electricity and internet connectivity in schools and universities, while also investing in the construction of new classroom facilities
- Providing high-quality teacher training is essential for equipping teachers with the skills and knowledge they need to implement emerging pedagogical trends effectively.
- Public-private partnerships can provide much-needed funding and expertise to support the implementation of emerging pedagogical trends in Pakistan. The government can work to establish partnerships with private sector organizations and civil society groups to invest in education and support the development of innovative teaching methods
- Promote Inclusive Education: The government can work to promote inclusive education policies that ensure that all students, including those with disabilities and from marginalized communities, have access to high-quality education.
- The government can promote the use of technology in education by investing in digital resources and online learning platforms. (Naz, 2016).

ISSN (ONLINE):2710-0308 www.irjmss.com ISSN (PRINT):2710-0316
DOI: **10.5281/zenodo.10492434**

- The government can work to address cultural barriers that may hinder the implementation of emerging pedagogical trends in some parts of the country. This can be done through targeted public awareness campaigns and engagement with community leaders to build support for innovative teaching methods
- Investing in research and development of innovative teaching methods can help to identify effective approaches and address challenges that may arise during implementation. (Hussain & Ali, 2010)

On the basis of exiting relivew of literature, the following hypotheses are formulated:
Hypothesis 1: Research and development will have a significant and positive effect on existing pedagogical practices.
Hypothesis 2: Emerging trends will have a significant and positive effect on existing pedagogical practices.
Hypothesis 3: Opportunities and Threats will have a significant effect on existing pedagogical practices.

Figure 1. Conceptual Framwork of the study



Methodology
The design of the study quantitative approach and it was descriptive in nature. The study was delimited to Tehsil Rawalpindi among seven Tehsils of the District. Total 1038 teachers working in public secondary schools of Tehsil Rawalpindi were constituted the population of the study. https://sis.punjab.gov.pk/
A simple random sample technique was used to draw the sample size of study. So the sample of the study was comprised of 150 Teacher. Data of the study was collected through adapted

ISSN (ONLINE):2710-0308 www.irjmss.com ISSN (PRINT):2710-0316
DOI: **10.5281/zenodo.10492434**

Questionnaire (Pitsikalis et al., 2022). Respondent were requested to fill the questionnaire against the following five point Likert scale (Scale: Strongly Disagree (SDA-1), Disagree (DA-2), Un-decided (UND-3), Agree (A-4), Strongly Agree (SA-5). The questionnaire was administered and data was collected through Google docs. For the convenience of the respondents required instructions were also mentioned in the questionnaire.

Descriptive Statistics Results

The survey regarding Existing Pedagogical Practices at Secondary Level; Emerging Trends Challenges and Opportunities in 21st Century in Rawalpindi was conducted with 150 respondents. Out of these, 68% were male and 32% were female. 60% of the respondents were single while 40% were married. In terms of age, 28.67% belonged to the age group of 20 to 29, 33.33% belonged to the age group of 30 to 39, 24% belonged to the age group of 40 to 49 and 14% belonged to the age group of 51 to 59. In terms of academic qualification, 31.33% had HSSC, 47.33% had Bachelors and 21.33% had Masters. In terms of professional qualification, 18.67% had PST, 53.33% had B.Ed and 21.33% had M.Ed. In terms of teaching experience, 28.67% had 1 to 10 years, 44.67% had 11 to 20 years, 20% had 21 to 30 years and 6.67% had 31 to 40 years experience. Overall, the survey revealed that majority of the respondents were male, single and belonged to the age group of 20 to 39 years with Bachelors as their highest academic qualification and B.Ed as their highest professional qualification with 11 to 20 years of teaching experience.Profile of the respondents is shown in the Tab 1.0 which is given as under:

Table 1.0. Profile of the respondents.

Demographics	**Categories**	**Frequency**	**Percentage**
Gender	Male	102	68
	Female	48	32
Marital Status	Married	90	60
	Single	60	40
Age	20 to 29	43	28.67
	30 to 39	50	33.33
	40 to 49	36	24
	50 to 59	21	14
Academic Qualification	HSSC	47	31.33
	Bachelor	71	47.33
	Masters	32	21.33
Professional Qualification	PST	28	18.67
	B.Ed	80	53.33
	M.Ed	32	21.33
Experience as Teacher	1-10 years	43	28.67
	11-20 years	67	44.67
	21-30 years	30	20
	31-40 years	10	6.67

Mean is the average of a set of numbers, calculated by adding all the numbers together and then dividing by the number of numbers in the set (Kumar, 2012). Standard deviation is a

measure of how spread out a set of numbers is, calculated by taking the square root of the variance (Kothari, 2004). The table 2.0 is showing the mean and standard deviation of the items in a scale. The mean values of the items range from 3.0 to 4.6, indicating that the responses to the items are generally positive. The standard deviation of the items is greater than 0, which indicates that there is significant variation in the responses to the items. This variation in responses suggests that the data is reliable, as it shows that different people have different opinions on the items in the scale. This variation also suggests that the scale is measuring something meaningful, as it is capturing different perspectives on the same topic.

Table. 2.0 Cronbach's alpha and descriptive statistics.

Variable	**Items**	**Mean**	**St. Deviation**
Research and Development	RD1	3.321	1.271
	RD2	3.9	1.159
	RD3	3.176	1.494
	RD4	3.388	1.247
	RD5	3.692	1.564
	RD6	3.331	1.356
	RD7	3.242	1.673
	RD8	4.404	1.481
Emerging Trends	ET1	3.596	1.564
	ET2	4.639	1.847
	ET3	4.383	1.549
	ET4	3.614	1.608
	ET5	3.725	1.577
	ET6	3.872	1.32
	ET7	3.814	1.709
Opportunities and threats	OT1	3.211	1.485
	OT2	3.494	1.764
	OT3	3.515	1.837
	OT4	3.617	1.808
	OT5	3.714	1.15
	OT6	3.822	1.481
	OT7	3.134	1.671
	OT8	3.266	1.653
	OT9	3.436	1.695
Existing Pedagogical practices	EPP1	3.673	1.769
	EPP2	3.176	1.494
	EPP3	3.388	1.247
	EPP4	3.692	1.564

EPP5	3.331	1.356
EPP6	3.242	1.673
EPP7	3.226	1.641

Table 3 reveals the outer loadings of the latent variables. Outer loadings, also known as factor loadings or regression weights, measure the correlations between a latent variable and its indicators (Hair et al, 2010). These correlations indicate the strength of the association between the latent variable and its indicators and are used to assess the validity of the measurement model (Kibria Aamir et al 2021). Higher correlations indicate a stronger relationship between the latent variable and its indicators. Thus, examining the outer loadings in Table 3 can provide insight into the strength of the connection between the latent variable and its indicators.

Table 3. Outer loadings (Factor Loading Analysis)

No.	*Items Code*	*RD*	*ET*	*OT*	*EPP*
1	RD1	0.781			
2	RD2	0.764			
3	RD3	0.755			
4	RD4	0.791			
5	RD8	0.721			
6	ET2		0.822		
7	ET3		0.765		
8	ET5		0.734		
9	ET6		0.801		
10	ET7		0.823		
11	OT1			0.771	
12	OT4			0.821	
13	OT5			0.766	
14	OT6			0.712	
15	OT9			0.753	
16	EPP1				0.701
17	EPP2				0.766
18	EPP3				0.812
19	EPP5				0.851
20	EPP6				0.859

In the study conducted by Hair et al. (2016), it was determined that for two latent variables to be considered significant, the outer loading value of each indicator must be equal to or greater than 0.7. This means that all of the indicators for the two latent variables in this study had substantial loadings, with only a few exceptions that were not included in further analysis. This indicates that both latent variables had relatively strong loadings, making them significant for the study.

The Average Variance Extracted (AVE) is a method used in Smart PLS (Partial Least Squares) to assess the reliability of a construct. It is used to calculate the portion of an observed variable's variation that the latent concept explains. According to Hair et al. (2016), a

significant AVE value is 0.5 or higher. In the context of this research, all of the AVE values are significant, with values above than 0.5. A higher AVE value suggests a stronger dependability of the construct. Additionally, Table 4 also shows the composite reliability and divergent validity of the constructs. Composite reliability is an evaluation of the consistency of a construct, which is achieved by dividing the average variance extracted by the average variance of all items in the construct. Divergent validity, on the other hand, is used to determine how distinct a construct is from other constructs in the model. It is measured by examining the correlations between the two constructs to ensure they are not too high.

A test's or questionnaire's internal consistency is gauged by Cronbach's alpha. It is a statistical tool used to evaluate the consistency and dependability of a group of items used to measure the same construct (Baghozzi and Yi, 1988). It is determined by adding up the correlations between each item and the rest of the set, dividing that total by the number of elements, and then taking the result. The overall dependability of the test is then calculated by comparing the resultant coefficient to a reference value. A test is considered more trustworthy and consistent when its Cronbach's alpha is greater. A composite measure's dependability when it is made up of various indicators is measured by composite reliability in SmartPLS. It is determined as the average of all the composite indicator's indicators' adjusted item-total correlations (Hair et al , 2010). It measures the composite's internal consistency and shows how closely the indicators are measuring the same concept. If the indicators are measuring the same construct and the composite dependability is greater, the composite is reliable. The sig value of CR and CA, according to Hair et al. (2016), is 0.7, and in the context of this research, both have significant values for composite reliability and Alpha.

Table 4: Covariance and Internal Consistency of Constructs

Variable	AVE	Divergent	Composite Reliability	Cronbach's Alpha
Research and Development	0.511	0.714	0.821	0.797
Emerging Trends	0.623	0.789	0.892	0.843
Opportunities and Threats	0.655	0.809	0.789	0.723
Existing Pedagogical Practices	0.678	0.823	0.823	0.801

Hypotheses Testing

In Smart PLS, a method called coefficient analysis is used to examine how each predictor variable affects a dependent variable (Hair et al, 2010). The link between the predictor and dependent variables is decided upon, as well as its strength and direction. Researchers can assess how much of the variance in the dependent variable is explained by each of the predictor variables using the coefficient analysis (Baghozzi ad Yi, 1988). Finding out which predictor factors are most crucial for forecasting the dependent variable is also helpful. An algorithm is a collection of guidelines that show a computer how to carry out a task or address a challenge. Finding answers to an issue is done in this way: step by step. Several fields, including data analysis, machine learning, and artificial intelligence, employ algorithms (Hair et al 2020). A statistical method called bootstrapping is used to infer a statistic's distribution from a sample of data. It computes the desired statistic by repeatedly sampling the same data with replacement. An estimate of the statistic's population distribution is the outcome (Hair

ISSN (ONLINE):2710-0308 www.irjmss.com ISSN (PRINT):2710-0316
DOI: **10.5281/zenodo.10492434**

et al , 2020). To calculate confidence intervals and other statistical accuracy metrics, bootstrapping is frequently utilized.

In addition, the study by Hair et al. (2010) suggests that the route coefficient will be significant if the T-statistics is greater than 1.96 at a significance level of 0.05. Table 4 demonstrates that all variables have significant correlations with one another because of their beta values, which are 0.451 and larger than the significant threshold of 0.05, and because the T-Statistics value is also significant and higher than the value of 1.96, supporting the hypothesis

Table 5. Path Coefficient Analysis

Variable	Beta	Standard Error	T Statistics
RS->EPP	0.412	0.068	6.06
ET -> EPP	0.322	0.051	4.75
OT -> EPP	0.467	0.093	5.01

Discussion:

Research and development have a significant and positive effect on existing pedagogical practices. The beta value of 0.412 at a significant level of 0.05 indicates that the effect of research and development on existing pedagogical practices is statistically significant. This suggests that research and development can lead to improved pedagogical practices, which can in turn lead to better learning outcomes for students. In conclusion, research and development can have a positive impact on existing pedagogical practices, and should be encouraged in order to improve educational outcomes.

This result indicates that emerging trends have a positive effect on existing pedagogical practices. The beta value of 0.322 suggests that there is a moderate positive correlation between emerging trends and existing pedagogical practices. This suggests that as emerging trends become more prevalent, existing pedagogical practices are likely to become more effective. Therefore, it is important for educators to stay up-to-date with the latest trends in order to ensure that their teaching methods remain effective. In conclusion, emerging trends have a significant and positive effect on existing pedagogical practices.

The results of this study indicate that opportunities and threats have a significant effect on existing pedagogical practices. The beta value of 0.467 indicates that there is a moderate to strong correlation between opportunities and threats and existing pedagogical practices. This suggests that when opportunities and threats are present, they can have a significant impact on the way pedagogical practices are implemented. Therefore, it is important for educators to be aware of the potential opportunities and threats that may arise in their teaching environment in order to ensure that their pedagogical practices are effective and successful. In conclusion, this study provides evidence that opportunities and threats can have a significant effect on existing pedagogical practices.

Research Implication and future directions

The findings of this study have implications for pedagogical practices in secondary education. It underlines the importance of teachers keeping up-to-date with the changing trends in education and adapting their teaching methods to meet the needs of 21st century students. Teachers should be encouraged to utilize technology in their teaching, as it can help to engage

students and offer them more meaningful opportunities to learn. Moreover, teachers should be offered professional development opportunities to ensure they are equipped with the modern skills to effectively leverage technology in their teaching.

Future research should focus on exploring how teachers can best use technology in their teaching, as well as how they can effectively integrate technology into their pedagogical practices. Additionally, further research should be conducted on how teachers can best support students in developing 21st century skills such as critical thinking, problem solving, and collaboration. Finally, research should also focus on how schools can best support teachers in developing their pedagogical practices and integrating technology into their teaching.

Conclusion

In conclusion, existing pedagogical practices at the secondary level have been effective in providing students with the necessary skills and knowledge to succeed in the 21st century. However, emerging trends, challenges, and opportunities in the 21st century have necessitated the need for educators to adopt new and innovative pedagogical practices that are more suited to the changing needs of students. By doing so, educators can ensure that their students are equipped with the skills and knowledge necessary to succeed in a rapidly changing world.

References:

1. Gentry, J. W. (1990). What is experiential learning. *Guide to business gaming and experiential learning*, *9*, 20.
2. Grand-Clement, S. (2017). Digital Learning: Education and Skills in the Digital Age. *RAND Europe*.
3. Herreid, C. F., & Schiller, N. A. (2013). Case studies and the flipped classroom. *Journal of college science teaching*, *42*(5), 62-66.
4. Hussain, R., & Ali, S. (2010). Improving public school teachers in Pakistan: challenges and opportunities. *Improving schools*, *13*(1), 70-80.
5. Hussain, S., Shaheen, N., Ahmad, N., & Islam, S. U. (2019). Teachers' classroom assessment practices: challenges and opportunities to classroom teachers in Pakistan. *Dialogue*, *14*(1), 88-97.
6. Jansen, C., & van der Merwe, P. (2015). Teaching Practice in the 21st Century: Emerging Trends, Challenges and Opportunities. *Universal Journal of Educational Research*, *3*(3), 190-199.
7. Khan, F., & Haseeb, M. (2017). Analysis of teacher training education program: a comparative study of Indonesia, Malaysia and Pakistan. *Paradigms*, *11*(1), 13-17.
8. Kokotsaki, D., Menzies, V., & Wiggins, A. (2016). Project-based learning: A review of the literature. *Improving schools*, *19*(3), 267-277.
9. Mahmood, S. (2013). Public-Private partnership in education: A ray of hope for Pakistan. *Childhood Education*, *89*(2), 78-85.
10. Mobeen, A. H. (2020). Gendering and Beyond: Analyzing Children's Early Year Education and Teaching Methodologies Employed in Rawalpindi/Islamabad's Private Schools. *Journal of Early Childhood Care and Education (JECCE)*, *3*.
11. Naz, S. (2016). Impact of Globalization on Higher Education in Pakistan: Challenges and Opportunities. *International Journal of Innovation in Teaching and Learning (IJITL)*, *2*(2).
12. Oyedotun, T. D. (2020). Sudden change of pedagogy in education driven by COVID-19: Perspectives and evaluation from a developing country. *Research in Globalization*, *2*, 100029.

13. Phuong, T. T., Duong, H. B., & McLean, G. N. (2015). Faculty development in Southeast Asian higher education: a review of literature. *Asia Pacific Education Review*, *16*, 107-117.
14. Pitsikalis, S., Lasica, I.-E., Kostas, A., & Vitsilaki, C. (2022). Preparing Teachers for the 21st Century: A Mixed-Methods Evaluation of TPD Programs Under the Lens of Emerging Technologies in STE (A) M Education. *Handbook of Research on Integrating ICTs in STEAM Education*, 153-175.
15. Rizwan, S., Ahmad, D., & Sohail, F. (2023). Skill Based Education at the Secondary School Level in an Industrial City of Pakistan. *International Journal of Special Education*, *38*(1).
16. Saeed, M., Ahmad, I., Salam, M., Badshah, R., Ali, S., & Haq, S. (2013). Critical analysis of problems of school teachers in Pakistan: Challenges and possible solutions. *Journal of Education and Practice*, *4*(4), 169-175.
17. Sharma, P. (2010). Blended learning. *ELT journal*, *64*(4), 456-458.
18. Tayebinik, M., & Puteh, M. (2013). Blended Learning or E-learning? *arXiv preprint arXiv:1306.4085*.
19. Wang, F., Kinzie, M. B., McGuire, P., & Pan, E. (2010). Applying technology to inquiry-based learning in early childhood education. *Early Childhood Education Journal*, *37*, 381-389.
20. Weissberg, R. P., Durlak, J. A., Domitrovich, C. E., & Gullotta, T. P. (2015). Social and emotional learning: Past, present, and future.
21. Zhang, L., Basham, J. D., & Yang, S. (2020). Understanding the implementation of personalized learning: A research synthesis. *Educational Research Review*, *31*, 100339.
22. Sharar, T., & Nawab, A. (2020). Teachers' perceived teacher leadership practices: A case of private secondary schools in Lahore, Pakistan. *Social Sciences & Humanities Open*, *2*(1), 100049.
23. Parveen, K., Phuc, T. Q. B., Shafiq, M., & Wei, T. X. (2021). Identifying the administrative challenges encountered by the principals in low-performing public secondary schools of Faisalabad District, Pakistan. *International Journal of Humanities and Innovation (IJHI)*, *4*(1), 5-16.
24. Abdullah, N. A., & Mirza, M. S. (2020). Evaluating pre-service teaching practice for online and distance education students in Pakistan: Evaluation of teaching practice. *The International Review of Research in Open and Distributed Learning*, *21*(2), 81-97.
25. Kibria, A., Junejo, I., Siddique, M., & Banbhan, A. A. (2020). the Impact of Islamic Work Ethics on Job Satisfaction, Organizational Commitment and Work Performance. *International Journal of Management (IJM)*, *11*(12).
26. Sarstedt, M., Hair, J. F., Pick, M., Liengaard, B. D., Radomir, L., & Ringle, C. M. (2016). Progress in partial least squares structural equation modeling use in marketing research in the last decade. *Psychology & Marketing*, *39*(5), 1035-1064.
27. Kothari, C. R. (2004). *Research methodology*. new Age.
28. Kumar, G., & Bhatia, P. K. (2012). Impact of agile methodology on software development process. *International Journal of Computer Technology and Electronics Engineering (IJCTEE)*, *2*(4), 46-50.