Research Article

Generic Competence of Sport Sciences Students and their Assessment of Academic Achievement

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Abstract | This piece of research was to assess generic competence in sports sciences students. The measuring instrument comprising 19 items (competences) was adopted from Reflex Project. Total 170 respondents of sports science department and some more sports students from other departments participating in sports activities were conveniently selected as a sample of the study. Mean median, mode and range were calculated to describe the data. The difference between the levels of competence was measured with the help of independent sample t-test. The same was applied on gender and group to observe the difference. The relationship between generic competence and students' grades was found with the help of Pearson correlation. The impact of generic competence and students' grades was observed with the help of multiple regressions. The findings of the study concluded that the level of competence was found the same in male and female students. But, the level of competence was found in few competences when observed group wise. The relationship between generic competence and students' grades was found in few competences. The impact of generic competence and students' grades was also found in few competences. It was recommended that Students' grades made better through focusing on generic competence in curriculum.

1. Introduction

Competence is a concept that has been used in the past few decades. Almost in every field, the concept signifies as an essential prerequisite and the readers, with the passage of time, are becoming more aware with this term (Campion *et al.*, 2011). Kallioinen (2010) defined the term as representation of dynamic combination of knowledge and understanding, cognitive skill, practical, intellectual and interpersonal skill.

The term competence can be explained as an individual's capacity in some certain situations. It is the power to act with effectiveness in a situation (Perrenoud, 2013; Grgasovi´c and Šoštari, 2022). It is suitable for the students' learning and plan, to promote lifelong learning. They are intangible and

dynamic (Morgan and Fekete, 1996). These are skills and ability which has formally recognized and is used to perform specific task (Pukelis and Pileicikiene 2009). It is the ability to display superior performance in any task assigned to an individual (Ducker, 1985). Drummond *et al.* (1998) indicated that competence is a highly sensitive topic and also necessary for career development of students and needs an academic scientific approach for its development.

Generic competences may be useful across different organizations and positions (Soderquist *et al.*, 2010). They are known as employability skills and are important for job and personal development of the students. They usually refers to the abilities and skills that are general to multiple regimes i.e. more than one field of knowledge, one occupation or one work site (Cheetham and Chivers, 1996). It prepares students to deal with different challenges of life and of complex society. It does not only give the students skills but also develops abilities that are useful in wide varieties of situations (Shah *et al.*, 2017). It builds self-esteem and self-confidence in individuals. Generic competence has gained more attention for all over the world (Selvadurai *et al.*, 2012). Rychen (2006) and Salganik (2003) stated that generic competence is multi-functional and transversal across different fields.

Competences can be assessed objectively by external evaluators, but require more time and resources (Pederson *et al.*, 2005). In order to assess the generic competences, a suitable technique is self-assessment. It serves as a stress-free mean and also as a source of getting information directly. This method is widely used at higher-education level. Interest to calculate generic competences among students at higher education levels has increased now-a-days. For instance, past researches i.e. Shah *et al.*, (2017) and Shamim ur-Rasul *et al.*, (2014) in their studies did research on generic competences of students at higher education level and this study is on generic competence of sports students. The literature reveals that there was less number of empirical studies on assessment of generic competences among sports students. No study on generic competence of the sports students in Pakistan has yet been found. So this study was added to the literature on expectation and achievement gap in developing generic competences of sports students. Higher education students have specific and generic competences. Both competences are significant for

work place. Specific competences help person to perform specific task. Generic competences help students to get integrated into rapidly changing job market and its demand (Ince and Hunuk, 2008). Past studies shows that specific competences give more attention but the generic competences were ignored. So, the present study determines the level of generic competence in sports sciences students. This study finds out the grades of students and their relationship with generic competence. It also finds out influence of generic competence on grades of students.

The objectives of the current research study are as following:
1. To determine level of generic competence in the students of sports sciences.
2. To find out the grades of sports sciences students.
3. To explore relationship between the generic competence and grades of the students
4. To find out effect of generic competence on the grades of the students

1.1 Literature review

Past researches on generic competences i.e. Shah *et al.* (2017) Assessment of generic competence among higher education students. The objectives of current study were to examine various stages of the generic competences of the students while they were either entering or leaving higher education organizations or institutions. This study explained how the higher education played a vital role in the promotion and dissemination of the generic competences in students during their academic session from start to end, but it was also noted that increase in the competence skills was only modest level and no noteworthy change was observed. There was some gender differences were observed among students in some generic competences.

A study conducted by Josep and Garrina (2011) by the title of 'Generic competences in Higher Education: Studying their development in undergraduate social science studies by means of a specific methodology'. This research was aimed to have sound understanding regarding the best contexts for gaining the generic competences in the higher studies as well as highlighted the importance in professional world. The study was conducted in specific time and special settings required for learning of generic competences, with the context studied and regarding higher studies. In 2006, Anna Louise Jones, re-disciplined the

generic skills and conducted a study with objective to investigate the link between disciplinary contexts and generic skills. Finding of this study showed a significant variance in ways how generic skills were conceptualized across discipline. Crebert (2004), conducted a study regarding gaining generic skills during the university and higher studies. The objective was to evaluate how the university education, job appointments and the employment after graduation may develop the generic skills in a person. Present study revealed that graduates whole heartedly accepted contribution of their universities and that they made contributed to development of their generic skills, as well as they acknowledge and value learning experience in workplace during job and then later on in regular employment.

Kallioinen (2010) did a research on defining and comparing the generic competences in the higher education and the main objective was to highlight the significance of the defining generic competences in light of the definition of Europe. As a finding of this study, matrix of Laurea's competences was developed which reflected with the reference to Finnish and European definition of competence. In the Laurea's study, the meta-cognitive skills are mainly implanted in learning outcomes of generic competence. Other studies Shamim-ur-Rasul *et al.* (2014) exploring generic competence of university students'. Purpose of this research was to discover residential and gender variances in the generic competences of the students enrolled in university for higher education. According to the results, the pupils were well aware regarding their generic competences and its importance. Current research aims to investigate assessment of generic competence of students of Sports Science and the objective is to evaluate the level of the generic competence of the pupils of Sports Science and relationship of generic competence and students' grades.

2. Materials and Methods

This was a descriptive study. Survey research was used to collect data. Population was the students of the host university (Sargodha University Pakistan). While sample was selected on the basis of convenient sampling technique. Total 170 students of B.S Sports sciences and the player students studying in other departments of the university were the total sample. Generic competence scale was used as instrument,

which were consisted of nineteen competencies and developed by the reflex project in western context and used by Shah *et al.* (2017) in Pakistani context. The instrument includes nineteen (19) generic competences. The data were collected against the 10 point rating scale. Scale ranges from 1 (very low) to 10 (very high). Grades of the responding students was also required. For this purpose, Students were asked to report their Cumulative Grade Point Average (CGPA). Permission from the heads of the Department/Institute was sought in writing before approaching students. Questionnaire was given to students and were asked to rate themselves at a 10-point scale. At that time majority of the students were unaware of the research and rating scales so they were being briefed about the questionnaire and the purpose of the research. They were also made assured that their responses would be used for research purpose only and will not be shared with anyone. The data were collected from only those who consented willingly to participate this study.

Data was analysed through the software (SPSS). Descriptive statistics was used. Mean median, mode and range were calculated to describe the data. The data were also analysed using mean scores and independent t-test statistic at significance level of 0.05. Mean is most satisfactory measure of characterizing a group. The researcher found its importance to check whether the difference between the mean marks of the sample was significant, therefore t-test was applied to determine the significant difference among the students' responses. For the comparison of means of two groups, a specific statistical test is used which is known as t-test (Kim, 2015) In order to find out link between generic competence and students' grades, Pearson correlation was calculated. Multiple regression was used to find impact of generic competence on the speculative performance of students.

3. Results and Discussion

Table 1 shows that most of the competences have significant relationship between students' grades, Pearson 'r' value was 0.151 and p-value 0.050 which shows that significant positive but weak relationship between acquire knowledge and students' grades. Similarly, Pearson 'r' value was 0.179, and p-value $0.020 < 0.05$, which shows that there was a significant positive but weak relationship between negotiate

Table 1: Relationship between generic competence and student's grades.

Competence	N	CGPA (r)	P value
Mastery of ones' own field	170	0.038	0.622
Knowing about others' areas/ fields	170	-.002	0.974
Thrust for newness in knowledge	170	-.070	0.368
Thinking analytically	170	0.151	0.050
Can negotiate more effectively	170	0.179	0.020
Can do well even in difficult situations	170	-.072	0.350
Well aware about new horizons of life	170	0.167	0.029
More effectively coordinate with other activities	170	0.139	0.070
Can use time more efficiently	170	0.074	0.340
Productivity of work is good	170	0.224	0.003
Can use others' capabilities more effectively	170	-.018	0.816
Can convey my ideas to others	170	0.001	0.995
Can assert my authority to others	170	-.042	0.587
Can use technology efficiently	170	0.157	0.041
Can resolve issues and suggest new ideas	170	0.218	0.004
Can question at my own and others ideas	170	0.119	0.121
Can present my own ideas and can convince them	170	0.192	0.012
Good in writing and reporting documents	170	0.167	0.030
Can write and speak in other languages	170	0.050	0.515

effectively and students' grades. Pearson 'r' value was 0.167 and p-value 0.029<0.05 which shows that there was a significant positive but weak relationship between awareness to new opportunities and student grades. Likewise, Pearson 'r' value 0.139 and p- value 0.070<0.05 which shows that there was a significant positive but weak relationship between coordinate activities and student grades. Table 1 shows that Pearson 'r' value was 0.224 and p- value 0.003<0.05 which shows that there was a significant positive relationship between work productively with others and students' grades. Similarly, Pearson 'r' value was 0.157 and p–value 0.041<0.05 which shows that there was a significant positive but weak relationship between the usage of computer and internet and students' grades. Pearson 'r' value 0.218 and the p-value 0.004<0.05 which shows that there was a significant positive relationship between come up with new ideas and solutions and students' grades. Pearson r value was 0.192 and p- value 0.012<0.05 which shows that there was a significant positive but weak relationship between present ideas and reports

to an audience and students' grades. Pearson 'r' value was 0.167 and p-value 0.030<0.05 which shows that there was a significant positive but weak relationship between write reports, and documents and student grades. Rests of the generic competences have no significant relationship regarding student's grades.

Table 2 showed that multiple linear regressions analysis was computed to conclude the impact of generic competence on students' grades. Regression model was statistically significant at .004 which was less than the value of significance 0.05. This means that overall regression model fitness in regressing overall impact of the generic competence on students' grades.

Table 2: Impact of generic competence on students' grades.

Model	B coefficient	P
Constant	2.824	.000
Mastery of ones' own field	-0.01	.961
Knowing about others' areas/ fields	-0.13	.464
Thrust for newness in knowledge	-0.36	
Thinking analytically	-0.06	.703
Can negotiate more effectively	0.29	.070
Can do well even in difficult situations	-0.24	.080
Well aware about new horizons of life	0.14	.441
More effectively coordinate with other activities	.0.31	.056
Can use time more efficiently	-0.16	.330
Productivity of work is good	0.38	.036
Can use others' capabilities more effectively	-0.20	.260
Can convey my ideas to others	-0.17	.355
Can assert my authority to others	-0.27	.087
Can use technology efficiently	0.25	.089
Can resolve issues and suggest new ideas	0.23	.229
Can question at my own and others ideas	-0.08	.644
Can present my own ideas and can convince them	0.22	.212
Good in writing and reporting documents	0.21	.183
Can write and speak in other languages	0.06	.642

a. Dependent variable students' grades, a: .004. $R^2 = .222$ Sig.004

Following were the regression equation:

$$y = \alpha + \beta_i X_i + \varepsilon$$

$$Y = a + B_1 X_1 + \beta_2 X_2 + B_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + B_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12} + \beta_{13 X_{13} + \beta_{14}} \beta_{15} X_{15} + \beta_{16 X_{16} + \beta_{17}} X_{17} + \beta_{18} X_{18 + \beta_{19}} X_{19}$$

Students' performance = 2.824-.001 (statement 1)- .013 (statement 2) -.036 (statement 3) -.006 (statement 4)+.029 (statement 5) -.024 (statement 6)+.014 (statement 7)+.031 (statement 8) -.016

(statement 9)+.038 (statement 10) –.020 (statement 11) –.017 (statement 12) –.027 (statement 13)+.025 (statement 14)+.023 (statement 15)-.008 (statement 16)+.022 (statement 17)+.021 (statement 18)+.006 (statement 19).

The result showed that value of R^2= .222 implied that generic competences of the study were able to explained 22.2% of the variance of students' grades. R^2 Was considered to have moderate impact on students' grades. Significance impact was found in 7 competences out of 19 competences on students' performance. Significance impact were found in the following competences i.e. analytical thinking, negotiate effectively, do well under pressure, coordinate activities, work productively with others, assert your authority, usage of computer. Significance impact was not found in 12 competences out of 19 competences. Significant impact were not found in the following competences i.e. master of your own field, knowledge of other fields, acquire knowledge, awareness to new opportunities, utilization of time effectively, mobilize the capabilities of others, meaning clear to others, come up new ideas and solution, willingness to question your own and other ideas, present ideas and reports to an audience, write reports, and documents.

3.1 Scatterplot of generic competence and students' grades
Figure 1 shows CGPA of students with y -axis and level of competences of the students on x -axis. Scatter plot shows that there was a weak relationship between grades and generic competences. a. Dependent variable student's grades $R^{2=26.8}$, Sig .001

The above figure shows that "multiple linear regressions analysis" was computed to conclude the impact of generic competence on students' grades. The regression model was statistically significant at 0.01 which was less than the value of sig 0.05. This means that overall regression model fitness in regressing the impact of generic competence on student' grades.

$$y = \alpha + \beta_i\,_{X_i} + \varepsilon$$

$$Y = a + B_1 X_1 + \beta_2\ X_2 + B_3X_3\ + \beta_4X_4\ + \beta_5\ X_5 + B_6X_6 + \beta_7X_7\ + \beta_8\ X_8\ + \beta_9\ X_9\ + \beta_{10}X_{10}$$
$$+\ \beta_{11}\ X_{11}\ + \beta_{12}X_{12} + \beta_{13}X_{18}\ _{+\beta_{14}}\ \beta_{15}X_{15}\ + \beta_{16}X_{16}\ _{+\beta_{17}}\ X_{17}$$
$$+\ \beta_{18}X_{18+\beta_{19}}\ X_{19+}\ \beta_{20}\ X_{20}\ _+\ B_{21}\ x_{21}\ _+\ B_{22}\ X_{22}$$

3.2 Scatterplot of generic competence and students' grades
Students performance = 3.033-1.90 (Group) +.022 (Semester) +.103(Gender) + .004(statement 1) –.020 (statement 2) –.040 (statement 3) –.004 (statement 4) + .032 (statement 5) –.021 (statement 6) + .009

(statement 7) + .002 (statement 8) –.016 (statement 9) + .030 (statement 10) –.020 (statement 11) –.014 (statement 12) –.021 (statement 13) +.021(statement 14) +.019 (statement 15) –.006 (statement 16) +.019 (statement 17) +.017 (statement 18) +.008 (statement 19).
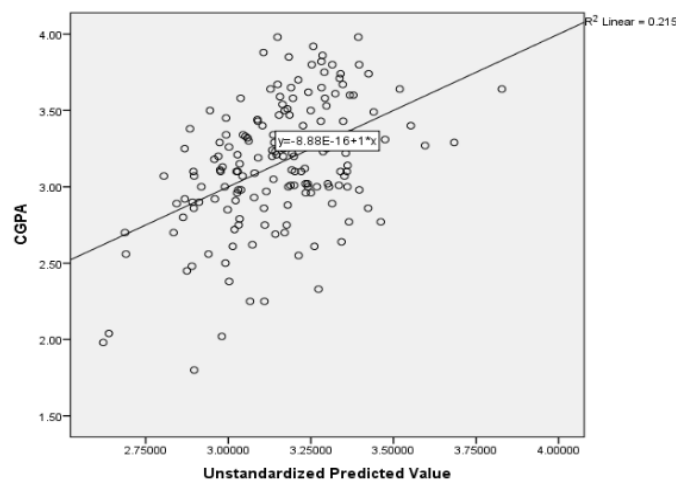

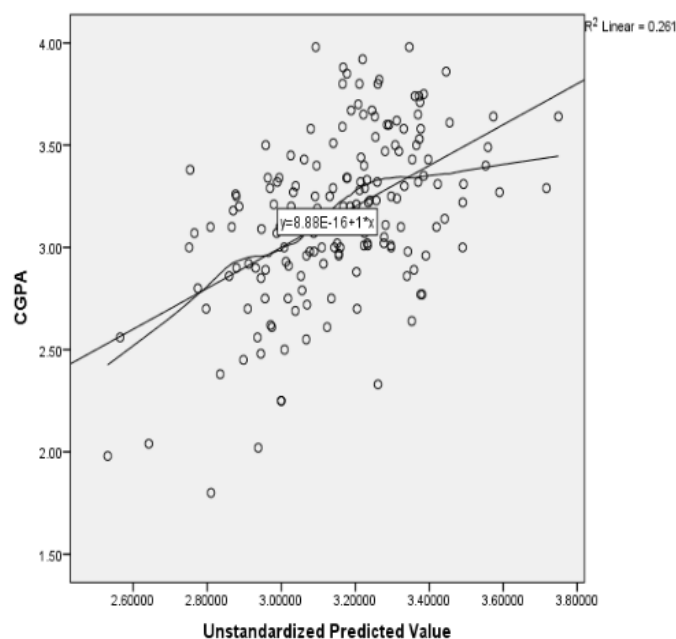**Figure 1: Relationship between CGPA and generic competences.**

Figure 2: Impact of generic competence on CGPA.

The result showed value of R^2= 0.268 implied that generic competences of the study were able to explained 26.8 % of the variance of students' grades. R^2 was considered to have moderate impact on grades of the students. Significant impact was found only three (3) competences out of 19 competences. Significant impact was found in the following competences i.e. analytical thinking, negotiating effectively, and having ability to work with others productively. Group was also impact on student 'grades.

The main purpose of this study was to assess the level of generic competence of sports science students. The present study found that there was no significant difference between level of generic competence in male and female students. The finding of a similar study conducted by Shah *et al.* (2017) contradicts the finding of this study. For example, they found that male and female have different level of generic competence. The possible reason of this contradiction in results might be due to difference between sample sizes of the both studies. The sample size in that study was higher than this study. It may be possible large sample size gave the similar results. Furthermore, the study found that students belonging to sports science department rated themselves better as compared to other than sports students of the departments regarding their generic competence. The findings of similar study conducted by Hadiyanto and Ibrahim (2013) and Aliu and Aigbavboa (2021) support the findings of this study. For example, they found that students in university of Indonesia rated themselves higher in their generic competence as compared to university of Malaysia students. The possible reason in results might be due to the culture of academic environment was different in both studies. This study also found that a significant relationship is present between generic competence and grades of student's. The findings of the study of Hadiyanto and Ibrahim (2013) and Grgasovi´c and Šoštari´c (2022) support the findings of this study. They found that a significant relationship is present with generic competence and their grades of students. The finding of similar study conducted by Shamim-ur-Rasul (2014) supports the finding of this study. For example, they found that students are generally aware of generic competences and are able to assess themselves through self-assessment tool. The possible reason of results might be due to similar self-assessment tool was used to assess students' generic competences the research revealed both of the congruous as well as incongruous result in current project and at the same time noted the matching phenomena in literature.

Conclusions and Recommendations

The level of generic competences of the students was high and medium in all competences. The competences level of students' was high within thirteen (13) out of nineteen (19) competences in 'master of your own field or discipline' "acquire new knowledge' 'awareness to new opportunities' 'coordinate activities' 'utilization of time' 'working productively with other' 'mobilizing the capabilities of others' 'making your meaning clears to others' 'asserting your authority' 'usage of computer and internet' ' coming up with new ideas and solution' 'the willingness to raise question on your own and other's idea' 'present ideas and reports to the audience.' While the level of generic competence of students was medium in six (6) competences in 'knowledge of other field or discipline', 'analytical thinking', 'negotiate effectively' 'performing well under pressure' 'write reports and documents' 'writing and speaking in a foreign language' whereas, the level of students generic competences was not low in any competences.

Significant difference was found in the level of few competences when observed group wise. But when observed gender wise there was no significant difference found in the level of all competences. Sports science students and other sports base students were not different in fourteen (14) out of nineteen (19) competences. Sports and other sports base students showed differences only in five competences. Sports science students assess themselves higher level as compared to other than sports base students. Overall students have different range of grades in term of CGPA, Students have the CGPA more than 3, maximum CGPA of students was 3.98 and minimum CGPA was 1.80. The mean of grades in all semesters were high. Sports students CGPA were low as compared to other than sport base students'. Most of the students contain high level of cumulative grade point average (CGPA).

There exists a weak positive relationship between generic competence and students' grades in the following competences acquire new knowledge, negotiate effectively, awareness to new opportunities, coordinate activities, work with others productively, usage of computer and the internet, coming up with new ideas and solution, presenting reports and ideas to an audience, write reports and documents. Significance impact were found in seven (7) competences out of 19 generic competences on students' performance i.e. analytical thinking, negotiate effectively, performing well under pressure, coordinate activities, work with others productively, assert your authority, usage of computer and the internet.

Significance impacts were not found in twelve (12) competences out of 19 competences. Significant impact were not found in the following competences

i.e. master of your own field or the discipline, the knowledge of other fields or disciplines, and acquiring new knowledge, awareness to new opportunities, utilization of time effectively, mobilizing the capabilities of others, meaning clear to others, coming up with new ideas and solution, willingness to raise question on your own and other's idea, present ideas and reports to an audience, writing documents and reports. On the other hand, significant impact was found only three (3) competences out of 19 competences. Significant impact was found in the following competences i.e. analytical thinking, work with others productively and negotiate effectively. Group was also impact on student 'grades.

Following were the recommendations:
In the light of findings is suggested that researcher conduct research on same topic with bigger sample and population size. The researchers may enhance the parameters of the generalizability by replicating the study on the larger samples in educational sector.
In the light of findings, it is recommended that Students' grades made better through focusing on generic competence in curriculum.

Novelty Statement

Studies on generic competencies has been carried out in past but this phenomena is investigated in a novel perspective as unit of analysis is students of "sports sciences". It is substantiated that students of sports sciences necessitates a different level of such competencies as it is the requirement of their field.

Author's Contribution

Zunaira Fatima Syeda: Conception of the work, Drafting of paper
Ashfaque Ahmad Shah: Conceived and designed the data analysis
Farah Deeba: Critical revision of the article
Farheen Malik: Collected the data

Conflict of interest
The authors have declared no conflict of interest.

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