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# COMPETENCY LEVEL OF JUNIOR HIGH SCHOOL SCIENCE TEACHERS IN MOUNTAIN PROVINCE, PHILIPPINES

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## ABSTRACT

Using descriptive research, the study determined the competency level of junior high school science teachers in terms of a. Social regard for learning; b. Curriculum; c. Learning Environment; d. Planning, Assessing, and Reporting; e. Diversity of Learners; f. Community Linkage g. Personal and Professional Development and Professional Index of Individual Plan for Professional Development (TIPPD). The competency level of junior high school science teachers was "satisfactory," as reflected in the mean of 3.13 using Friedman's two-way ANOVA. Using Sandler's A test, the difference in the teachers' competency level according to qualification is significant. Their strength is in Social Regard for Learning. The weaknesses are the Diversity of Learning and Community Linkages. For the Professional Index of Teacher's Individual Plan for Professional Development (TIPPD), 50% are experienced teachers, 41.67% are developing, and 8.33% are experts. Statistical analysis revealed no significant difference in the Professional Index of Teachers Individual Plan for Professional development (TIPPD) according to work experience, training attended, and qualification. The length of service and number of training attended is not significantly associated with junior high school science teachers' competency level—however, a marked difference in the competency level in terms of qualification. The work experience, the number of training attended, and teachers' qualifications do not have a bearing on the Professional Index of Teachers' Individual Plan for Professional Development. Finally, the professional development of teachers needs to be addressed. Teachers should diversify their learning approaches to take the needs of diverse learners. Community linkage should be strengthened, and school heads should fully implement continuing education programs for teachers.

## INTRODUCTION

A teacher is a valuable person in the country's educational system. Therefore, as an instrument of molding young citizens to become productive individuals in the next generation, the teacher should be capacitated with new teaching technologies to effectively deliver knowledge and skills. Likewise, teaching innovation is necessary to make an enabling learning environment suited to every learner. In other words, they need to embrace a transformative way and outcome-based learning to develop the young's potentials. However, amid educational reform and innovation initiated by the Educational managers to improve education in the Philippines through massive capacity building of public school science teachers, it is still behind Asian counterparts. According to Ismael et al. (2018), this may be attributed to the quality of Instruction, teachers' competence, and Principal instructional leadership on science teaching competency.

Another factor is based on the study conducted in the 4,246 secondary schools nationwide with 30,067 Science and Mathematics teachers. The data showed that 50% were qualified to teach general science, biology, chemistry, and physics as having the least qualified teachers. The highest percentage of qualified teachers in science was Biology (44%), General Science (42%), Chemistry (34%), and Physics (27%) (DOST, 2011).

The students' performance in science, as revealed in the Trends in International Mathematics and Science Study (TIMSS), is also discouraging, showing a low score among Filipino Students in International Achievement Test (Umil, 2012). Because of the unexpected test result, educational reform is adapted nationwide to improve curriculum and instructions and upgrade the teachers' competency in the public school. One way of upgrading teachers' competence is the National Competency-Based Teacher Standard (NCBTS), an instrument used to evaluate and determine teachers' competency and professional index. The result is the basis for capacity building for teachers. This competency standard is derived from educational theories and empirical research on the characteristic learning environment and teaching practices that lead to effective students learning in different parts of the country (NCBTS Primer, 2005).

In the light of the issue of teacher's competence confounding the educational system today, the study looked into the competency level and professional index of the Junior High School science teachers relative to a) Social regards for learning, b) Curriculum, c) Learning Environment, d) planning, assessing and reporting, e) diversity of learners, f) community Linkages, g) Personal and Professional Development.

Specifically, this study sought to answer the following questions:

1. What is the level of competency of Junior High School science teachers in terms of a) Social regards for learning, b) Curriculum, c) Learning Environment, d) planning, assessing and reporting, e) diversity of learners, f) community Linkages, g) Personal and Professional development according to?

a. Work experience
b. Number of training attended
c. Qualification

2. What is the professional index of Teacher's Individual Plan for Professional Development (TIPPD) of Junior High School science teachers in terms of a) Social regards for learning, b) Curriculum, c) Learning Environment, d) planning, assessing and reporting, e) diversity of learners, f) community Linkages, g) Personal and Professional development according to?

a. Work experience
b. Number of training attended
c. Qualification

## MATERIALS AND METHOD

### *Research design*

The study used the descriptive method of investigation. It covered the profile, competency, and training needs of Junior High School science teachers. Nineteen (19) national high schools in Mountain Province, Philippines, participated in the study. The target of the said investigation was junior science teachers (N=36) regardless of their employment status.

### *Data gathering tools*

The questionnaire checklist intended for National Competency-Based Teachers Standard (NCBTS) was the main data gathering instrument. The tool consists of questions geared on assessing of competency of science teachers. The questionnaire was divided into the respondents; teachers' competency level and Plan for professional development under the social regard for learning, curriculum, learning environment, planning, assessing and reporting, diversity of learners, community linkage, and personal and professional growth. Since the questionnaire checklist was National Standard, the validity test was not necessary.

### *Analysis of data*

The frequency counts and 4-point scale was used to determine the profile and competency level of the respondents relative to a) Social regards for learning, b) Curriculum, c) Learning Environment, d) planning, assessing and reporting, e) diversity of learners, f) community Linkages g) Personal and Professional Development. The following reference code below was used to determine the competency level of junior high school science teachers:

**Table A:** Responses interpretation

| Code of Competency Level | Interpretation |
|---|---|
| H-High | My level of competence in KSA is HIGH. This is my strength. Although not a priority, training, or professional development needs. I should continue to enhance this competency |
| S-Satisfactory | My level of competence in KSA is Satisfactory, but I would benefit from further training and professional development |
| F-Fair | My level of competence in the KSA is fair, and I need further training and professional development |
| L-Low | My level of competence in the KSA is low. I urgently need training and professional development |

The Teachers' Professional Development Index was determined using the reference code provided below.

**Table B:** Teacher Professional Index (TPDIndex)

| Competency Level | Label for the Index | Description |
|---|---|---|
| 3.91 - 4.00 | Expert | The teacher has almost all the competencies at a high level for effective teaching. These are the identified strengths. Strength has to be sustained and enhance; however, professional development need have to address continuously |
| 2.91 -3.90 | Experienced | The teacher has the majority of the competencies at a high level for effective teaching. Strengths have to be enhanced. Training and professional development needs have to be addressed. |
| 1.91-2.90 | Developing | The teacher has the average of the competencies at a high level for effective teaching. These strengths have to be enhanced; however, training needs have to be addressed as a priority |

According to the selected profile, Friedman's two-way ANOVA by rank was used in revealing the significant difference in the competency level and plan for junior high school science teachers' professional development. According to qualification, Sandler's A test was used to determine the significant difference in junior high school science teachers' competency. Chi-square was used to assess the relationship of Teacher's Individual Plan for Professional Development and work experience, the number of training attended, and junior high school science teachers' qualifications.

## RESULTS AND DISCUSSION

### *The Competency Level of science teachers*

The competency level of the teacher as to a. Social regard for learning; b. Curriculum; c. Learning Environment; d. Planning, Assessing, and Reporting; e. Diversity of Learners; f. Community Linkage and g. Personal and Professional Development is presented in table 1.

**Table 1:** Competency Level of Junior High School Science Teachers (N=36)

| Domains | 4 | 3 | 2 | 1 | WM | DE | Rank |
|---|---|---|---|---|---|---|---|
| 1. Social Regard for learning | 12 | 21 | 3 | 0 | 3.25 | S | 1 |
| 2. Learning Environment | 11 | 22 | 3 | 0 | 3.22 | S | 2 |
| 3. Diversity of Learners | 5 | 25 | 4 | 2 | 2.92 | S | 7 |
| 4. Curriculum | 8 | 24 | 4 | 0 | 3.11 | S | 5 |
| 5. Planning, Assessing and reporting | 10 | 3 | 3 | 1 | 3.14 | S | 4 |
| 6. Community linkage | 9 | 4 | 4 | 1 | 3.08 | S | 6 |
| ***7.*** Personal and Professional Growth | 10 | 3 | 3 | 0 | 3.19 | S | 3 |
| Over-all Mean | | | | | **3.13** | **S** | |

**Legend:**

| Numerical Value | Statistical Range | Descriptive Equivalent |
|---|---|---|
| 1 | 1.00 – 1.75 | Low (L) |
| 2 | 1.76 – 2.50 | Fair (F) |
| 3 | 2.51 – 3.25 | Satisfactory (S) |
| 4 | 3.26 – 4.00 | High (H) |

The study results reveal that the junior high school science teachers' competency level is "Satisfactory," as shown in an overall rating of 3.13. It was also revealed that the teachers would benefit from further training and professional development. The finding is similar to the level of competency belonging to the Faculty of Education in Yemen's Universities, which is average. Still, it disagrees with the Faculty of Education level in Indian Universities, which is less than the average ( Naji, Q. et al., 2015).

The most rated junior high school science teachers' most rated competency is social regard for learning and learning environment. The finding reveals that social concern for learning is the strength of junior high school science teachers. Both competencies are regarded as "satisfactory," as reflected in the weighted mean. Social Regard for Learning refers to teachers' actions to demonstrate punctuality, maintain appropriate appearance, be careful about the effect of one's behavior on students, and explain that learning is of different kinds and comes from various sources.

The data collaborated with Estria (2013) that punctuality and appropriate appearance were rated "very satisfactory." This implies that the teachers support the Civil Service Code of Conduct and Ethical Standards for Public Officials and Employees. Furthermore, such compliance is in line with the Department's mandate that the teachers observe punctuality and appropriate appearance.

Among the seven domains of competency-based standard, Diversity of Learners and community linkage are the least rated. Diversity of learning and community linkages are the weaknesses of the teachers. The diversity of learners refers to the teacher's effectivity in understanding and accepting the learner's diverse knowledge and experiences. It also includes the skills, knowledge, and values of teachers in the teaching-learning process. One example is adopting new strategies to address differently-abled students' educational needs and make appropriate adjustments for different socio-economic backgrounds.

This finding echoes Klimova et al. (2018) 's viewpoint that teachers should be aware of learning methods and required knowledge, skills, and competencies because these good practices were now fragmented. It collaborates with Johnson's (2014) idea and Umil (2012) that students' poor achievement level is due to their skill, knowledge, and expertise. Therefore, to improve students' achievement levels, the teachers should use varied teaching methodologies in dealing with diversified learners.

Community linkage refers to establishing enabling learning environments with full educational support coming from the stakeholders and community. Surprisingly, there is a weak community linkage of the junior high school science teachers. But these could be attributed to their non-exposure to community affairs because teachers spend much time on lesson planning and other school demands while balancing their time between family and career.

Such finding contradicts the ideas advocated by Bilbao et al. (2016) that the partnership of school and the community are the powerful forces that create an enabling learning environment. Partnership with the community stakeholder should not be neglected by teachers because education is shared accountability and shared leadership. For the best interest of the children, both should be willing to share responsibilities. Cydis S. (2014) stressed the need for teachers to establish a sound public relation to improving school performance. Through effective communication, the public will show favorable attitudes towards teachers and support school activities and programs.

***Competency level of science teachers according to work experience***

**Table 1.1:** Comparison of the Competency Level of junior High School Science School Teachers According to Work Experience (N=36)

| NCBTS Domains | Years of work experience | | | WM | D.E |
|---|---|---|---|---|---|
| | 1-5 | 6-10 | 11-above | | |
| 1. Social Regard for learning | 3.31 | 3.17 | 3.24 | 3.25 | ***S*** |
| 2. Learning Environment | 3.33 | 3.27 | 3.13 | 3.24 | ***S*** |
| 3. Diversity of Learners | 3.10 | 2.79 | 2.78 | 2.92 | ***S*** |
| 4. Curriculum | 3.11 | 3.00 | 3.11 | 3.09 | ***S*** |
| 5. Planning, Assessing and reporting | 3.15 | 3.17 | 3.12 | 3.14 | ***S*** |
| 6. Community linkage | 3.02 | 3.09 | 3.13 | 3.08 | ***S*** |
| ***7.*** Personal and Professional Growth | 3.42 | 3.12 | 2.98 | 3.19 | ***S*** |
| Over-all Mean | 3.21 | 3.09 | 3.07 | 3.13 | |

C.V. at .05 = 5.99 Fr = 2.79 **Not Significant**

Table 1.1 reveals a Fr value of 2.79, which is less than the critical value at the 0.05 level of significance. This implies that work experience has no bearing on the competence of the teachers. Such finding is similar to that of Zapanta (2014), who found out that teachers are satisfactorily competent in Art Education even without teaching experiences. How-ever, they attended training to enrich their competence in the subject area.

Therefore, teachers' competency is attributed to the knowledge and skills acquired during college education and the attitude toward the teaching profession. This implies that even if the teachers' work experience is long, they will not be guaranteed high competence if their pre-service education is poor. ("New K12 curriculum," 2012).

***Competency level of science teachers according to number of trainings attended***

**Table 1.2:** Comparison of the Competency Level of Junior High School Science School Teachers According to Number of Training Attended (N=36)

| NCBTS Domains | No of training attended | | | WM | D.E |
|---|---|---|---|---|---|
| | 5-6 | 2-4 | 0 | | |
| 1. Social Regard for learning | 3.17 | 3.28 | 3.22 | 3.25 | ***S*** |
| 2. Learning Environment | 3.30 | 3.24 | 3.19 | 3.24 | ***S*** |
| 3. Diversity of Learners | 2.96 | 2.90 | 2.92 | 2.92 | ***S*** |
| 4. Curriculum | 3.01 | 3.11 | 3.11 | 3.09 | ***S*** |
| 5. Planning, Assessing and reporting | 3.22 | 3.10 | 3.17 | 3.14 | ***S*** |
| 6. Community linkage | 3.13 | 3.05 | 3.16 | 3.08 | ***S*** |
| ***7.*** Personal and Professional Growth | 3.02 | 3.30 | 3.08 | 3.19 | ***S*** |
| Over-all Mean | 3.21 | 3.09 | 3.07 | 3.13 | ***S*** |

C.V. at .05 = 5.99 Fr = 0.071 **Not Significant**

Statistical analysis reveals in Table 1.2 that teachers' competency level according to the number of training attended based on the Fr of 0.071 value is not significant. This implies that training has no bearing on the competency level of junior high school science teachers.

The study's finding supports the idea that even if the teachers attended much training, it does not assure a profound effect in increasing teachers' competencies. As argued by Carter (2002), "Although training is central to the teachers' effectiveness, training bears little relation to quality teaching." The same line of thought is offered by Fauthab, B. et al. (2019). In a follow-up interview with the respondent, others claimed that their other purpose in attending training is to gather promotion certificates. The actual application of what was learned in the classroom depends on the availability of instructional devices.

Indeed, Esmeralda (2010) agrees that the teachers' competency is moderate, whether they attended several training pieces. The teacher's competency level's greatest factor is the adequacy of learning facilities; likewise, the teachers sent to training are not in-lined with his specialization.

***Competency level of teachers according to qualification***

**Table 1.3:** Comparison of the Competency Level of Junior High School Science School Teachers according to Qualification

| NCBTS Domains | Major (specialized in Science) | Minor and with training | WM | DE |
|---|---|---|---|---|
| 1. Social Regard for learning | 3.42 | 3.02 | 3.25 | S |
| 2. Learning Environment | 3.39 | 3.24 | 3.24 | S |
| 3. Diversity of Learners | 3.04 | 2.92 | 2.92 | S |
| 4. Curriculum | 3.20 | 3.09 | 3.09 | S |
| 5. Planning, Assessing and reporting | 3.30 | 3.14 | 3.14 | S |
| 6. Community linkage | 3.17 | 3.08 | 3.08 | S |
| ***7.*** Personal and Professional Growth | 3.25 | 3.10 | 3.19 | S |
| Over-all Mean | 3.21 | 3.09 | 3.13 | S |

C.V. at .05 = 0.286 A = 0.191 **Significant**

The data in Table 1.3 revealed that junior high school science teachers' competency level is significantly associated with their qualifications. Eighteen (18) of 36 respondents were majors, 4 were minors, 14 were not major, and minors but have science training. The data confirmed Oreta (2012) that there is a significant number of teachers who do not specialize in the key subject area. The possible outcome would be similar to the study of Abal, N. (2013) that non-specialized teachers in English failed to give more speaking activities.

Teachers should undergo advanced study because it has something to do with improving teachers' competence. Based on Goldhaber and Brewer's (1997) study, the students in mathematics who received instruction from a teacher with advanced degrees in mathematics achieved higher scores than those whose teachers had no advanced degree in mathematics. This implies that attending postgraduate study will upgrade teachers' competence because they were updated with the pedagogical methodology's current trend.

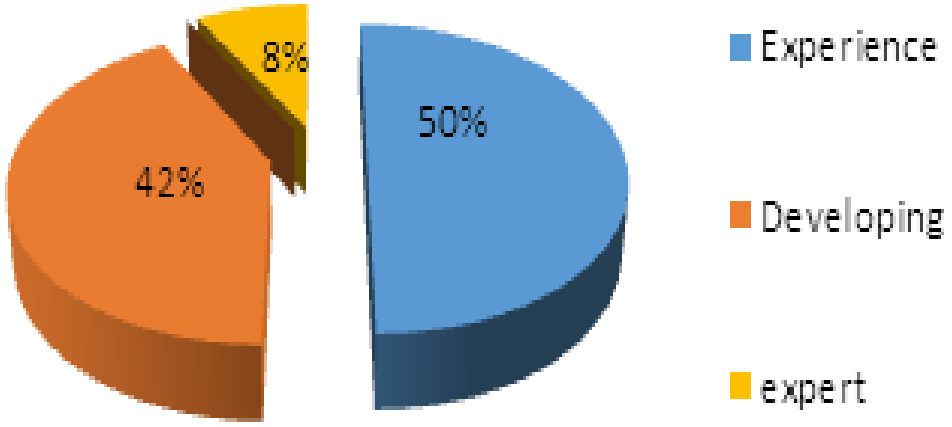
Lardizabal et al. (1977) stress that a competent teacher's first essential is to grasp the subject he teaches. The higher the grade level one teaches, the greater is the need for specialized knowledge. Because even in elementary school, teachers are now required to specialize in an academic area.

***Professional index of teachers individual plan for professional development***

The Teachers' Individual Plan for Professional Development (TIPPD) is a tool to determine the teacher's label based on their revealed competency level. The TIPPD is labeled as Expert, Experience, Developing, and Beginning. It was revealed in Figure 1 that the majority of the respondents are experienced. This implies that 50 percent of junior high school science teachers in Mountain Province, Philippines possess competencies at a high level for effective teaching. However, their strengths have to be enhanced, and training and professional development need to be addressed.

Eight percent are considered experts, and these teachers have the competencies at a high level for effective teaching. Their strengths have to be sustained and enhanced; however, professional development needs to be continuously addressed.

**Figure 1:** Professional Index of Teacher's Individual Plan for Professional Development of Junior High School Science School Teachers




***Relationship of work experience to the professional index of teachers individual plan for professional development***

**Table 2.1:** Relationship of work Experience to the Professional Index of Teachers Individual Plan for Professional Development of Junior High School science teachers

| Professional Index | Work Experience in years | | | Total |
|---|---|---|---|---|
| | 1 -5 | 6-10 | 11 | |
| Beginning | 0 | 0 | 0 | 0 |
| Developing | 7 | 3 | 5 | 15 |
| Experience | 8 | 4 | 6 | 18 |
| Expert | 0 | 1 | 2 | 3 |
| TOTAL | 15 | 8 | 13 | 36 |

C.V at .05 = 9.49 $X^2$ = 2.423 Not Significant

Statistical analysis in table 2.1 revealed no significant difference in the professional index of TIPPD of teaches according to work experience. This means that regardless of teachers' length of work experience, it does not have a bearing to their Professional Index of Teachers Individual Plan for Professional Development.

The result corroborated Esmeralda (2010), who said teachers with long and short teaching experience are moderately competent. Moderately competent implies that a teacher needs training and professional development. However, it is surprising that those new teachers are moderately competent even they lack experience. But this is not impossible if they have a good foundation in Education to make them be on par with the veteran teachers. Veteran teachers may be more resistant to learning new technologies and innovations since they feel they can back up their teaching performance through years of experience in the field. Indeed, Oreta (2012) concludes that most teachers are unfamiliar with the importance of computers because they were the product of early education. With the emergence of computer applications in education, the teachers need to be abreast of new technology.

One factor why the professional index of teachers remains satisfactory is their usual practices and professional attitude. Especially when they are pretentious, to be a

competent teacher, he must accept and adapt to changes and learn from others' best practices.

***Relationship of the number of training attended the professional index of teachers individual plan for professional development***

**Table 2.2:** Relationship of the Number of Training Attended the Professional Index of Teachers Individual Plan for Professional Development of Junior High School science teachers

| Professional Index | Number of training Attended | | | Total |
|---|---|---|---|---|
| | 5-6 | 2 | 0 | |
| Beginning | 0 | 0 | 0 | 0 |
| Developing | 4 | 3 | 8 | 15 |
| Experience | 10 | 4 | 4 | 18 |
| Expert | 1 | 1 | 1 | 3 |
| TOTAL | 15 | 8 | 13 | 36 |

C.V at .05 = 9.49 $X^2 = 4.084$ **Not Significant**

With statistical data of $x^2 = 4.084$, which means **not significant**, the finding is the same as Estella's study (2014) that training does not significantly contribute to the teacher's competence. Therefore, training moderately affect teachers' performance in practice. Although numerically, the data shows further that those who attended more training programs became experienced teachers. Supports the findings that teachers' training moderately affects the teachers' performance in their teaching practice.

The finding is also similar to the Municipal Agriculture Office technician's narration that despites of several livelihood training they were conducted. During the evaluation, they found out that the trainees don't have their desired output even if materials and financial support are well provided. This may confirm that training has no significant effect on training participants.

This scenario is possible for teachers as well. The department is conducted regular mass training to improve teachers' competence, but it has little effect on the teaching performance when they returned to the based school. It is possible due to mismatch (out – of –field), of course, or bloated school work instead of concentrating on lesson planning or the teacher who attended the training was the favorite of the school head even it is not his field of specialization.

Another factor is attitudes, practice, and how they understand the teaching profession. They might see that teaching in school is an 8 A.M. to 4 P.M. job. They expect the same of their Head. In other words, they lack commitment because the school head is lax also for some teachers. Both may also lack the commitment to build their interest and potentials to transform learners. As a significant element in the educational process, they should enrich their teaching capabilities with new educational technologies to enable better learning outcomes because according to LiZhuo, G., & Sun Youngeun J. (2019), the more technology acquired of the teacher is the better outcome. One effective way of improving the teaching capabilities of teachers according to Shaukat (2004) is self-learning and postgraduate studies.

***Relationship of the qualification to the professional index of teachers individual plan for professional development***

**Table 2.3:** Relation between Teachers' Qualification and Professional Index of Teachers Individual Plan for Professional Development Junior High School science teachers

| Professional Index | Qualification | | Total |
|---|---|---|---|
| | Specialized in Science | Non-Specialized | |
| Beginning | 0 | 0 | 0 |
| Developing | 6 | 9 | 15 |
| Experience | 13 | 5 | 18 |
| Expert | 2 | 1 | 3 |
| TOTAL | 21 | 15 | 36 |

C.V at .05 = 9.49 $X^2 = 3.588$ **Not Significant**

Twenty-one (21) of 36 respondents were specialized science teachers, while fifteen (15) are non-specialized. And six (6) of 21 specialize science teachers were rated as developing teachers under the teacher's professional index. 13 were experienced, and only two (2) belongs experts teachers. For fifteen (15) non-specialized science teachers, nine (9) were developing, five (5) were experienced, and one expert teacher. The data shows many expert teachers under specialized science teachers compared to the non-specialized science teacher. According to qualification, the statistical analysis using Chi-square reveals no significant difference in the Professional Index of Teachers' plan for Professional Development.

The Professional Index for Teachers Individual Plan for Professional Development (TIPPD) of junior high school science teachers according to qualification is **satisfactory** based on statistical data of 3.588 regardless of the number of training attended and length of experience. It is also revealed that teachers who specialized in science were labeled as experienced teachers compared to non-specialized science teachers labeled as developing. Experience teachers have a high level for effective teaching while developing teachers have average competencies at a high level. This idea is supported by Afante (2000) as cited by Estria (2013), who claimed that being specialized in a certain field highly affects the competency of teachers because these are the graduates of Bachelor of Science Education (BSE).

However, it's surprising that Developing teachers remain high with only two experts under specialized science teachers despite their length of service and training attended. One possible gap is pre-service teachers' training in colleges and universities. Before, the training given to them is maybe no longer appropriate to education today as affected by rapid changes in the world's demand. Oreta (2012) also explained that 41% had graduated more than 20 years ago on the teachers' profile. Perhaps, it is not surprising that competency is declining because of a probability that these teachers are also using outdated practices in teaching. They are the product of the old education system.

Asia Pacific Journal (2013) explained that the teacher's competence is measured in better learning outcomes, as evidenced in students' output. However, according to Kunter, K. et al. (2013), teachers' teaching competency depend on the mastery of knowledge, pedagogy skills, and teachers' positive attitude towards the teaching profession. Therefore, the teachers must embrace new pedagogical approaches applicable to today's generation to produce the desired learning output. However, even if the teachers demonstrate his creative skill and innovativeness to make learning different if they lack science, culture learning is not fruitful. But it does not end there. The teacher should look at what domain of learning he will need to address. Webb, N.M. et al. (2017) suggested that multiple classroom participation structures are heightened to understand the development of students' learning better. According to Uerz, D. et al. (2017), it is also helpful to

understand the four domains of competence: technology competence, pedagogical and educational technology competence, teaching and learning, and professional learning.

## CONCLUSIONS

The competency level of Science teachers is generally **satisfactory**. Of science teachers, 42% are non-specialized science teachers. Their strength is on Social Regard for learning, but their weaknesses lie in the Diversity of Learning and Community Linkages.

The length of service, the number of training attended are not significantly associated with the competency level science teachers. However, there is a marked difference in the competency level of teachers in terms of their qualifications.

In terms of the Professional Index of Teachers Individual Plan for Professional development of science teachers, most teachers are **experienced.**

The work experience, the number of training attended, and junior high school teachers' qualifications do not bear the Professional Index of Teachers Individual Plan for Professional Development.

## RECOMMENDATIONS

To improve the competency level of junior high school science teachers from SATISFACTORY to HIGH, professional development needs are to be addressed, such as offering multi-intelligence and learning styles seminars. Teachers should diversify their learning approaches to take into account the different needs of the learners.

Community linkages need to be strengthened. This could be done by inviting experts from the community to serve as additional sources of information through lectures or facilitator in school functions

Continuing professional education for teachers should be supported by the school heads, such as the scholarship and Educational assistance program for graduate studies. The staff development program, as contained in the School Improvement Plan, should be fully implemented.

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