

Benchmarking of Industry Readiness for Physical Education Graduates in India

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Abstract: The present study is to develop benchmarking of industry readiness for physical education graduates in India. The study focused on the challenges and gap between student experiences and demand of industry and reflect the concern about how benchmarking guides physical education graduates and industry stakeholders in certain direction. Based on the review, four major variables (academics, sports, industry and social responsibility) are identified for the study. A pool of industry stakeholders from school and college principal, directors of sports, head of the departments, CEO and HR of physical education service providing companies and from another domain were identified. Their responses were collected through survey tool protocol and interview protocol with each industry and quality analysis was performed to identify the attributes in influence physical education student readiness for the industry. The identified attribute can be formalized into a self assessment tool for the students, teacher and institution to helps and support students fill the missing attributes before graduation from university and become more industry ready.

Keywords: Physical education, stakeholders, benchmarking, sports, attributes.

Introduction

The aim of the Indian higher education system to make every citizen of India as qualitative, equity, skillful, knowledgeable, enabling them as world citizens with rooted deeply in Indian culture and heritage (MHRD 2017). According to New Educational Policy 2016, it was revised after nearly three decades since it was emerged lastly, based upon the new opportunities, socio-economic aspects, political transformation and global demands. This new policy recreate and reframe the inculcate values, importance of higher education, focus on skill learning to all citizens in India (MHRD, 2016). The education system in India since ancient time focused on not just to gain knowledge, learning skill, but to realize-self for life span. In modern era, Indian education system has grown itself in terms of universities, colleges, schools etc. and accountability and autonomy become two major objective of education system to create skillful citizens to the world society (Majhi & Dansana, 2021).

Policy of higher education in India:

According to UGC's 12th Five-year plan (2012-2017) report, Indian higher education is passing through a phase of magnificent expansion caused through increased students gross enrollment ratio (GRE) in higher education colleges and universities, magnificent expansion of several colleges and universities, improved level of public funding in higher education. This expansion brought up

challenges in higher education along with opportunities to make more professional and balanced students who can achieve international benchmarking and create their standard in their respective fields (UGC, 2012). MHRD also revised and implemented the in national education policy (NEP; 2019, 2020) to make student world citizens and more productive to industry (MHRD, 2020).

Physical education in higher education:

Physical education aimed to make wholesome development of an individual, and people accept physical education for health and fitness purpose as well professional purpose also (Desai et al., 2013). Physical education field is one of the most growing industries in the world (Clarrence et al., 2015) and people show a keen interest in the physical education field. This interest of people resulting not just good health, but good economic opportunities also (Lancaster & Bain, 2020). Student enrolled themselves in various undergraduate and post graduate programs for being professionals in physical education field. Industry stakeholders also taking an interest to make maximum benefit from the physical education field, which is resulting a demand and supply process in industry (Polkinghorne et al., 2021). Wide variety of occupational opportunities in physical education sector from school physical education teacher, college, school, sports manager, health and fitness, sports scientist, but it is notified that student are unable to get professional opportunity in comparison to their potential, unable to maintain their professional position after being selected and they are unable to maintain standard and quality of profession (Basoglu, 2018).

The problem of gap:

Expert says, common education system; lack of industrial education system, awareness, updated curriculum etc. are the factors influencing student learning. There is also a gap between student learning and industry demand in physical education (Heslop & Council, 2014), after completing program candidates are unable to fulfill the demands of industry (Tellmann et al., 2021). Candidates are unable to maintain the service quality, productivity, standardization of work, demand of profession and expectation of society.

Discussing about quality, standardization, benchmarking in the physical education industry is desired key aspect of all stakeholders (i.e. student, alumni, parents, faculty, and physical education industry) (NAAC, 2007) and every stakeholder has their own expectation (Duclos, 2015). This creates opportunity along with challenges for physical education graduates to uplift themselves according to the demand of industry (Boresgarc et al., 2020). But the present scenario is witnessed that today candidate is unable to consume and maintain the professional opportunity. This problem is a matter of discussion which needs a process based solution involving of various stakeholders.

Concept of benchmarking, need and importance in physical education:

MHRD (2016) revealed about unprecedented challenges-from great recession, fall of jobs, job security, and lack of dedicated and productive employee in Indian industry too. This complex issue is a matter of debate and finding out the solution as soon as possible in all the fields, and need to look at the future (Behzadirad & Stenfors, 2015). We know about how the industrial revolution (Tay et al., 2018) has made changes in human's lifestyle (Schlaepfer & Koch, 2017), education system did not grown itself according the demand, it is resulting a gap between industry and student learning (Vermunt et al., 2018). The gap between industry demand and student learning can be covered by the

benchmarking, which will be fixed with established standardize key performance indicators. Benchmarking can be set fix parameters, which are beneficial to all the stakeholders and can be fullfil their demands (Scott, 2011). Benchmarking helps to any candidate, institute or organization to fix on working life, measuring continuity, making the assessment of performance towards their aim, compare to others, and find-out process of development (Altungul & Demirag, 2017).

Now the question arises of what will enable this education system capable to meet the demand of the 21st century's physical education industry. How to prepare candidates to meet the needs and demands of stakeholders of the physical education field, and how a candidate prepares themselves to meet the demand of stakeholders (Weingarten et al., 2012). To improve the standard of the student industry readiness of the country, the higher education system in India must provide more systematic education, and develop a standardized assessment system for the scope of up-gradation (Lanaster & Bain, 2018).

Most successful organizations around the world in all sectors use assessment systems frequently to identify problems, causes, and their solution (Basoglu, 2018). This exercise keeps them on track of succession regularly (Behzadirad & Stenfors, 2015). Assessment during and after degree programs in physical education provides essential assurance to be industry readiness in the physical education industry, to all candidates (Fisher et al., 2021). This assessment provides overall information on their knowledge and skills. This assessment helps physical education graduates to choose the planning of either getting further study at higher or to move towards a profession as industry-ready (Michelsen et al., 2017).

To achieve this historic opportunity, it depends upon the assured assessment system in higher education physical education. According to Coates (2015), assessment is a broad term in physical education and have their significance. Assessment has its broad area, and it can be done in a variety of ways, so assessment helps to identify scope and assumption. Coates (2015) also explained the process of assessment as measurement, evaluation, and interpretation of student learning and development.

Similar issues creating problems for physical education students when they complete their programs and applying for to be a professional. There is also a gap between candidate's learning and industry's demand in physical education (Heslop & Council, 2014). Today candidates are unable to fulfill the demands of industry (Tellmann et al., 2021) and deal with this problem in industry an assessment procedure should be followed to find out the strength and weakness of the candidate before they engaged in profession or higher studies (Chajewski et al., 2011). So it is required to identify key performance indicators for the assessment of student's learning outcomes, so that this exercise helps to categories different types and levels of assessment. A key performance indicator is financial and non-financial assets for any organization to find out how successful they are, aiming towards their set goals (Velimirovi et al., 2011). The most important significance of the key performance indicator system in physical education is to produce highly skilled and future stick skilled candidates to get employed and for nation-building. It will give thrust to good skilled citizens and economically boost the nation (Chalmers, 2008). To do the exercise, firstly, need to review the need and demands of the field, and also review the existing previous assessment tools related to student learning assessment. Many researchers find various key performance indicators to assess student learning outcomes:

Indicators	Variable	Sub variable
Assessment of Higher Education Learning Outcomes (AHELO) (Tremble et al., 2012)	1. Generic Skill 2. Economic Assessment 3. Engineering Assessment	
Student success in higher education (Weingarten et al., 2011)	1. Knowledge	1.1 Knowledge of the physical & natural world 1.2 Intercultural knowledge & competence 1.3 Civic knowledge & engagement 1.4 Ethics reasoning
	2. Intellectual abilities	2.1 Critical inquiry 2.2 Creative thinking 2.3 Problem solving 2.4 Independent learning 2.5 Data manipulation 2.6 Analysis & assessment of information 2.7 Synthesis
	3. Professional/ Technical abilities	3.1 Written communications 3.2 Oral communication 3.3 Quantitative literacy 3.4 Information literacy 3.5 Teamwork skills
A study on Key Performance Indicators (KPIs) for Basic Education in Taiwan (Wu & Cheng, 2012)	1. Input indicators	1.1 Educational background 1.2 Educational resources
	2. Process dimension	2.1 Leadership and management 2.2 Curricula and teaching 2.3 Professional development 2.4 Student activity and support 2.5 Parental involvement and support
	3. Output dimension	3.1 Student learning performance 3.2 Teacher teaching and research performance 3.3 Overall school performance
A Continuous Improvement Model for Teacher Development and Evaluation (AFT & CEO, 2010)	1. Professional teaching standards	1.1 Communication 1.2 Teacher leadership 1.3 Competencies of teacher performance 1.4 Complexity of teaching & student learning 1.5 Encourage teacher to be reflective practitioners 1.6 Collaborative & reflective nature of teacher's work
Performance and Development Guidelines for Teachers (Rowe & Lievesley,	1. Professional knowledge	1.1 Student outcome 1.2 Know the student how they learn 1.3 Know the content and how they teach
	2. Professional	2.1 Plan for and implement effective teaching &

benchmarking of industry readiness for physical education graduates in india

2002)	practice	<p>learning</p> <p>2.2 Create & maintain supportive and safe learning environment</p> <p>2.3 Assess, provide feedback & report on student learning</p>
	3. Professional engagement	<p>3.1 Engaging in professional learning</p> <p>3.2 Engage professionally with colleagues, parents/careers & community</p>
UNESCO Education For All (EFA) Indicators (Rowe & Lievesley, 2002)	Indicator 1 to Indicator 18.	<p>1: Gross enrollment in early childhood development programs, including public, private, and community programs.</p> <p>2: Percentage of new entrants to primary Grade 1 who have attended some form of organized early childhood development program.</p> <p>3: Apparent (gross) intake rate in Grade 1 as a percentage of the population of official entry age.</p> <p>4: New entrants to primary Grade 1 who are of the official primary school entrance age as a percentage of the corresponding population.</p> <p>5: Gross enrollment rate (Grades 1-5 total)</p> <p>6: Net enrollment rate (Grades 1-5 total)</p> <p>7: Public current expenditure on primary education as: a percentage of GNP; and per pupil as percentage of GNP per-capita</p> <p>8: Public expenditure on primary education as a percentage of total public expenditure on education.</p> <p>9: Percentage of primary school teachers having the required academic qualifications.</p> <p>10: Percentage of primary school teachers who are certified to teach according to national regulations.</p> <p>11: Teacher: pupil: ratios</p> <p>12: Repetition rates at Grade 1 and 5</p> <p>13: Survival rate to Grade 5</p> <p>14: Coefficient of efficiency to Grade 5</p> <p>15: Achievement Test Scores and Basic Learning Competencies in Language, Mathematics and Social Studies.</p> <p>16: Literacy rate of population 15-24 years old</p> <p>17: Literacy rate of population 15+ years old</p> <p>18: Gender parity index (female to male literacy rate)</p>
Advanced standard for physical education (NASPE, 2008)	Professional knowledge	<p>Content knowledge</p> <hr/> <p>Curricula knowledge</p>

		Method of inquiry
	Professional practice	Sound teaching practice
		Assessment
		Equity, Fairness and Diversity
		Reflection
	Professional leadership	Collaboration, Reflection, Leadership and Professionalism
		Mentoring
		High expectation for a physical actively class

Table no. 1: matrix of previous work.

When discussing the key performance indicators for physical education students in higher education we need to focus on the basic components of performance and development tools (Tremble et al., 2012). As Jensen, (2011) states ‘meaningful appraisal geared teacher improvement and development in learning’, similarly this statement directly correlates in student learning assessment. The model facilitates professional growth and allows candidates, teachers, and other beneficiaries to identify their professional growth based on the needs (DEECD, 2014).

Methodology

This is well known fact that research work in assessment in physical education has limited boundaries, and its need greater expansion according to demand. Thus the aim and objectives of the present study to development and assessment of industry readiness of physical education graduates.

Theoretical Sample:

- Selection of variables: For the present study four variables were identified based on reviews of related literature. Also based on input process delivery of higher education stakeholders, and expectation and utilization of industry stakeholders.

Sr. no.	Variables	Significance
1	Academics	This parameter includes assessment of theory and practical classes, grounds activities, course related other classes, and other co-curricular participation of physical education trainee teachers.
2	Sports	This parameter explores the level of participation of candidates sports as a player, as a volunteer, as an official and as an organizer at various level competitions during their program.
3	Industry Exposure	This parameter will explore the previous experience of candidates related to the physical education industry. Their associations with various opportunities in the physical education field and learning.
4	Social Responsibilities	This parameter will explore the association and contribution of the candidate towards society.

Table no. 2: illustration of variables.

benchmarking of industry readiness for physical education graduates in india

- Selection of participants: Total twenty industry stakeholders were selected for data collection. Whereas eight professors from department of physical education of different institutions, four physical education teachers from senior secondary schools, three director of sports, four principal of govt. senior secondary schools, three head of the department of physical education from private universities, three HR/CEO of physical education service provider companies the participants were selected from various industry stakeholders from the different field of physical education industry.

Core phenomena:

- A separate survey tool protocol (quantitative data) were used for each type of industry stakeholder for data collection. Data was collected online through Google form.

Casual conditions:

- A semi-structured interview protocol (qualitative data) was conducted to collected data from the industry stakeholders, who already attempted survey tool protocol.

Data collection:

After collection of (qualitative and quantitative) data, nesting of data and analysis were done.

Open coding:

Open coding process was applied to find-out key facts and theories. It is resulting an expert review protocol was developed for collecting data from industry stakeholders again on their previous responses.

Qualitative analysis			
Theme	Attributes	Label	Codes
Academics	Classroom teaching	Industry oriented academics	5
	Grounds activity	Communication based assessment	4
	Research activity	Classroom participation	7
	Conference	Student interest-based education	4
	Workshop	Theoretical knowledge	3
	Co-scholastic event participants	Communication skills	20
		Skilled based academic opportunities.	4
		Teaching lesson practice	7
		Knowledge sharing	9
		Skill elective course	4
		Practical exposure/UGC regulation/NCTE curriculum	12
		Teacher's ability	9
		Student background/ Community connect and exposure	5
	Motivation	7	

		Promoting local language	3
		Transfers of learning	2
Sports	Sports participation	NSNIS	11
	Sports volunteer	Certificate in coaching	4
	Technical official	Certificate in officiating	4
	Sports organizer	Certificate in sports organization & administration	2
Industry exposure	International internship	Strategic thinking	3
	Summer internship	Thinking ability	1
	School internship	Attitudinal sift	1
	Apprentice	Soft skills	2
	Sports industry	Emotional intelligence	4
	Corporate sector	Organizing self	1
	Federation/ organization	Proficiency	1
	On site visit	Self-discipline	3
		Personality development	6
		Internship & Apprentice	17
Social Responsibility	NCC	National integration	10
	NSS	Socialization	11
	NGO	Connect to society	3
	NDRF	Connect to society	3
	Scout & Guide	Connect to society	3
	Govt. schemes	Teachers' attributes and quality training	2
		Response-effectiveness	2

Table no. 3: final outcomes for benchmarking.

Result and Discussion

The findings say; that student performance assessment will not be only limited criteria for assessing the student performance, outside classroom activity should be take consideration for student performance assessment i.e., student's participation in research activities, conference, workshop, co-scholastic event participation should be considered. These can be a valid criterion for student performance assessment.

Similarly, sports participation is one of major aspect for physical education teachers, coaches and trainer. Mostly expert agreed on this point that sports participation as player, as a volunteer, as technical official and experience of event organization is very important for physical education teachers. Sports participation is important criteria for physical education teachers in diverse field. They cannot be bound themselves in just sports participation, experience of volunteering, technical officials and event organization also be major factors for physical education teacher. but its importance different for all industry stakeholders. It is also matter of debate that all the industry stakeholders not consider sports participation much important for all. CEO, HR managers, and other

industry stakeholders not consider sports participation that much important as student performance assessment criteria in their field.

Industry experience considered another important parameter for student performance assessment. All the industry stakeholders and experts consider this important for all diversified field of physical education. Associated with physical education industry as internship, apprentice, federation, organization, and onsite visit can also be considered as criterion measure for student performance assessment.

Social responsibility is another considered parameter for student performance indicators for industry readiness. Industry stakeholders agreed that association and involvement of student in social responsibility should be considered as important parameter. Student involvement in social awareness program like government social awareness schemes, volunteer services, NCC, NSS, NDRF, NGO, and Scout & Guide should be considered for selection process in physical education industry readiness.

Conclusion and Recommendation

On the basis of findings, it is concluded that a skillful candidate is always been a priority for any industry. Physical education industry has diversified domain and this complex situation become a challenge as well as opportunity for physical education graduates. These all above discuss parameter are essential for any domain in physical education industry, either candidate working as physical education teacher, coach, trainer, writer, journalism, administration, management, director of sports, gym, fitness center, recreation center, rehabilitation center, CEO, HR. and freelancer. Benchmarking provides a path to all the stakeholders to achieve maximum possibilities in case of admission process, academic parameters, student support, curriculum review and assessment purpose. The finding of study, as benchmarking set limits for student to learn maximum for being industry readiness, also helps industry stakeholders to recruit good candidate. Benchmarking also enable to the stakeholders to identify best practice to deliver the best and achieving the excellence in physical education in India. It is further recommended that the benchmarking process is required:

1. For quality control enhancement.
2. For developing assessment tool for stakeholders (for purposes).
3. For curriculum revision and content development aiming towards broader scope in physical education.
4. For transforming of program, meeting industrial demand, and administrative feasibilities.

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benchmarking of industry readiness for physical education graduates in india

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