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Perceptual Learning Style Preferences and Motivation To Achieve Academically among Senior High School Students

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Abstract

The study aimed to determine which perceptual learning style preference best influences students' motivation to achieve academically. This study utilized a descriptive correlational design and employed a survey method to attain the objective. Using the random sampling technique, the researcher has chosen the senior high school students of the cluster 6 schools in Davao City as the respondents. The researcher used pilot-tested and enhanced adapted questionnaires to determine the level of perceptual learning style preference and motivation to gather essential data academically. The story of perceptual learning style preferences and inspiration to academically attain the students obtained various mean scores based on the analysis results. Still, both belong to the descriptive level equivalent to very high. Meanwhile, when the expectations of the perceptual learning style were associated with the motivation of the students to achieve academically, Pearson-r research showed that a significant relationship existed. Further, regression analysis showed that perceptual learning style preferences significantly influence students' motivation to succeed academically. Remarkably, among perceptual learning style preferences, visual, tactile, and individual learning significantly influenced the motivation to achieve academically of the senior high school students. Lastly, the result indicated that perceptual learning style preferences in terms of visual best predict academic achievement among senior high school students.

Keywords: : Education, Perceptual Learning Style Preferences, Motivation to Achieve Academically, Correlations, Philippines

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1. Rationale

Over the years, researchers have succeeded in pointing out motivation as one factor that affects achievement. Various researchers demonstrated that as students proceed through each grade level, their motivation to achieve academically continuously decreases (Applegate & Applegate, 2010; Capen, 2010; Froiland, Oros, Smith, &Hirchert, 2012). This remains an increasing problem among secondary educators worldwide. In the study of Svobodová (2015), it was reported that students in science class could not overcome the problematic nature of different science disciplines because of the deficiency of the first impulse to start learning due to lack of motivation.

At the same time, students have declined considerably due to the absence of the motivation to achieve academically in the class. Besides, Sikhwari (2014) stated that students in higher education with less incentive to succeed academically in the category seldom engaged themselves in Physical Education activities compared to those who are noted to be highly motivated.

Meanwhile, students' motivation to achieve academically has been highlighted across numerous studies as an essential factor in educational processes (Guido & Dela Cruz, 2011). Albalate, Larcia, and Jaen (2018) It was recorded that being motivated to gain academic help in the creation of cognitive and metacognitive strategies of students leading to better cognitive results, improved ability to select and concentrate on things, a high level of attention, and ability to learn new knowledge and skills quickly over some time. Students who are motivated to achieve a goal in the class aspire to achieve a goal, display persistence, attend to the tasks required to achieve the goals, and have a deep desire to achieve their goal. (Gardner, 2010). Moreover, Tasgin and Tunc (2018) emphasize that motivation conducts itself in ways that maximize acquisition and knowledge. They attended classes, not just incidentally, but

internally, and when needed, they sought additional support, and quality turned into time. (Parr, 2011).

Several proponents (Gilakjani &Ahmadi, 2011; Ghaedi & Jam, 2014 Jhaish, 2010) suggested that helping students identify their perceptual learning styles preference improves their motivation to achieve academically in class. The findings of Jhaish (2010) pointed out that it had a positive influence on a basis to compete academically, making students aware of their perceptual learning style preferences and helping them develop study skills consistent with their chosen learning style.

Similarly, Gilakjani and Ahmadi (2011) expressed that analyzing one's particular learning style aids the students to become more focused and become attentive learners, ultimately increasing educational success. Meanwhile, the report of Ghaedi and Jam (2014) shows that visual learners are inspired to achieve academically because a large number of books required for higher education could be studied. Moreover, although the interplay of perceptual learning style preferences and motivation to succeed academically among students investigated widely in general education (Tabatabaei & Mashayekhi, 2013), there is still a lack of research into the Filipino context; hence, this prompted the researcher to investigate the relationship existing among these variables.

Most of the study investigates perceptual learning style preferences of English as second language students, but not for academic purposes. Thus, identifying the significant relationship of these variables will provide a better picture of what specific personal learning interventions may be implemented. Hence, recognizing their innate learning dispositions and their motivation towards their studies will be a basis for the public secondary high schools in Davao City to design and implement educational interventions to enhance student's academic performance and the quality of their learning experiences.

2. Research Objective

The study was intended to determine which domain of perceptual learning style reference best influenced motivation to achieve academically among senior high school students. Specifically, the study had the following objectives:

To assess the level of perceptual learning styles preference among the old high school students in terms of:

1.1 visual;

1.2 auditory;

1.3 kinesthetic;

1.4 tactile;

1.5 group learning; and

1.6 individual learning.

2. To ascertain the level of motivation to achieve academically among senior high school students in terms of:

2.1 striving for excellence;

2.2 desire to learn; and

2.3 personal incentives.

3. To evaluate the significant relationship between perceptual learning style preference and motivation to achieve academically among senior high school students.

4. To determine which domain of perceptual learning styles preference the best influence the motivation to achieve academically among senior high school students.

2.1. Hypothesis

The following hypotheses were tested at 0.05 level of significance:

1 There is no significant relationship between perceptual learning style preference and motivation to achieve academically among senior high school students.

2 There are no perceptual learning style preferences that best influence the motivation to achieve academically among senior high school students.

3. Review of Related Literature

This section provides discussions of variables and their indicators. The independent variable is perceptual learning style preference, proposed by Naserieh (2009), indicated with visual, auditory, kinesthetic, tactile, group, and individual learning. On the other hand, the dependent variable is motivation to achieve academically, which Soyogul (2015) defined as a set of methods worried with a force that energizes behavior and directs it at attaining some scientific goals. The discussions of the concepts, ideas, and viewpoints from various authors were taken from different books, journals, and electronics.

4. Perceptual Learning Style Preference

The preference for perceptual learning styles relates to the perceptual networks by which learners want to learn (Hsieh, Jang, Hwang & Chen, 2011). Gokalp (2013) described the features, strengths, and preferences of how people obtain and process information are identified. This is because, when studying, every person has his or her strategy or collection of techniques. Likewise, Dung and Florea (2012) The preference for established perceptual

learning styles is a dynamic process for individual learners to acquire data effectively through meaning. Similarly, Ghaedi and Jam (2014) the changes between learners, using one or more senses to grasp, organize, and maintain experiences, relate to perceptual learning styles.

Meanwhile, Vaseghi, Ramezani, and Gholami (2012) showed that people learn differently because learning style preferences are individual, habitual, and convenient (s) of absorbing, processing, and retaining new information and skills. Alsafi (2011) pointed out that all learners have individual characters in terms of learning processes. Some learners, for instance, may respond to hands-on activities; others may prefer visual presentations. Therefore, a person may improve their capabilities and power by recognizing the dominant learning style, improving the efficacy of the learning experience. This will guide students to schedule or change their learning methods in parallel with the preference for learning. (Vaseghi, Barjesteh, & Shakib, 2013).

Concerning perceptual learning style preferences, Palabıyık (2014) noted that even if people do have some dominant learning styles, it doesn't mean that they cannot learn by using other techniques. Instead, it means that they know more effectively when, following their dominant class, the learning activity is presented. In this sense, faith in learning can slowly increase as learners know how to read. (Magulod, 2017). The need for overbearing supervision by educators would be minimized by learning to understand and better comprehend knowledge Teevan, Michael, Schlesselman (2011) pointed out that students are responsible for their instruction and are at the center of the process, and that all is under their influence. Albeshtawi (2017) denoted that acquiring and processing information by individual learners occurs differently from a parallel perspective. Dung and Florea (2012) expressed that unique learning styles may be influenced by their previous learning experiences, genetic makeup, and culture.

For example, some learners are more comfortable with data and facts, while others prefer mathematical models and theories. Psaltou-Joycey and Kantaridou (2011) stated that some learners are visual and desire to learn by charts, whereas others like to learn by verbal explanations and are called auditory learners. Also, some students want to learn in a group, while others prefer to learn individually.

Also, the study of Komarraju, Karau, Schmeck, and Avdic (2011) emphasizes that learning style has an important place in individuals' lives. Accordingly, individuals who are aware of their learning style preferences are successful because they could integrate them into learning and learn more easily and quickly. As a result, those learners become effective problem solvers. Thus, Hargadon (2010) suggested that people must pursue education in areas appropriate for their learning styles. This is because a person educated in an environment that does not correlate with his/her learning style will lack trust and may be less successful; thus, he/she may become frustrated. (Saadi, 2012).

Also, Seifooriand Zarei's (2011) awareness of the preference for perceptual learning styles offers details about why learners have distinct forms of learning. Therefore, thinking about one's choice for a perceptual learning style helps to control the learning process. As Jhaish (2010), It is crucial, as one of the most vital signs in learning is to learn to be autonomous, that is, to take responsibility for the individual's education, so this learner should know what style of learning is. D'cruz, Rajaratnam, and Chandrasekhar (2013) added that this must be part of the learning process to encourage the person to gain information without any support from others, which continuously shifts and changes. Briefly, as learners know how to read, trust in learning can consistently increase.

The study conducted by Rhouma (2016) revealed that a better understanding of their learning, perceptual learning styles can be extended to both teachers and learners to increase their

chances of success in the foreign language learning classroom. Learning styles are considered among the significant variables that help teachers assess how well their students learn a second or foreign language. (Oxford, 2003). While this problem has been generally recognized in educational psychology, further research is needed to explore the relationship between learning styles and language learning skills. Therefore, the present study was carried out to investigate the relationship between the perceptual learning style preferences and the participants' writing output after receiving instruction within the context of activity theory based on computer-assisted language learning. The writing instruction was based on a platform for e-learning built according to the paradigm of activity theory.

The findings showed a lack of a meaningful association between the participants' learning style preferences and their achievement in writing. It was also observed that there was no substantial difference in the participants' writing achievement through various tendencies in the learning style (Hajimaghsoodi & Maftoon, 2018). Ho and Ng (2014) stated from a different point of view that learning styles are essential as they provide teachers with some insights into how learners tend to learn English.

Knowing learners' learning styles can create a more favorable atmosphere for teaching and learning, which indirectly generates greater motivation for learners to learn the language. The perceptual language learning styles of first-year undergraduates enrolled in a public university are explored in this preliminary research. Personal factors such as gender, academic major, and English language skills further explore their perceptual learning styles. The respondents are first-year undergraduates who have been chosen using the methodology of stratified random sampling.

In comparison to previous research, preliminary findings indicate that there are several variations in terms of results. It is hoped that this research may shed some light on the

preferred styles of learning among undergraduates. Identifying the desired learning styles of undergraduates in the first year will assist instructors, curriculum designers, and lecturers in advancing curriculum creation and content design to meet learners' needs. Shuib and Azizan (2015) mixed findings of gender disparity in learning style preferences among students have also been published on a different view. Some studies (Almasa et al., 2009; Zarina Ashikin & Norhana, 2009) documented gender differences in the preference for perceptual learning styles among students.

For instance, Almasa et al. (2009) assessed that learning styles among 540 private university ESL students showed a substantial difference in auditory and kinesthetic learning styles between male and female students. Meanwhile, Zarina Ashikinet al. (2009) reported that the male group had been reported to prefer a kinesthetic learning style, while the female group prefers a type of visual learning. On the contrary, the study of Ismail, Shah, Ismail, Esa, and Muhamad (2013) reported no gender difference.

The first indicator of perceptual learning style preference in this study is the visual or the mode of instruction wherein individual choice for taking information uses a sense of sight (Naserieh, 2009). For instance, Strauss (2013) noted that individuals who learn through their eyes and prefer this type of instruction are visual learners; they remember what they see, whether it is images or text pieces. Visual learners can easily recall printed information in numbers, words, phrases, or sentences. Gilakjani and Ahmadi (2011) denote that visual learners think in pictures and graphical images learn best. Most of the time, these learners rely on the nonverbal signals of the teacher or facilitator, such as body language, to understand. (Gilakjani, 2012). Visual learners often prefer sitting in front of the classroom. Descriptive notes are usually made regarding the content being presented. In work carried out by Sauvola (2010), the author found that visually capable people enhance their learning by writing oral directions, highlighting the critical points of a text, or drawing charts of mind-maps.

If provided through the visual medium, these learners grasp knowledge most efficiently. If they read them, they recall and understand details and directions better. Therefore, they prefer reading tasks and use dynamic highlighting systems to make such information more prominent visually. As pointed out by Roell (2019), Instinctive followers of directions are characterized by the visual learner, has a great sense of balance and coordination, quickly visualizes objects, has a good understanding of color, is an outstanding organizer, and promptly recognizes minute similarities and differences between entities and individuals.

Learners with a visual learning preference fall into visual/verbal and visual/nonverbal learners. (Biçer, 2014). Visual/oral learners are often referred to as 'print-oriented because they prefer to read written materials such as textbooks, handouts, and notes. (Lu &Yang, 2018). Usually, these learners are the kind of 'bookworm' people who read only for fun. (Ting, 2013).

On the other hand, when information is portrayed visually in a diagram or image, individuals with a visual/nonverbal learning style learn more effectively. (Bambaeeroo & Shokrpour, 2017). For example, by analyzing a picture in their mind, they can readily remember the structure of a chemical compound. Visual/Nonverbal learners benefit from teachers who regularly use visual aids such as photographs, maps, and models. As pointed out by Moradi (2013), It's easier for students with visual/nonverbal learning styles to see items in their mind's eye than to be lectured - to imagine a task or concepts.

The second indicator of perceptual learning style preference in this study is the auditory or the mode of learning wherein learners acquire new information by listening then repeating or discussing ideas with others (Naserieh, 2009). These individuals discover information by listening and interpreting data utilizing pitch, concentration, and tempo, according to Wong (2011). Tuli (2015) also said that By listening by ear, the aural or auditory students learn,

which means learning something by listening to lectures, audio recordings, recorders, etc. It is also proposed that this type of person acquires knowledge by reading aloud in the classroom and does not fully understand written content.

Through the sound, pitch, and volume of their voices, learners who learn through auditory mode indicate emotion (Horowitz, 2012). Chieke, Ewelum, and Madu(2017) described that these people enjoy listening but cannot wait to get a chance to talk. Alos, Kayalar, and Kayalar (2017) thought that auditory learners appear to have long and repetitive explanations and want to hear themselves and speak to others. Also, Chieke (2015) stresses that auditory learners prefer to recall names but forget faces and are distracted by sounds quickly. They enjoy reading conversations and plays, and they hate long narratives and details. Auditory learners benefit, either from the teacher or themselves, from oral instruction. They tend to listen to or recite data and take advantage of aural repetition.

Meanwhile, story-listening is very important for auditory learning in a study by Cohen and Wolvin (2011). Therefore, for auditory learners, the meaning of stories and the stories offer far more than entertainment and help us understand ourselves and the world around us. Thus, the study emphasizes that stories are central to interaction and that trained listeners are more cognitively oriented. Storytelling is crucial, but they need to refocus on story listening is highlighted by Ray and Seely (2012). Therefore, to enhance the listening skills of students and their general comprehension skills, great potential can be given for developing classroom education around the stories.

The third indicator of perceptual learning style preference in this study is the kinesthetic or the mode of learning described by Naserieh (2009) as learning preference where individuals learn best with an active, hands-on approach. As pointed out by Durmuscelebi(2013), body discomfort is a positive indicator of their thoughts. Griss(2013) believed that being a

kinesthetic learner is characterized by moving a lot when learning, preferring not to sit still, choosing not to read, loving problem solving, talking with hands or movements, and liking to touch things. When speaking, they gesture, are bad listeners, stand very close when speaking or listening, and quickly lose interest in lengthy discussions.

In relation to this, a study conducted by Metzler (2016) indicates that learners who prefer the kinesthetic mode of the best thing to know about learning are what was done, not what they heard or thought about. Accordingly, those learners prefer direct involvement in what they are learning. Ediger (2013) said that learners with a kinesthetic learning mode are distractible and find it hard to pay attention to auditory or visual presentations. According to (Gilakjani, 2012) they are rarely an avid reader; they may frequently fidget while handling a book. They often poor spellers; they need to write down words to determine if they feel right. It is therefore suggested by Shoval and Shulruf (2011) that kinesthetic learners should be given breaks when possible and allowed to move around during those breaks.

On a different view, Lai, Luong, and Young (2015), Active learners have indicated that they appear to learn better through physical activity. Hence, rather than learning theoretical science, they favor performing arts and athletics. Kinesthetic learners are easily distracted in a typical lecture setting, as pointed out by the authors. A role-playing example helps kinesthetic learners envision a dilemma where a dilemma occurs and behave as a solving agent. Another instance is playing a game like playing the Hanoi Tower puzzle in the classroom. Kinesthetic learning gives all learners, especially active learners, an exciting learning experience.

In this analysis, the fourth predictor of perceptual learning style preference is the tactile or mode of learning. Learners favor learning with their hands by resource manipulation, such as writing, drawing, modeling, or performing a laboratory experiment (Naserieh, 2009). According to Strauss (2013), concrete experience is generated when the learners' ideas are

reflected in the physical nature of body behavior and sensory experiences with people and objects in the world. Sensation usually leads to information convergence, which leads to intervention. Action provides the brain with sensory input. Based on this evidence, it would make more sense to conclude that behavior leads to sensory input while teaching tactile learners, which leads to the information being learned being incorporated.

Research by Perez-Sabater, Montero-Fleta, Perez-Sabater, and Rising (2011) investigated whether long-term memory could be enhanced or not by movement and learning. The researcher's analysis aimed to compare students' retention of linguistic information in a movement learning environment with students taught using a conventional approach. The short-term retention test results showed more muscular retention in the movement teaching group than in the traditional teaching group. There was a significant difference in retention between the group taught with movement exercises. The group trained with conventional teaching methods when the researchers checked retention a few weeks later. It did much better for the community-oriented with movement exercises. The researchers found that the long-term memory of the learner is improved by incorporating movement into learning tasks.

With this point of view, the fifth predictor of perceptual learning style preference is group learning, described by Naserieh (2009) as the mode of learning in which the group learner learns through interacting with others more effectively. According to Schmid, interactions between student-student, student-teacher, and student-content between Bernard, Borokhovski, Tamim, Abrami, and Surkes (2014) are essential to engaging students for community learning. Likewise, Decuyper, Dochy, and Van den Bossche(2010) pointed out that group learning processes activate the learning process among students. In this regard, individuals work together to accomplish common goals; they cooperate to enhance their teaching.

In an investigation carried out by Borokhovski, Tamim, Bernard, Abrami, and Sokolovskaya (2012), the authors found that interactively structured activities are more conducive to improving student learning than contextual educational settings that are not explicitly designed to create collaborative learning environments. Likewise, Kyndt, Raes, Lismont, Timmers, Cascallar, and Dochy (2013) recorded a positive impact of cooperative learning on student achievement and attitudes. Furthermore, they stated that variations in effect size are also created by the study domain, the age group, and the students' cultures.

In this analysis, the last and sixth predictor of the preference for perceptual learning style is individual learning, described by Naserieh (2009) as the mode of learning in which an individual learner learns more effectively by working alone. Students who are independent learners work to higher expectations, are more inspired, and have higher self-esteem than other children, according to Wrenn and Wrenn (2009). By using their ideas to shape views, students gain skills that help them advance their learning, solve issues, and use various methods in their education. Also, Minner, Levy, and Century (2010) noted that the primary conditions for promoting independent learning are to take responsibility for learning, active engagement, and encouragement.

5. Motivation to Achieve Academically

In his investigation, Soyogul (2015) defined motivation to achieve academically as a set of methods worried with a force that energizes behavior and directs it at attaining some scientific goals. Sandoval-Pineda (2018) pointed out that it is an external force that activates the speed of doing any task and explains why people perform the learning tasks. Accordingly, the author emphasizes that to achieve academically, and these internal mechanisms energize behavior in different ways, such as starting, continuing, intensifying, focusing, and preventing it, from various sources (needs, cognitions, and emotions).

The investigation conducted by Guido and Dela Cruz (2011) showed that effective teaching strategies influence student's motivation to achieve academically in the class. Through an effective teaching strategy, the author stressed out that the students knew how to plan and implement the solution to the question and problems in physics. Similarly, Eridemirand Bakirci (2010) found out that a successful teaching method encourages students to show higher cognitive skills through solving problems, either by a teacher-centered approach or a student-centered approach; their attitudes towards a topic could be positively influenced.

On the other hand, Maranan (2017) identified that classroom environment is a factor that enhances students' motivation to achieve academically. According to Akomolafe and Adesua (2015), when a classroom is conducive to learning wherein materials and equipment allow students to explore and acquire scientific knowledge, students are encouraged to mind intently and participate in discussions. They tend to rely more on their insight, and that confidence causes test scores to rise. Likewise, Aydin (2012) stressed out that positive environment help students can become effective learners in which they can self-regulate learning, analyze task requirements, set productive goals, and select strategies to achieve their learning objectives.

Correspondingly, Yilmaz, Sahin, and Turgut (2017) said that when it is open, healthy, supportive, personalized, and inspiring, the school atmosphere optimizes motivation and learning. Therefore, teachers play a significant role here because they are an integral part of the school setting. As pointed out by Williams and Williams (2011), the expertise and skills of teachers, level of motivation, qualifications, modes of assessment, style of teaching, the standard of enthusiasm, and enthusiasm can contribute to learners' motivation. In education and assessing, the more enthusiastic, inspired, and trained teachers are, the greater the potential to increase the enthusiasm of learners to learn.

On a different view, Clickenbeard (2012) expressed that self-efficacy serves as an intrinsic motivator for students at the tertiary level to face obstacles and achieve academic achievement. The report of Fenningand May (2013) was made clear that as students' self-efficacy rises, they will begin to assume that they are competent to complete a task. This trust is a strong incentive for outstanding success because it will help them develop high skills and a high level of competence in those skills, thereby helping them persevere in the face of difficulties.

In the same vein, Brown's (2014) view shows the fact that self-efficacy has been shown to affect the option of whether to participate in a task, the effort spent performing it, and the patience shown in achieving it. Individuals who feel able to perform specific tasks or activities are described as high in self-efficacy and are more likely to perform these tasks and activities. People who consider themselves less competent are less likely to try to accomplish these tasks and activities and are therefore defined as low in self-efficacy (Mbatha, 2015).

The study carried out by Guido (2013) denotes that motivation to achieve academically was found to be a crucial factor in advancing student learning and achievement in the class. Gardner (2010) stresses that people who are highly motivated to learn express effort to achieve a goal, demonstrate determination, attend to the tasks required to achieve the goals, have a deep desire to achieve their goal, enjoy the activities needed to achieve their goal, are eager to meet their goals, have an expectation of their accomplishments and failures. Likewise, Zeidan and Jayosi (2015) pointed out that highly motivated students can easily understand technical terms and infer processes presented in the class. In other words, when the individuals are well-informed with the natural sciences method skills, natural sciences and other skill-based subjects become more amusing to them, which increments the certain attitudes facings difficulties.

In another study conducted by Albalate, Larcia, and Jaen (2018), findings indicate that students who are highly motivated to achieve academically are efficient in using cognitive and metacognitive strategies. Hubert (2017) asserted that highly motivated students could control various mental processes for better cognitive performance, Increased Ability to deal with things in a selective and concentrated manner, can focus over some time, quickly learn new knowledge and skills, can recognize action plans, understand the scientific language quickly, and can maintain and manipulate information to solve complex scientific problems. Tasgin and Tunc (2018) emphasize that students who possess a high level of learning motivation conduct themselves in ways that maximize acquisition and knowledge. Those students attended classes, not on a casual basis but need internal rewards, they seek additional help when needed, and they turn in quality on time (Parr, 2011).

On a different view, the study of Eryilmaz, Yildiz, and Akin (2011) concluded that students' engagement in academic and laboratory activities affects their motivation for class engagement. As Thoe, Thah and Fook (2010) pointed out, motivation to achieve academically allows students to learn from the teacher and be engaged in the activity. As a result, the more the students being engaged in-class training, the more they develop skills to work with others and know how to transfer knowledge to solve problems that allow inventiveness creatively, sparked mystery, provided an opportunity to work with rest, and developed a sense of fortune (Saeed & Zyngier, 2012).

The first indicator of motivation to achieve academically in this study is striving for excellence, or the students' intention to exert the best effort to meet the academic expectations they set for themselves (Waugh, 2001). Motivation is seen as a pre-requisite and a required element for student engagement in learning, as reported by Zyngier (2011). Student interest in education is an end in itself and a way of obtaining good academic results for students (Meyer,

2010). This is critical because sincere commitment to student life will contribute to more extraordinary literary achievement. (Mitra &Serriere, 2012).

As stated by Aypay and Eryılmaz (2011), motivation is the power of the actions of individuals, while participation is defined as the relation between the person and the operation. The degree of active engagement of a student in classroom learning activities reflects successful participation in the school environment. Leeand Reeve (2012), on the other hand, asserted that encouragement in the school environment is a tool for students to initiate and conduct the task of the class. The motivational mechanisms multi-dimensionally enhance and maintain students' classroom activities and include the students' needs, goals or beliefs, and objectives. In reality, Christenson, Reschly, and Wylie (2012) claim that all the criteria and goals are met by students who have been inspired to learn, demonstrate the following behaviors: engage in class, repeat knowledge, relate to their current knowledge, and ask questions. These students are, in short, eager to learn.

The second indicator of motivation to achieve academically in this study is a desire to learn. According to Waugh (2001), the factors contributed by learning from others and responsibility for learning. According to Altındağand Senemoğlu (2013), skills such as individual's acquisition problem-solving skills, experiencing the investigation activity, stimulating their thought and helping individuals find the importance of the subject matter in everyday life, because when individuals acquire these skills, it enables students to be conscious of what a person does and does not know, thereby improving their Studies also show that if high school students have a deep desire to learn, these students would be highly motivated to engage effectively (Eryılmaz, Yıldız & Akın, 2011). Also, it has been found that female students' participation is higher than male students, and students are more likely not to engage in mathematics lectures (Sever, Ulubey, Toraman & Türe, 2014). A meaningful relationship between gender and participation has been determined in addition to these findings. On the

other hand, it has been concluded that secondary school students' motivation and participation rates decline as the class level rises (Güvenç & Koç, 2016).

The third indicator of motivation to achieve academically in this study is personal incentives or the intrinsic rewards and social rewards perceived by the students in teaching-learning processes (Waugh, 2001). Previous studies (Lai, 2011; Nedeljković, 2012; Velki, 2011) Intrinsic incentives mean that students at both secondary and tertiary levels have a more positive impact on motivation for learning and academic achievement. Students' intrinsic motivation contributes to a high level of education, success, and imagination (Castiglia, 2010). Brophy (2010) also emphasizes the positive effect of individual variables, such as the internal interest in learning information, the sense of personal utility, or the importance of the content itself (proper knowledge, skills, etc.). External motivation and social, motivational variables do not have such significance for the consistency and stability of learning motivation, as Velki (2011) has pointed out.

6. **Correlation between Measures**

The study carried out by Ghaedi and Jam (2014) indicates an essential relationship between learning styles and motivation among higher education students to achieve academically. As the findings indicate, the highest correlation is with visual learning types, i.e., visual learners have more learning incentives. This is analogous to Magulod's (2017) view that visual learners tend to review many books required for higher education through reading over other skills. Therefore, based on the findings obtained, the null hypothesis that there is no strong association between learning styles and the motivation for academic achievement among higher education students has been rejected.

Similarly, another study conducted by Gilakjani and Ahmadi (2011) demonstrates a beneficial relationship between the preferences of perceptual learning style and academic motivation. Their research shows that analyzing one's learning style can be very helpful and advantageous to the cause of students to be successful academically by helping them become more oriented and attentive learners, which will eventually improve educational success. Discovering this learning style will allow students to assess their strengths and weaknesses and learn from them, according to Alsafi (2011). It was therefore recommended that teachers integrate learning styles into their classroom by defining the learning styles of each of their students, matching the teaching style to the learning style for demanding tasks, improving weaker learning styles through more manageable tasks and drilling, and teaching students to choose strategies for learning style.

With similar line of thinking, Arnado (2020) stated that learning styles are the core of how learners learn. Different learning styles exist. The most common is the visual, auditory, and kinesthetic ones that students use to absorb data. On the one hand, students' motivation is an inner force of the students to do a mission of their own will. The respondents stated that using hearing elements known as auditory learners; they absorb information best. Through visualizing or visual learners, they absorb data. The participants demonstrate why they learn by activity or kinesthetic learners.

Most of the students were fond of listening while studying. It has been shown that it is the best way for students to absorb information efficiently. Teachers need to identify learning strategies for students to comply with their teaching methods. The research emphasizes that learners' self-motivation does not affect students' learning styles.

The statistical evidence in the analysis of Tabatabaei and Mashayekhi (2013) in the sense of language teaching suggests that there is no clear but low statistical association between

learning styles and their motivation for achievement in foreign languages. The performance of these students did not display significant variations, although the tendencies were different. Their analysis also shows that students' learning patterns do not make a difference in achieving progress in foreign language education. However, classroom experience indicates that in classrooms where a dominant teaching or curricular style does not encourage mismatched students to use their preferred techniques, learning will suffer. Of course, it is difficult to consider all learning styles in EFL classroom teaching; also, it is impossible to remember how each student learns best constantly; learning style is only one of the many variables affecting the learning process the outcomes of learning.

In addition, Jhaish (2010) has shown that academic performance and higher education failure are affected by the content being provided and how students interpret it. Therefore, it had a beneficial impact on the incentive to compete academically to make students aware of their perceptual learning style preferences and help them improve research abilities consistent with their chosen learning style. Also, the study findings suggest that visual learners continued to use strategies to read alone, in a quiet spot, or pay attention to blackboards. Without visual feedback and often manipulated techniques that facilitated dialogue in a chaotic, social atmosphere with multiple sources of aural stimulus, the auditory learners were at ease. In the learning environment, the kinesthetic students were found to involve movement strategies, and the tactile ones needed strategies that involved the manipulation of natural objects.

In teaching mathematics, Naik (2013) emphasizes that their motivation to learn and academic achievements seem to improve when learners are taught following their learning styles and recognizing their types while studying. Henning (2013) said that teachers who do not understand mathematical cognition in learners could increase the propensity to learn Breckler, Teoh, and role (2011) also added that the prolonged mismatches between the classroom

teaching style and the learning styles of most learners could lead to poor academic achievement and hostility towards a subject.

In the same vein, Bosman and Schulze (2018) suggested that the preference for learning is most associated with motivation for achievement in mathematics in their research. The study found that learners who performed well in mathematics were much more likely than low-achievers to learn individually. The low achievements relied on others, as well as on writing and a kinesthetic style. This further shows that learners who were unable to study mathematics at home did not perform poorly in preparation for tests and exams. The authors, therefore, proposed that constructive encouragement by their teachers and peers is invaluable to increase their proximal development zone to enable struggling learners to achieve a degree of maturity where they could continue to study individually at home.

The view of several authors (Gilakjani & Ahmadi, 2011; Tabatabaei & Mashayekhi, 2013; Ghaedi& Jam, 2014; Jhaish, 2010) mentioned in the above literature asserted that there various practices that enhance the ability to recognize perceptual learning style preference have a strong influence on the motivation to achieve academically among senior high school students. Accordingly, the student's ability to analyze their by becoming more concentrated and becoming conscientious learners, eventually increasing educational achievement, individual learning styles, can be very helpful and beneficial to their motivation to be successful academically.

Thus, the literature in this study, which is composed of theories and investigations, has significantly helped the researcher establish and position the context of the study. The researcher was also able to demonstrate the study's conceptual framework by explicitly discussing the nature of variables, the choice of population, and the method to answer the research objectives identified. It also provides a basis for the interpretation of data.

Based on the literature review of this study, the perceptual learning style preference and the motivation to achieve academically have been established. But the literature in the locale setting is scarce. In this manner, the results of the concurrent studies will not just be written. Instead, it will be actualized. There are many findings on how to increase students' motivation, but what is lacking is applying all these in an actual setting.

7. Theoretical Framework

The research is anchored by Edward Deci and Richard Ryan in Self-Determination Theory (SDT) (1985). SDT represents an extensive framework for the study of human motivation and personality. In cognitive and social development and individual differences, SDT articulates a meta-theory for framing motivational research. This systematic theory distinguishes intrinsic and extrinsic sources of motivation and describes the respective functions of innate and forms of extrinsic motivation. Perhaps more significantly, in addition to their well-being and the quality of their results, SDT proposals often concentrate on how social and cultural influences promote or weaken the sense of volition and initiative of people. Conditions promoting the experience of autonomy, competence, and connectedness of the person are argued to encourage the most voluntary and high-quality motivation and participation, including improved performance, persistence, and imagination, for activities. Furthermore, SDT contends that the degree to which all of these three psychological needs in a social context are unsupported or hindered would have a significant adverse effect on well-being in that community.

In their report, Gilakjani and Ahmadi (2011) have indicated that analyzing one's learning style can be very helpful and beneficial to students' motivation to be successful academically by allowing them to become more focused and attentive learners, which will eventually improve

educational performance. This will enable students to assess their strengths and limitations and learn from them by discovering this learning style.

Consequently, Naik (2013) asserted that their desire to learn and academic achievements increase when students are taught under their learning styles and when they recognize their types while studying. A positive impact on the willingness to compete academically was to make students aware of their perceptual learning style preferences and to help them improve research abilities consistent with their chosen learning style.

8. Conceptual Framework

Two variables make up this analysis. The independent variable is the preference for perceptual learning styles or the perceptual networks by which learners want to learn (Hsieh et al., 2011). As proposed by Naserieh (2009), the indicators of perceptual learning style preference are visual, or the mode of instruction wherein individual choice on taking information is utilizing the sense of sight; auditory or the method of learning wherein learners acquire new knowledge by listening then repeating or discussing ideas with others; kinesthetic or the learning preference where individuals learn best with an active hands-on.

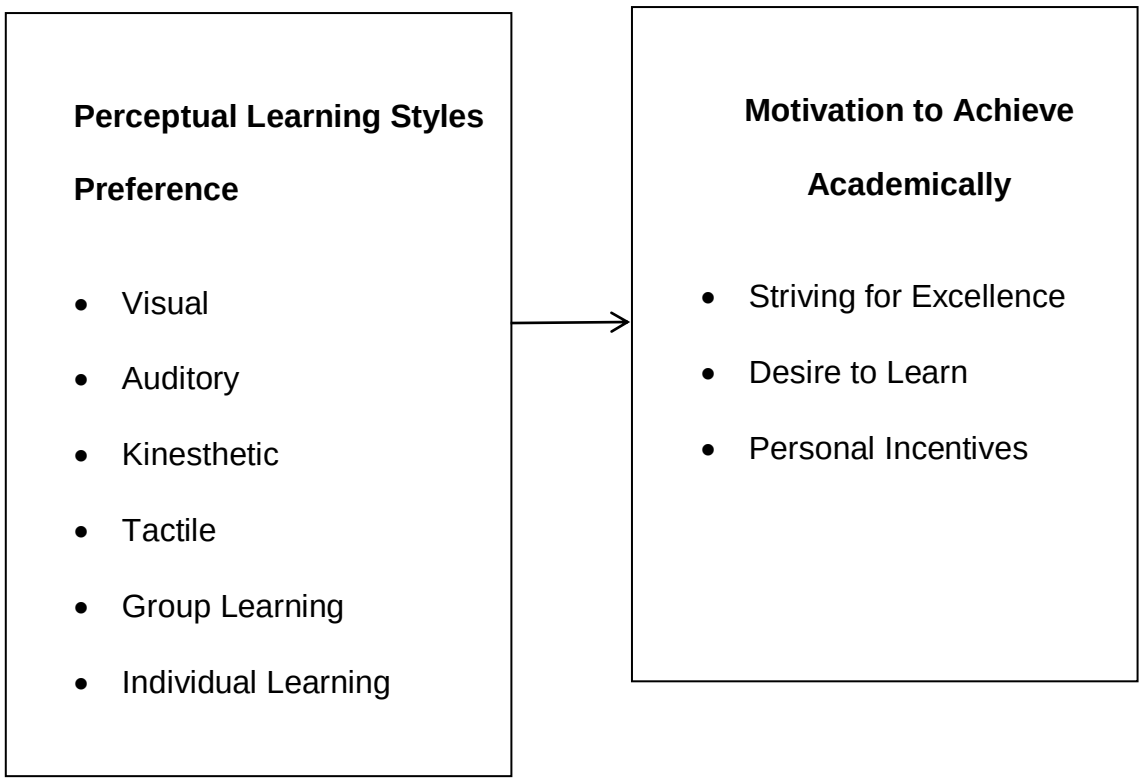

Figure 1. Conceptual Framework of the Study

Approach; tactile or the mode learning wherein learners favor learning with their hands through manipulation of resources, such as writing, drawing, building a model, or conducting a lab experiment; group or the mode of learning wherein the group of working with others, the learner learns more effectively; and individual learning or the style of learning in which an individual learner learns more effectively by working alone.

On the other hand, the dependent variable is the desire to succeed academically or externally, which stimulates the speed of performing every task and describes why individuals perform the learning tasks (Sandoval-Pineda, 2018). The indicators of motivation to succeed academically, as intellectualized by Waugh (2001), are striving for success or the intention of the students to make the best effort to achieve the academic standards they set for themselves;

Ability to learn or the factors contributed by learning from others and responsibility for learning, and personal motivations or the intrinsic benefits and social rewards perceived.

9. Significance of the Study

This study's findings have social value because it generates knowledge of essential or educational development and policy. It is expected that this study will be helpful to highlight the benefits of improving the motivation to achieve academically of the students all over the globe, as students' motivation to achieve academically has been recognized as an essential factor in educational processes (Guido & Dela Cruz, 2011). As noted earlier, researchers (Applegate & Applegate, 2010; Capen, 2010; Froiland, Oros, Smith & Hirchert, 2012) have reported a decline in motivation to achieve academically, especially with struggling students.

Students' motivation must be addressed at the senior high school level by recognizing their perceptual learning style preference to promote a positive attitude toward learning, which will foster competitiveness and excellence throughout life.

In the context of teaching, the findings are essential to the teaching profession because they might suggest future evidence-based interventions that can be implemented regarding the importance of analyzing students own particular perceptual learning style preference that can be very helpful to the students' motivation to achieve academically by aiding them in becoming more focused and become attentive learner (Gilakjani & Ahmadi, 2011). Likewise, the knowledge attained about the relationship between perceptual learning style preference and motivation to achieve academically can be extended to future students and other teachers.

For instance, programs for helping students strengthened weaker learning styles through more manageable tasks and drills and teaching students, learning style selection strategies could serve as an intervention (Alsafi, 2011). Moreover, this study will be beneficial to identified

individuals of the academe in the Philippines. This includes the school administrators, senior high school teachers, students, and educators in research.

The findings of this study may provide the school administrators a framework to design curricula that could help learners receive education in areas suitable for their learning styles. The reason for this is that individuals educated in an area having no relationship to their learning style may lack confidence and may be less successful, resulting in becoming frustrated (Saadi, 2012). Also, students will benefit from this study's findings because it will help them understand the importance of identifying their dominant learning style. By identifying students' dominant learning styles, they could increase their capabilities and strength, followed by enhancing the learning experience's effectiveness. This will guide students to plan or modify their learning methods parallel to the learning preference (Vaseghi et al., 2013).

10. Definition of Terms

For clarity, the following terms are operationally defined:

Perceptual Learning Styles Preference. This refers to the study's independent variable described in terms of visual, auditory, kinesthetic, tactile, group, and individual learning.

Motivation to Achieve Academically. This pertains to the study's dependent variable striving for excellence, desire to learn, and personal incentives.

11. METHOD

This chapter presents discussions on research design, research locale, population and sample, research instrument, data collection, statistical tools, and ethical consideration.

12. Research Design

This study employed a quantitative research design using a non-experimental approach that employs descriptive-correlational. Leedy (1993) described quantitative research to systematically examine phenomena and their relationships dealing with numbers and something observable. To clarify, predict, and control phenomena, it addresses questions regarding relationships with visible variables.

Descriptive-correlational research design is a tool used to characterize the data and calculate the degree of association (or connection) between two or more variables or sets of scores (Kalla, 2011). According to Good (1972), descriptive statistics are the first step in any quantitative research, as they include data on the distribution and measurement of central (i.e., mean) patterns of the data, as cited by Callaman (2012). The descriptive approach will prioritize the quantitative and qualitative definition of the degree of the perceptual learning style of the students in terms of visual, auditory, kinesthetic, tactile, community learning, and individual learning, as well as their level of motivation to academically achieve. Correlational research investigates the relationship of the dependent and independent variables and uses surveys, classification and data reduction techniques, and assessments of relations among variables. Besides, Sieg (2015) stated that correlational studies do not influence variables but only look at relationships. Thus, the interest of the study was to investigate which domain of perceptual learning styles preference the best influence the motivation to achieve academically among senior high school students.

13. Research Locale

This study was conducted specifically in Davao District, Philippines, in Region XI (Davao Region). In Mindanao, Davao City is a significant town. With a total land area of 2,444 square kilometers, it is the center of Metro Davao, and the city is the largest in the country in terms of land area. Davao City is grouped with but is administered independently of Davao del Sur for geographical and statistical purposes. The city is divided into three congressional districts, subdivided into 11 administrative sections with 182 barangays. Davao City is regularly described as arguably one of the safest cities in the Philippines by its citizens and the national media.

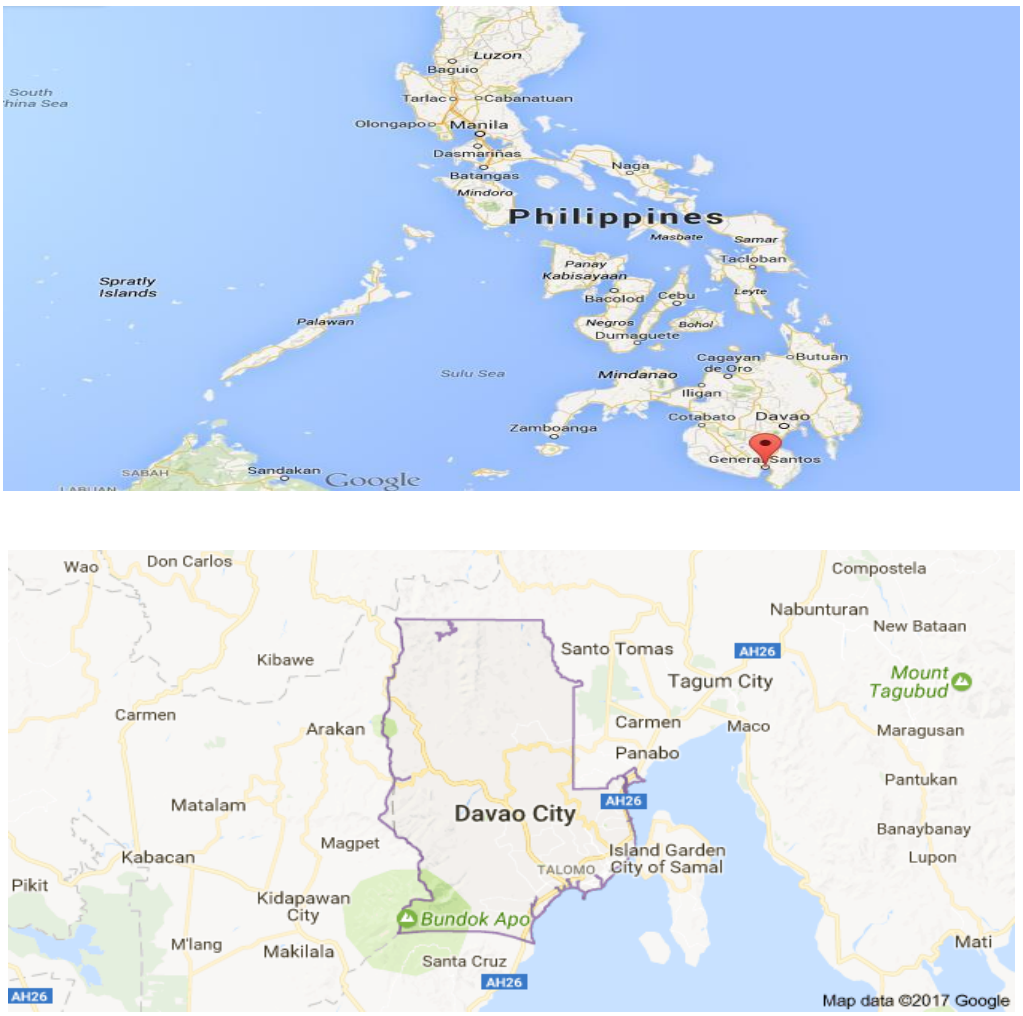

Figure 2. Map of the Philippines and Davao City

In particular, the study was conducted among the cluster 6 secondary schools in Davao City Division. The selected schools were with School I.Ds' 304347, 304395, 304373, 305642, 304385, 304388, 304386, 301715, 304394, 304387, and 305668.

Since the chosen schools were located at least 20 kilometers away from the city proper and some schools were located in far-flung areas, the researcher observed that the students' motivation was low. Moreover, based on the cluster data on drop-outs, one of the main reasons for dropped-out students was lack of motivation. Thus, this study was conducted and is deemed essential.

14. Population and Sample

The study respondents were the 180 senior high school students in Cluster 6 schools in Davao City Division. Through the use of the Slovin formula, the sample size was determined. The respondents were chosen using stratified random sampling. According to Calmorin (2016), stratified sampling is a scientific type of sampling that divides the population into two or more strata. For each stratum, the sample items are drawn at random.

The unit of analysis under this study was the SHS students. The group of SHS students in each school was considered a stratum where samples were taken randomly. The selected senior high school students of each of the schools will survey to determine the levels of perceptual learning style preference and motivation to achieve academically.

Meanwhile, elementary students, junior high school students, SPED students, and students under the ALS program were not part of this study. Also, SHS students from private schools and SHS students residing within the cluster but did not study among the schools in cluster 6 were excluded from the study.

Further, during the recruitment process, respondents were informed that their participation is voluntary and free from or liabilities if they decide to withdraw their participation in the conduct of the study. In any event, if the respondent chooses to withdraw from the study for any cause whatsoever, the data collected from the participant at the point of withdrawal remains part of the study database and will not be deleted unless the participant has requested that the investigator remove the partial data collected from the participant. The researcher also considered the participant who withdrew if, following their withdrawal from the interventional portion of the analysis, the participant wished to have continued follow-up and further data collection. In this case, the conversation with the participant distinguishes between interventions related to the research and the ongoing follow-up of information about the clinical outcome, such as the medical course or the findings obtained from the laboratory.

15. Research Instrument

The study employed questionnaires adapted from studies and was modified to fit the respondents' context. The instrument was divided into two parts: perceptual learning styles preference and motivation to achieve academically.

The first part of the instrument concerned the perceptual learning style preference, adapted from Naserieh's (2009) study, which indicated visual, auditory, kinesthetic, tactile, group, and individual learning. The questionnaire was made use of a 5-point Likert scale. The scaling was done by having one-half of the value of 5 as an average cut-off point or the appropriate level, with a uniform interval of 0.80. The instrument was pilot tested at a nearby school and obtained an overall Cronbach's alpha value of 0.980, denoting that the tool has high reliability and internal consistency among the items.

The level of students perpetual learning styles preference was determined to base on the following range of mean:

Range of Means and Interpretation

Range of Means	Descriptive Level	Interpretation
4.20 - 5.00	Very High	Perceptual learning style preferences among SHS students are always evident.
3.40 – 4.19	High	Perceptual learning style preferences among SHS students are often evident.
2.60 – 3.39	Moderate	Perceptual learning style preferences among SHS students are sometimes evident.
1.80 – 2.59	Low	Perceptual learning style preferences among SHS students are seldom evident.
1.00 – 1.79	Very Low	Perceptual learning style preferences among SHS students are never evident.

The second tool was motivation to achieve academically among senior high school students. This questionnaire was adapted from Waugh (2001), which consists of three indicators, namely: striving for excellence, desire to learn, and personal incentives. This 24-item questionnaire made use of a 5-point Likert scale, and its level was determined to base on the following range of mean:

Range of Means and Interpretation

Range of Means	Descriptive Level	Interpretation
4.20 - 5.00	Very High	Motivation to achieve academically among SHS students is always manifested.
3.40 – 4.19	High	Motivation to achieve academically among SHS is often evident.
2.60 – 3.39	Moderate	Motivation to achieve academically among SHS is sometimes evident.
1.80 – 2.59	Low	Motivation to achieve academically among SHS is seldom evident.
1.00 – 1.79	Very Low	Motivation to achieve academically among SHS is never evident.

16. Data Collection

Steps were undergone in conducting the study after the validation of the research questionnaire. First, the researcher secured permission to conduct the study. The endorsement letter from the permission letters to be sent to the Schools Division Superintendent of Davao City and to the principals of School 304396, 304396, 304396, 304396, 304396, 304396, and 304396 which are under the cluster 6 schools division of Davao City to ask permission to conduct the survey.

Second, the researcher considered the distribution of the research instrument. After the approval to conduct the study was given to the researcher, the questionnaires were distributed to the specified respondents of the survey. Those identified respondents were the180 senior high school students of the cluster 6 schools in the division of Davao City. However, the researcher ensured that respondents were initially contacted through email, text message, and call before administering the questionnaires. Respondents who took part in the investigation formalities because their data were kept strictly confidential, and pseudonyms were used to ensure their identities could not be identified.

Lastly, during the retrieval of the research instrument, the researcher administered the survey to the respondents simultaneously. The study participants were given a testing time of 30 minutes for the questionnaires to be finished. After which, the data collected was subjected to quantitative analysis.

17. Statistical Tools

This section contains the statistical tools that were utilized to attain the objectives of the study.

Mean and Standard Deviation. This was used to describe SHS students' perceptual learning style preference and their motivation to achieve academically.

Pearson r Correlation. This was applied to determine the significance of the relationship between perceptual learning style preference and motivation to achieve academically among senior high school students.

Regression. This was employed to determine which perceptual learning style preferences the best influence SHS students' motivation academically.

18. Ethical Consideration

The researcher promptly observed the protocols deemed necessary as the standard guidelines in carrying out the research study. The researcher is a Bachelor of Secondary Education Major in Mathematics and with rigid training during his student's life. With varied work experiences, the researcher was confident that the conduct of the study followed the protocol in the assessment, like handling data and the proper treatment of respondents have been correctly observed. Ethical considerations play an essential part in conducting important and worthwhile research. In ensuring that the study was guided with standards and free from fallacies, the following principles were observed.

Voluntary Participation with Informed Consent. Since the respondents of the study were the grade eleven students, whom the majority of whom were not yet of legal age, the researcher distributed to the respondents the informed consent forms containing the invitation to participate voluntarily, explaining the purpose of the study, the study procedures, and most of all explaining their rights as participants; like they could quit anytime. The respondent signed

an assent form if they were minors and parental consent for their parents and the informed consent form if 18 years old and above.

Parental consents and assent forms were distributed to the respondents who gave their vital data and guaranteed the participation and allowed the respondents to recognize the connections of involvement and were fully enlightened on the free will about the involvement without pressure or intimidation.

Privacy and Confidentiality. Safeguarding the privacy, confidentiality and anonymity of the research data was an utmost consideration. The researcher was obliged to protect the given details about the respondents. Such obligations were to preserve facts from unofficial access, utilization, revelation, improvement, misplacement and stealing. Thus, the researcher never revealed information about the participants and safeguarded the participants' identity in various ways intended to protect their anonymity.

Recruitment. Before the conduct of the study, the researcher asked permission from the Schools Division Superintendent. Then, the endorsement from the said officers was submitted to the school principal, where the study was conducted. The researcher ensured that the protocol and reminders given by the office of the SDS-OIC were adequately observed. With the principal's permission as to when to distribute the questionnaire, the advisers were asked to facilitate the distribution, monitoring and retrieval of the instruments. Before the respondents answer, the researcher explained the very intention of the study to the respondents and motivated them to willingly participate in answering the questionnaires.

Risks. Suppose the respondents felt uneasy while answering the questionnaire due to some delicate concern of the topic, they may not continue to answer, or they may escape answering the questions that might have made them feel psychologically and emotionally distressed. The questionnaire never harmed the respondents in any form. Likewise, the researcher valued the

cooperation of the respondents and observed the utmost welfare among them during the conduct of the study.

Benefits. The study included helpful information that could be important to public and private officials; administrators of human resources and policymakers.

The study's conclusions, debates and outcomes illustrated evidence-based data that can be used by government institutions such as public schools and to provide a conducive learning atmosphere that can increase awareness, learn self-efficacy and facilitate students' positive attitude specifically toward science and technology subjects.

Withdrawal Criteria. The researcher also considered the participant withdrawing if, following their withdrawal from the interventional portion of the analysis, the participants wished to have continued follow-up and further data collection. Those respondents who withdrew their involvement were told that they were free of all liability or obligations. The researcher also assisted in getting a referral to see a qualified professional who could help process these emotions for the respondents.

Plagiarism. The researcher ensured that the resources being used in this study were cited correctly. The authors' ideas were paraphrased and properly synthesized to abstain from plagiarism. To avoid plagiarism, the researcher used Grammarly or Turnitin software as the plagiarism detector procedure to ensure that the manuscript was not plagiarized.

Fabrication. The data of this study were basically from information gathered by the researcher and have not contradicted the available kinds of literature included in the manuscript. There is no fabrication or inclusion of data, survey or enactment that never arises in gathering data. The researcher made only conclusions that were only found from the results of the study.

Falsification. There was no overemphasis statement of the results to assure that the theory or proposition used in the study is justifiable. The researcher ethically stated the survey results following the underlying literature and recommendations. There was no modification or alteration of the products to support claims and hypotheses in the study. Moreover, there was no maneuver of the research questionnaires, medium, or procedures existing in this study.

Conflict of Interest. The conduct of the study was scheduled after the second quarter of the participants' examination to avoid conflict of their time in studying their lessons in preparation for their exams. The researcher's utmost interest was to finish the paper as a requirement to graduate with a master's degree.

Deceit. The researcher assured the respondents that answering the questionnaire would never cause any harm. The researcher assisted the respondents satisfactorily and talked through the process and the study's outcome. They were given a general idea of what the researcher was investigating and why such a study was conducted. Their role and contribution to the study were promptly explained.

Permission from Organization/Location. Before the conduct of the study, procurement of letter to conduct research duly signed by the Schools Division Superintendent. Then the reply from the said office allowing the researcher to conduct the study was delivered to the School Principal where the conduct of the research was done.

Technology Issues. Participants could contact the researcher at a given mobile number and email address on the informed consent form if they have questions, concerns or complaints about the research.

Authorship. As the primary author, the researcher did the intensive literature review, implemented and conducted the study.

19. Results

The results obtained from the collected data are presented in this chapter. As seen in the first chapter, it is a series based on the study's objectives. It, therefore, explains the levels of preference and motivation for academic achievement of perceptual learning styles, the importance of the relationship between the selection of perceptual learning styles and the motivation to achieve academically and the effect of the preference of perceptual learning styles on the motivation of senior high school students to academically achieve.

20. Perceptual Learning Style Preference

Senior high school students' perceptual learning style preference was computed and interpreted on the attained mean rating per indicator. Senior high school students' perceptual learning style preferences are visual, auditory, kinesthetic, tactile, group learning, and individual learning.

The perceptual learning style preference of senior high school students, as shown in Table 1, obtained a mean score of 4.32 or very high, indicating that the senior high school students always, if not all the time observed most of the items regarding the perceptual learning styles preference. The mentioned overall mean score is the result acquired based on the mean score of 4.58 or very high for auditory, 4.38 or very high for visual, same as 4.38 or very high for kinesthetic, 4.20 or very high for individual learning, as well as 4.19 or high for tactile, and 4.18 or high for group learning.

Table.1. Perceptual Learning Styles Preference of Senior High School Students

Indicators	S.D.	Mean	Descriptive Rating
Auditory	0.51	4.58	Very High
Visual	0.52	4.38	Very High
Kinesthetic	0.52	4.38	Very High
Individual Learning	0.48	4.20	Very High

Tactile	0.45	4.19	High
Group Learning	0.48	4.18	High
Overall	**0.30**	**4.32**	**Very High**

The highest mean score of 4.58 or very high on the perceptual learning style preference in terms of auditory denotes that the items on this particular indicator are always, if not all of the time, perceived by the senior high school students. The description is a result of the very high rating given by the respondents on the following descriptors: being able to better understand the instructions when being told by the teacher; learning how to do something in class better when it is being meant; remembering things that were heard in class better than things being read; learning better in the course during the teacher's lecture and learning better in class when listening to someone.

Moreover, the results in Table 1 show that the senior high school students assigned a very high rating on the perceptual learning style preference in terms of visual, indicating that they always, if not all the time, perceived all the items described in this particular indicator. The mean score of 4.38 is a result based on the very high rating assigned by the respondents in the specific items in the questionnaire appended in this study. It includes learning better by reading what the teacher writes on the chalkboard, remembering and understanding better when the instructions are read, learning better through reading than listening to someone, and learning more by reading textbooks than listening to lectures.

Further, the results in the table also reveal that perceptual learning style preference in terms of kinesthetic acquire a very high descriptive rating. The mean score of 4.38 is a product of the very high rating given by the senior high school students on the following descriptors appended in this paper: preference on learning by doing something in class, learning better when things are done in style, enjoying learning by doing experiments in the class,

understanding things better in class through participation in role-playing, and learning best in class through participation in related activities.

Furthermore, shown in Table 1 is the perceptual learning style preference in terms of individual learning obtain a mean score of 4.20, denoting that the senior high school students frequently perceived the statements under this particular indicator. This specific indicator's very high descriptive rating was obtained due to the very high rating assigned by the senior high school students on the appended items under this particular indicator. This includes remembering things better when studying alone, learning better when working alone, working better when alone in the class, and preferring to do projects independently and working alone.

On the other hand, perceptual learning style preference in tactile got a mean score of 4.19 or high. The high descriptive level is provided base on the given scores of the senior high school students on the particular items on the questionnaire, which include learning more through making a model of something and enjoying making something for a class project.

Lastly, results in Table 1 show that the lowest mean score of 4.18 is on perceptual learning style preference in terms of group learning. The high rating is obtained based on the senior high school students' given rating to the following descriptors: getting more work done when working with others, enjoying the work assignment with two or three classmates, and studying with others.

21. Motivation to Achieve Academically

The motivation to achieve academically among senior high school students is computed and interpreted on the obtain mean rating per indicator. Motivation to succeed academically in this study indicates striving for excellence, desire to learn, and personal incentives.

In Table 2, the descriptive statistical analysis results on the motivation to achieve academically among the senior high school show that the overall mean score is 4.30 or very high. The cited overall mean score is the resulting gain based on the mean score of 4.39 or very high for personal incentives, 4.29 or very high for a desire to learn, and 4.28 or very high for striving for excellence.

Meanwhile, it is also shown in the table that motivation to achieve academically in terms of personal incentives obtained the highest mean score of 4.39 or very high, denoting that most of the statements under this particular indicator have always been, if not all, of the time, perceived by the respondents. This very high description is based on the very high rating given by the senior high.

Table 2. Motivation to Achieve Academically among Senior High School Students

Indicators	S.D.	Mean	Descriptive Rating
Personal Incentives	0.46	4.39	Very High
Desire to Learn	0.35	4.29	Very High
Striving for Excellence	0.31	4.28	Very High
Overall	**0.25**	**4.30**	**Very High**

School students on the following items appended in this study: interacting with peers in solving problems in academic work, trying to achieve academically because of challenges it brings, liking the intellectual challenge of academic work, and liking the social relationships involved in academic work.

The results on the table also show that senior high school students have been given the motivation to achieve academically in terms of the desire to learn a very high rating. The mean score of 4.29 is obtained due to the very high rating assigned by the respondents on the

descriptors appended in this study. This includes showing interest in several academic topics, reading widely on several educational issues, thinking about solving problems with which others have difficulty, asking questions to others to improve my understanding of academic matters, learning from others with more knowledge than I have, aiming to learn from an expert in at least one academic area, and planning to seek out information when necessary and take steps to master it.

Lastly, indicated in Table 2 is the motivation to achieve academically in striving for excellence obtains the lowest mean score of 4.28, which is also described as very high. The very high description on this particular indicator is the result of the rating given by the senior high school students on the specific items in the questionnaire that includes doing the best to reach the academic standards that were set, evaluating performance against the academic standards that was developed for oneself, trying different strategies to achieve my educational goals when I have difficulties, seeking some average academic tasks that can succeed, pursuing some problematic academic studies that can grow, making strong demands to achieve in academic work, writing and re-writing academic assignments to attain, and re-think my values (social, parental, dates versus achievement) when one has conflicts about time to be spent on achieving.

Significance on the Relationship of :

Perceptual Learning Style
Preference and Motivation to
Achieve Academically among
Senior High School High Students

Displayed in Table 3 is the result of Bivariate Correlation Analysis using Pearson Product Moment Correlation on the relationship of perceptual learning style preference and motivation to achieve academically of senior high school students. As shown in the table, there is a

significant relationship between perceptual learning style preference and reason to achieve academically, as marked on the computed r-value of 0.684 and p-value less than 0.05. Thus, the null hypothesis of no significant relationship between perceptual learning style preference and motivation to achieve academically of senior high school students was therefore rejected.

Further, it could be seen in the table that the indicators of perceptual learning style preference have a significant relationship with motivation to achieve academically. The cited meaningful relationship among these factors is were based on the obtained important values of less than 0.05 on the corresponding computed r-value of 0.670 for the connection of visual and motivation to achieve academically, 0.428 for the link of auditory and motivation to achieve academically, 0.480 for the relationship of kinesthetic and cause to achieve academically, 0.028 for the ties of tactile and motivation to achieve academically, 0.239 for the connection of group learning and motivation to achieve academically, and 0.383 for the relationship of individual learning and motivation to achieve academically

Table 3. Significance on the Relationship of Perceptual Learning Style Preference and Motivation to Achieve Academically among Senior High School Students

Learning Style Preference	**Motivation to Achieve Academically**			
	SE	**DL**	**PI**	***Overall***
Visual	0.596* 0.000	0.514* 0.000	0.209* 0.000	0.670* 0.000
Auditory	0.364* 0.000	0.320* 0.000	0.126 0.093	0.428* 0.000
Kinesthetic	0.233* 0.002	0.314* 0.000	0.167* 0.025	0.480* 0.000
Tactile	0.469* 0.000	0.221* 0.003	0.009 0.903	0.028* 0.000
Group Learning	0.249* 0.001	0.136* 0.068	0.057 0.447	0.239* 0.003
Individual Learning	0.224* 0.002	0.334* 0.000	0.312* 0.000	0.383* 0.000
Overall	**0.593*** **0.000**	**0.516*** **0.000**	**0.249*** **0.001**	**0.684*** **0.000**

Significant @ p<0.05
Legend: SE=Striving for Excellence,DL= Desire to Learn, &PI= Personal Incentives

Significance on the Influence of Perceptual

Learning Style Preference on the
Motivation to Achieve Academically
of Senior High School Students

The significance of perceptual learning style preference on the motivation to achieve academically of senior high school students was analyzed using multiple linear regression analysis. Results in Table 4 show that the computed F-value is 48.782 has a corresponding p-value of less than 0.05, indicating that perceptual learning style preference significantly influences the motivation to achieve academically of senior high school students. Therefore, it is stated that perceptual learning style preference of senior high school students predicts the motivation to achieve academically of senior high school students.

Correspondingly, the results on the table show that the computed adjusted R2 value is 0.616, denoting that the perceptual learning style preference of senior high school students has contributed significantly in the variability of motivation to achieve academically of senior high school students by 61.60% from the total variability implying that the difference of 38.40% could be credited to other factors not covered in this study.

What is more, the table also indicated that perceptual learning style preference indicators significantly influence senior high school students' motivation to achieve academically. It could be seen in the coefficient.

Table. 4. Significance on the Influence of Perceptual Learning Style Preference and Motivation to Achieve Academically among Senior High School Students

Perceptual Learning Style Preference		Motivation to Achieve Academically			
		B	**Beta**	**t-value**	**p-value**
Constant		1.727*		9.584	0.000
Visual		0.295*	0.612	10.468	0.000
Tactile		0.202*	0.357	7.298	0.000
Individual Learning		0.102*	0.193	3.921	0.000
R	= 0.793				
R^2	= 0.629				
F-value	= 48.782				
p-value	= 0.000				
Significant @ p<0.05					

Models that at 0.05 level of significance, the value of the unstandardized coefficient of 0.295 is on visual, 0.202 is on tactile, and 0.102 is on individual learning. This means that a unit of increase on visual, tactile, and personal knowledge of the respondents corresponds to 0.295, 0.202, and 0.102 companies increase the motivation to achieve academically among senior high school students. Thus, this leads to the rejection of the null hypothesis that none of the domains of perceptual learning style preference best influence the motivation to achieve academically of senior high school students.

22. DISCUSSION

This part of the paper presents the discussion, conclusions, and recommendations of the researcher. The conference and findings are based on the results of the study generated from the survey. The decisions come from the findings of the paper and focus on the essential factors for discussions. The recommendations of the study are ideas that the researcher suggests for further researchers.

23. Perceptual Learning Style Preferences among Senior High School Students

The descriptive study showed that the preferences for the perceptual learning style among senior high school students are at a very high level, resulting in a very high rating on all measures, except for tactile and community learning. The results suggest that senior high school students learned efficiently because they approached learning tasks in line with their dominant style. Since they were aware of their perceptual learning style preferences, they become more successful because they could integrate them into learning.

Thus, those learners become more effective problem solvers. With their ability to recognize their dominant learning style preferences, the senior high school students could increase their capabilities and strength, resulting in the enhanced effectiveness of the learning experience. Those practices, therefore, are expected to increase the level of perceptual learning style preferences among the senior high school students since it is similar to the views of various authors (D'cruz, Rajaratnam, & Chandrasekhar, 2013; Seifoori&Zarei, 2011; Vaseghi, Barjesteh, & Shakib, 2013) that awareness of individuals on their own perceptual learning style preference provides information on how to control the process of their learning enabling them to obtain knowledge, which constantly shifts and changes, without any help from other.

Motivation to Achieve Academically among Senior High School Students

The study results showed that the motivation of senior high school students to achieve a very high standard academically is due to the very high rating provided by the respondents on all

indicators under this unique variable. On the findings, it could be shown that senior high school students are highly motivated to achieve academically because they communicate their effort to achieve a target, show determination, attend to the tasks necessary to achieve the goals, have a deep desire to achieve their goal, enjoy the activities required to achieve their goal, are aroused to meet their goals, expect the Senior high school students often have an excellent ability to understand technical terms that allow them to infer processes in the class being presented.

Therefore, this method raises the level of motivation among senior high school students to achieve academically because it is similar to the opinions of different authors (Eridemir & Bakirci, 2010; Gardner, 2010; Guido, 2013), pointing out that successful teaching technique helps students to demonstrate higher cognitive skills through problem-solving, either through a teacher-centered approach.

Significance on the Relationship between

Perceptual Learning Style Preferences

and Motivation to Achieve Academically

among Senior High School Students

To assess the significance of the relationship between variables in this study, a Pearson-r correlation analysis was carried out. In this research, it was found based on the results that perceptual learning style preferences are significantly associated with the motivation of the senior high school student to succeed academically. The current product is in line with Gilakjani and Ahmadi's (2011) anchored proposition that when students were able to identify their specific preference for perceptual learning style, it was constructive and beneficial to the

motivation of the students to be academically competitive because it allows them to become more oriented and attentive learners, who ultimately would be conservative.

As a result, it was suggested that when teachers integrate perceptual learning style preferences into their classroom by matching teaching style to the learning style of the students for complicated tasks, improving weaker learning styles through more manageable tasks and preparation, and teaching students selection strategies for learning style, this will allow students to assess their strengths and strengths. Jhaish (2010) also asserted that there was a positive effect on the motivation to compete academically by making students aware of their perceptual learning style preferences and helping them develop research skills consistent with their chosen learning style.

Furthermore, the current study results also suggest that allowing senior high school students to recognize their preference for their dominant perceptual learning style may enhance their motivation for academic achievement. The outcome, for example, shows that students who performed well in subjects were considerably more likely to learn visually. In the form of numbers, terms, phrases, or sentences, they can readily remember printed material. The study found that senior high school students prefer sitting in front of the classroom and taking descriptive notes about the presented content. This result is parallel to Naik's (2013) proposition that their motivation to learn and academic achievements increase when students are taught per their learning styles and recognize their types while studying. According to Magulod (2017), it has had a positive effect on the motivation to compete academically by making students aware of their perceptual learning style preferences and helping them establish research abilities consistent with their chosen learning style.

Significance on the Influence of the

Perceptual Learning Style Preferences
of Motivation to Achieve Academically

among Senior High School Students

To assess the meaning, linear regression analysis was performed to influence perceptual learning style preferences on the motivation to achieve academically among the senior high school students. The present findings validate the report of Ghaedi and Jam (2014), emphasizing that perceptual learning style preference has a significant and robust relation to motivation to achieve academically among senior high school students. According to Sauvola (2010), those students become successful learners because they are visually capable of learning to improve their learning by writing down oral instructions, underline the main points of a text or draw mind-maps or charts. If supplied through the visual channel, these learners absorb knowledge most effectively, thus rendering them academically competitive.

Moreover, it could also be seen in the study that perceptual learning style preferences in terms of tactile and kinesthetic influences senior students' motivation to achieve academically. The results denote that the old high school students' direct involvement in learning is also a strong learning style. This result is similar to Gris's (2013) view that kinesthetic learners are characterized by a lot of movement when learning, preferring not to sit still, not reading, enjoying problem-solving, talking with hands or activities, and liking to touch things. When speaking, they gesture, are bad listeners, stand very close when speaking or listening, and quickly lose interest in lengthy discussions. Strauss (2013) also added that when learners' concepts are articulated in the physical form of body behavior, sensory encounters with people and objects in the world generate tangible experiences.

24. Conclusion

Several conclusions are created based on the results of this study and within the limitations and restrictions (such as the survey questionnaire and the number of participants): There are

very high levels of perceptual learning style preferences among senior high school students. Meanwhile, the level of motivation of senior high school students to succeed academically is also very high. In addition, there is an essential relationship between preferences for perceptual learning style and inspiration among senior high school students to achieve academically. This result correlates with Gilakjani and Ahmadi's (2011) anchored proposition that when students were able to identify their specific preference for perceptual learning style, it was constructive and beneficial to the motivation of the students to be academically successful because it allows them to become more oriented and attentive learners, which eventually will improve educational learning.

Finally, the results of this study specifically support the theoretical assumptions that the motivation of the senior high school student to succeed academically is greatly affected by perceptual learning style preferences. Concerning visual, the result confirms the Sauvola (2010) idea, which suggests that students who are visually capable of learning are most efficient in grasping knowledge if given. In the meantime, concerning the effect of kinesthetic and tactile perceptual learning style preferences, the finding correlates with the Griss (2013) and Strauss (2013) proposal, which is also introduced when the learners' ideas are articulated in the physical type of body behavior and when sensory encounters with people and objects in the environment establish concrete experience.

25. Recommendations

The current research shows that the lowest mean score was achieved by perceptual learning style preferences in group learning, suggesting that the students did not learn efficiently by interacting with others. The researcher, therefore, indicates that learning institutions aim to offer orientation to students that could help them solve personal issues that contribute to their disliking of student-student, student-teacher, and student-content experiences. Teachers will

be encouraged to involve students in learning activities through preparation, which will enable senior high school students to work together to accomplish common goals and cooperate to maximize the learning potential of their own and each other. In addition, the finding of the present study also reveals that students' motivation to achieve academically in terms of striving for excellence obtained the lowest mean score. This means that senior high school students do not make the utmost effort to fulfill the academic goals they set for themselves. They appear to comply with the teachers' minimum specifications.

Therefore, the researcher recommends that educators actively look for motivational methods to engage students in public high school events to enhance their entire practice. Sufficient emotional and academic support should be given to students. Students are encouraged to develop programs for self-esteem and constructive self-concept enhancement. This suggests that the students will participate actively in the class to get good grades and address their interests.

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