

The mediating effect of social intelligence on the relationship between competency in drafting and motivation among senior high school students

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Abstract

This study aimed to investigate the mediating effect of social intelligence on the relationship between competency in drafting and motivation of Senior High School Students. This study surveyed 300 senior high school drafting majors from Tagum City, Davao del Norte, Philippines. Utilizing quantitative research design and mediation analysis through universal sampling technique to examine the mediating role of social intelligence on the relationship between competency in drafting and motivation among senior high school students. The data analysis employed multiple techniques to interpret the results, including mean, Pearson r, regression, and medgraph using the Sobel z-test. Results show that on average, senior high school drafting students demonstrate a high level of competency in drafting, a very high level of motivation, and a high level of social intelligence. Furthermore, a significant moderate positive relationship between competency in drafting and motivation dimensions across all categories, a moderate positive relationship between competency in drafting and social intelligence and a moderate positive relationship between social intelligence and motivation. Social intelligence was identified as a partial mediator in the relationship between competency in Drafting and motivation of Senior High School Students. These findings highlight the importance of further developing social intelligence to empower students in their educational journey, as it directly boosts motivation and acts as a key pathway for competency in drafting to influence motivation.

Key Words: education, Social Intelligence, Competencies in Drafting, Motivation, quantitative research, mediation, Philippines, SDG Indicator: Quality Education (SDG 4)

1. Introduction

Low academic motivation has become a pervasive issue among students, posing a significant challenge for educators and institutions striving to foster student success and long-term achievement (David & Asuncion, 2020). This issue is not confined to particular locations or educational institutions; it is a pervasive phenomena impacting students worldwide. Soric and Palekcic (2020) found that low academic motivation is a long-term problem for students in the United States, especially when it comes to managing learning activities and staying focused in class. Baker (2020) similarly documented a notable decrease in academic motivation in Canada, where pupils had diminished academic persistence and performance. South Korea is also dealing with a similar problem. Cho and Heron (2021) wrote about how students' enthusiasm to learn is going down, which has a big effect on how much work they do in class.

A need to examine how motivation affects classroom involvement is made clear by a lessening of interest and involvement in school. By changing how people feel, think, and act. Motivation is a big aspect of how children act and do in school, and it also affects how much they participate in class (Ryan & Deci, as cited by Lucas-Molina et al., 2025).

Moreover, scholars have recognized the complex character of competence, which includes cognitive talents, practical skills, and adaptive strategies necessary for efficiently managing academic duties (Dow-Fleisner et al.,

2023). In this situation, competency acts as a vital intermediary, potentially affecting the conversion of learning motivation into concrete academic results for learners. According to Cenik and Petrovic's (2020) research, it talks about how important motivation is for learning and say that it is a significant aspect in getting knowledge. It emphasizes the significance of both intrinsic and extrinsic motivation, particularly intrinsic motivation, which is associated with a student's innate drive to learn.

Additionally, social intelligence is the capacity to know oneself and to know others. Believes social intelligence is an aggregated measure of self- and social-awareness, evolved social beliefs and attitudes, and a capacity and appetite to manage complex social change. It is equivalent to interpersonal intelligence, one of the types of intelligence identified in Howard Gardner's theory of multiple intelligences, and closely related to theory of mind. Some authors have restricted the definition to deal only with knowledge of social situations, perhaps more properly called social cognition or social marketing intelligence (Magar & Magre, 2023). On another note, In the Philippines, the problem of low academic motivation is just as bad. Dela Cruz (2021) discovered that students enrolled in state institutions and colleges consistently have low academic motivation, adversely impacting learning outcomes and academic performance. The 2021 National Survey on Students Engagement further underscored a reduction in academic enthusiasm among Filipino high school and college students, indicating the immediate necessity to update curriculum to enhance their relevance to students' interests, cultural contexts, and prospective career opportunities (David et al., 2020). Low academic motivation can lead to lower self-esteem, worse grades, and more students dropping out of school if it is not dealt with properly (Muller & Steingruber, 2023). These implications highlight the necessity of addressing this issue and serve as the motivation for our investigation.

Additionally, several studies have demonstrated a positive correlation between competency in drafting and motivation. For instance, one study found that students with higher competency demonstrated more effective classroom motivation and classroom practices (Caprara et al., 2020). Similarly, another study revealed that competence simultaneously affects the motivation of the students. Motivation refinement can be pursued through increased competence (Starynska et al., 2023). Research by Aydin and Kaya (2020) demonstrates a positive correlation between competency in drafting and students' motivation. Thus, the urgency of continuously developing the instructional plan, strategies, and structures concerning motivation, mastering competencies, and social interaction is prevalent, especially in the aforementioned areas. All of these would show that there is a need for the enhancement of instruction to uplift the quality of students' learning experience in all public schools particularly in drafting technology subject and how students dealt with the critical components in terms of how motivated they are to undertake the course because of its complexities on problem solving, mathematical and logical analysis, highly synthetically structures and evaluative practical skills.

The theoretical foundation of this study is rooted in Robert White's competence motivation theory, which aims to explain individuals' motivation to participate, persist, and work hard in any achievement context (Wigfield et al., as cited by Sakaki et al., 2026). The theory explains that individuals are more likely to participate in activities where they feel competent.

Also, the Self-Determination theory by Ryan and Deci as cited by Lucas-Molina et al., (2025) articulates a meta-theory for framing motivational studies. This formal theory defines intrinsic and varied extrinsic sources of motivation. It describes the respective roles of intrinsic and types of extrinsic motivation in cognitive and social development and individual differences. People are often moved by external factors such as reward systems, grades, evaluations, or the opinions they fear others might have of them. In relation to competence, when a person feels competent, their motivation shifts from extrinsic to intrinsic. In connection with social intelligence, SDT emphasizes that motivation doesn't happen in a vacuum. A socially intelligent person can navigate their environment to find autonomy-supportive" groups. By connecting well with others, they receive the social feedback and support that reinforces their sense of competence and autonomy (Saputri et al., 2023). Furthermore, the Expectancy-Value theory by Eccles and Wigfield defines the motivation of a person within a specific realm to complete a particular task and attain a goal. Motivation is highest when someone is challenged but also feels as if the challenge is attainable. This theory emphasizes the interplay of competence-related beliefs and task values in influencing motivation and achievement outcomes (Spott, 2022). In this framework, competence is the engine of Expectancy, while Social Intelligence serves as a vital "social-cognitive" filter that

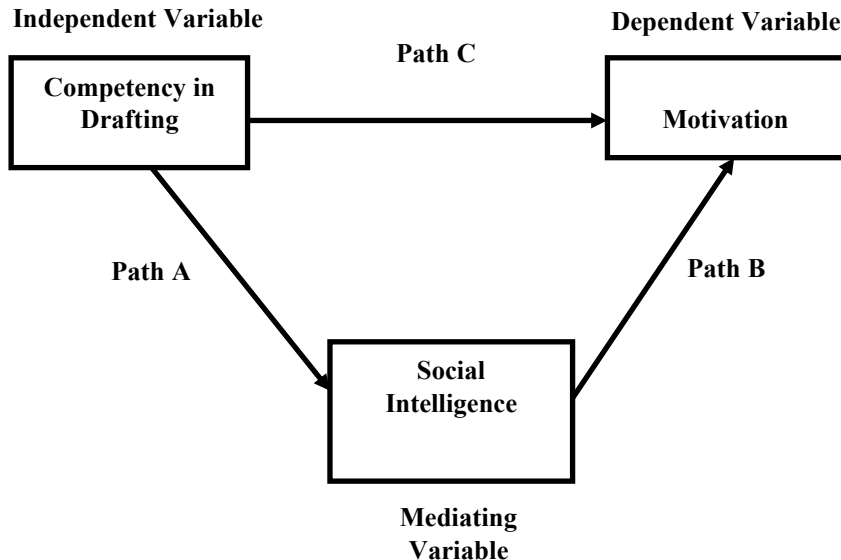
determines how much value you place on a task and how accurately you judge your own abilities (Wang & Xue, 2022).

In addition, the concept of this study is also rooted in Harter's Competence Motivation Theory, a theory of achievement motivation based on a person's feelings of personal competence. Accordingly, competence motivation increases when a person successfully masters a task. This encourages the person to master more tasks; the motive, or the impetus for action in a specific direction, is to develop, to attain, or to demonstrate competence. Although the fundamental objective of education is to create competence, several efforts to enhance student motivation in classrooms have not focused on competence motivation per se (Urdu & Turner, 2005). Thus, Diveck and Molden (2005) added that motivation is powered by a valuing of both competence acquisition (learning goals) and competence validation (performance goals). Self-theories help us understand which of these two faces of competence — competence acquisition or competence validation — becomes most valued.

Additionally, as Dewey pointed out, much of traditional education is directed towards isolating the learner from all social interaction and towards viewing education as a one-on-one relationship between the learner and the objective material to be learned. In contrast, progressive education acknowledges the social aspect of learning and incorporates conversation, interaction with others, and the application of knowledge as integral components of the learning process.

The conceptual framework of this study, as illustrated in Figure 1, comprises three factors that represent the relationships between the variables. The independent variable is competency in drafting, which is measured by three indicators: knowledge, skills, and attitude. Knowledge is physically constructed by learners who are involved in active learning. It is symbolically constructed by learners who represent their actions; knowledge is socially constructed by learners who convey their meaning-making to others. Knowledge is theoretically constructed by learners who try to explain things they do not entirely understand (Guiner as cited by Guiquing, 2024). Skill is a task or group of tasks performed to a specific level of competency or proficiency, which often uses motor functions and typically requires the manipulation of instruments and equipment (Sira, as cited by Hossain, 2025).

Attitudes are learned predispositions to respond consistently favorably or unfavorably towards a given object (Meece et al., 1982). Attitude is related to academic achievement, as it is learned over time through exposure to the subject area. Information about the subject area is received through instruction, and consequently, attitude is developed. Moreover, if a person is favorably predisposed toward an academic course, that favorable disposition should lead to favorable behaviors, such as achievement (Magno, 2003).



On the other hand, the dependent variable, which refers to motivation among senior high school students, is the learner's level of relationship with other students, their teacher, and their commitment to education. Relationship to students refers to students' self-motivation in acquiring competence developed through general experience but stimulated most directly through modeling, communication of expectations, and direct instruction or socialization by others (especially by themselves, parents, peers, teachers) (Mart, 2011). 136

Allowing students to sit and work with their friends is a great motivator, and productive work can take place when they are allowed to work together. It is incredible how cooperative students can become when they realize their relationship is at risk of being severed if a focus on learning is jeopardized by prioritizing friendship over it. However, threatening to separate friends is also a powerful motivator (Deysolong, 2023). [RC1.1]

Collaboration. Vygotsky theorized that communication and collaborative group work can enhance individuals' thinking and learning. Students can share learning strategies and perspectives through social interaction. Collaboration works best when students depend on each other to reach the desired goal, especially when there are rewards for group performance, and when students know how to work together effectively (Driscoll, 2011). Relationships with teachers refer to students' motivation, as reflected in their respect for and admiration of their teachers. Stipek found that students who perceived a more nurturing relationship with their teachers tended to have better attitudes towards academics and often performed better than their peers who lacked the same support system. Stipek also referenced the 1993 Belmont and Skinner study, which supported the idea that a good teacher-student relationship has a positive influence on learning. The more connected a child feels, the more they are willing to attempt tasks and to seek help when necessary. The student who feels this sense of connectedness may want to maintain it or please the teacher by doing well in class.

Students' commitment to education refers to their motivation to pursue competence, driven by external or internal factors. Miserandino (Koca, 2016) provided valuable insights into the theory of accomplishment goals, which explains students' motivation and its impact on their commitment to education. As Dweck and Leggett (Koca, 2016) and Urdan and Midgley (Koca, 2016) have shown, achievement objectives are what motivate people to pursue their goals in academic contexts and influence their emotional, cognitive, and affective reactions. Koca (2016) also cited the work of Ames, which emphasizes the value of a mastery-oriented approach that fosters perseverance, thereby promoting intrinsic drive, which in turn raises commitment to the learning process. This approach cultivates tenacity in the face of difficulties and disappointments, as well as profound engagement with academic work. The mediating variable is social intelligence, which measures their demonstrative empathy, energy, social skills, tolerance, and persuasiveness.

1.2 Purpose and statement of the problem

This study aims to determine the mediating effect of social intelligence on the relationship between competency in drafting and motivation among junior high school students. More specifically, this will seek answers to the following objectives:

1. To determine the level of Competency in Drafting in terms of:
 - 1.1 knowledge
 - 1.2 skills
 - 1.3 attitude
2. To ascertain the level of Motivation among senior high school students in terms of:
 - 2.1 relationship with other students
 - 2.2 relationship with teachers
 - 2.3 commitment to education
3. To describe the level of Social Intelligence adopted by Senior High School Students.
4. To determine the significant relationship between Competency in Drafting and Motivation among Senior High School Students.
5. To determine the significant relationship between Competency in Drafting and Social Intelligence.
6. To determine the significant relationship between Social Intelligence and Motivation among Senior High School Students.
7. To determine the Mediating effect of Social Intelligence on the relationship between Competency in Drafting and Motivation among Senior High School Students.

2. Methodology

2.1 Respondents

The respondents of the study were senior high school drafting majors from Tagum City, Davao del Norte, Philippines enrolled during the school year 2024-2025. The study involved a total of 300 [UD2.1] students who voluntarily consented to participate after being fully informed. The researcher employed universal sampling, ensuring everyone could participate in the study. The total number of students enrolled was 350, 30 of these students were those who were involved in the pilot testing while 20 of these students were not present during the conduct of data gathering. Stehman and Overton (2020) explained that complete counts represent a full enumeration (census) of individuals within a sampling unit. [UD3.1] According to Creswell & Creswell (2017), when the population is small, studying everyone provides the most accurate and true representation of the group, eliminating the need for complex probability calculations to generalize findings. By using total enumeration, the sampling error is effectively zero because the sample is the population. Also, Salkind (2010) notes that total enumeration is the best approach when the researcher needs to describe the population in its entirety with 100% precision, as it provides a complete census rather than an estimation. With this, it ensures that subgroups or outliers are included in the data set.

Moreover, the researcher considered the inclusion and exclusion criteria in the selection of the respondents for the study. The respondents were officially enrolled in the locale of the study for the school year 2024-2025, selected during universal sampling, voluntarily agreed to participate by completing and signing the assent form, and their parents voluntarily allowed them to participate by completing and signing the Informed Consent Form (ICF). The researcher secured the Informed Consent Form (ICF) from the respondents' parents or guardians and the Assent Form from the respondents who were aged below 18. The researcher explained the study through the ICF in clear, non-technical language, providing information about its purpose, duration, and any risks or potential benefits. This information was tailored to the individual's level of understanding and presented in a comprehensible manner. The respondents were given the opportunity to ask questions and clarify any concerns they might have had. This step was important to ensure that the respondents fully understood the implications of their participation and could make an informed decision about whether to consent or not. Additionally, the respondents were given five (5) days to consider their decision and were not pressured or coerced into participating. This step ensured that the respondents' decision was truly voluntary and not influenced by external factors. Furthermore, the respondents were given the opportunity to withdraw their consent at any time, even after they had initially agreed to participate. This step was important to ensure that the respondents' autonomy was respected throughout the entire process. Lastly, the respondents were informed about any potential changes to the activity that might occur over time and were given the opportunity to provide ongoing consent or withdraw their consent if they chose to do so. It should be noted that since some of the respondents were minors, the researcher asked for the completed ICF from the parents or guardians of the respondents, and the Assent Form was secured from the respondents.

2.2 Materials and Instruments

This study used adapted survey questionnaires. For the mediating variable, social intelligence, a 24-item adapted questionnaire, based on Goleman (2001), assessed demonstrative empathy, energy, social skills, tolerance, persuasiveness, and ability to lead. Responses were categorized using five-point scale ranging from Very High 4.20-5.00 to Very Low 1.00-1.79. For competency in drafting, a 28-item adapted questionnaire from Guiner (2013) measured skills, attitude, and knowledge. A five-point scale Very High: 4.20-5.00 to Very Low: 1.00-1.79 was used for evaluation. For motivation, a 33-item adapted questionnaire from Alrasbi (2013) explored relationship with other students, relationship with teachers, and commitment to

education. A five-point scale Very High: 4.20-5.00 to Very Low: 1.00-1.79 assessed the impact of these 138 factors.

The adapted questionnaires were reviewed by the research adviser and expert validators. A pilot test with 30 respondents to test the reliability was conducted to establish validity and reliability using Cronbach's Alpha. The calculated Cronbach Alpha values for the independent variable (competency in drafting) is 88.9 %, the dependent variable (motivation) is 88.1 %, and the mediating variable is 94.10 % exceeding the 70% of the requisite Cronbach Alpha value. To ensure the instrument's validity and reliability, the researcher refined the items based on expert face validation and the results of a pilot study. Specifically, ambiguous questions were reworded, and the layout was adjusted to improve clarity and flow. This iterative process ensured that the final research tool was culturally appropriate and easily understood by the target participants prior to actual data collection.

2.3 Design and Procedure

This study employed a non-experimental, quantitative research design utilizing a descriptive correlational research technique. This approach is used to gather data, thoughts, facts, and information pertinent to the subject. The descriptive nonexperimental correlational design helps to determine the extent of the relationship between two or more variables (Goertzen, 2017). In this context, the correlational method was chosen as the optimal design to fulfill the study's objectives and test the hypothesis. According to this approach, if the significance value is greater than .05, the null hypothesis (H_0) and the alternative hypothesis (H_a) are accepted. Hypothesis testing in this context determines whether the correlations between variables are strong or weak (Creswell & Poth, 2012).

Additionally, the study employed mediation testing to investigate three variables. This involves assessing the relationship between the predictor and mediator variables and between the mediator and criterion variables (Baron & Kenny, 1986). A straightforward mediation model implies that the relationship between an independent variable and an observed outcome can be explained by the influence of a third factor, known as a mediator. The relationship is fully mediated if the direct relationship between the independent variable and the outcome becomes insignificant after accounting for the mediator's influence. Furthermore, partial mediation occurs when the mediator accounts for some, but not all, of the relationship between the independent variable and the outcome. The degree of mediation is referred to as the indirect effect (Baron & Kenny, 1986). Mediation analysis is versatile and can be applied to linear regression, logistic regression, polynomial regression, and more (Shrout & Bolger, 2002). The study specifically aims to examine the relationships between competency in drafting and motivation, as well as the connections between competency in drafting and social intelligence, the connection between social intelligence and motivation, and the mediating effect of social intelligence on the relationship between competency in drafting and motivation among senior high school drafting students in the division of Tagum City. A medgraph was employed to determine the mediation.

During the data collection process, the researcher took the following steps: First, she presented her concept to her adviser before drafting the initial survey questionnaire. Second, the survey instruments are validated through the opinions of experts and notable research enthusiasts. Third, after the validation of the survey instruments, the researcher distributed the questionnaire personally to the respondents for pilot testing. The researcher discussed the study's purpose and emphasize that participation is entirely voluntary. Fourth, the completed survey instruments have been handed over to the statistician at the University of Mindanao for reliability and consistency assessment. After the permission was granted, the researcher was scheduled to distribute the questionnaires personally. The researcher then personally collected and gathered the questionnaires from the respondents, assuring them that the collected data were treated with utmost confidentiality and solely for academic and research purposes. Then, after retrieval, the data were screened, encoded, tabulated, and analyzed.

Additionally, for more comprehensive interpretation and analysis of the data, the following statistical tools were utilized. The Mean is used to measure the level of effectiveness of social intelligence, drafting competency, and motivation among Senior High School students. The Pearson Product-Moment Correlation is utilized to determine the relationships of competency in drafting and motivation, competency and social intelligence, and

social intelligence and motivation among Senior High School Students. Additionally, the methodology involves the application of multiple regression analysis, which enables the measurement of the influence of social intelligence and drafting competency on motivation. The Medgraph, using the Sobel z-test, was employed to determine the mediating effect of social intelligence on the relationship between drafting competency and motivation among Senior High School students. Additionally, the methodology involves the application of multiple regression analysis, which enables the measurement of the influence of social intelligence on drafting competency and the motivation of senior high school students. 139

Also, after completing all validation, reliability and consistency testing of the survey instruments, the researcher submitted all necessary documents to the University of Mindanao Ethics Review Committee (UMERC) for initial review to secure a certificate of approval to conduct the study. Then, after obtaining approval from University’s Ethics Committee (UMERC-2024-439), written permission and endorsements were secured from the agency where the study would be conducted. In this step, a letter was attached to the endorsements and submitted to the school prior to conducting the survey.

3. Results and Discussion

Level of Competency in Drafting

The data presents the level of competency in drafting among senior high school students across three indicators: Knowledge, Skills, and Attitude. Each indicator has an associated standard deviation (SD), mean, and descriptive level, with two of these rated as High and one rated as Very High. The overall result ($\bar{X} = 3.93$, $SD = 1.26$) indicates that, on average, senior high school students exhibit a high level of competency in Drafting. The highest mean score in Attitude ($\bar{X} = 4.25$, $SD = 1.19$) highlights that students are exceptionally proficient at practices that would prevent them from suffering serious falls or injuries. This is crucial for enhancing their competency in drafting. Conversely, skills ($\bar{X} = 3.79$, $SD = 1.31$) had the lowest mean, falling in the high range, indicating that students are proficient at drafting practices that could help them identify the common drafting tools and their uses.

Table 1
Level of Competency in Drafting of Senior High School Students

Indicators	SD	Mean	Descriptive Level
Knowledge	1.22	3.85	High
Skills	1.31	3.79	High
Attitude	1.19	4.25	Very High
Overall	1.26	3.93	High

The literature has a wealth of information about the significance of competency in drafting. Because, the competency in drafting is one of the five areas of Industrial Arts that is included in the development and validation test for acceptability and functionality of the input-process-output (I-P-O) model during the development training module, which analyzes the profile and the level of competency of the five industrial art areas along with knowledge, skills, and Attitude as input variables according to Guiner as cited by Guiquing (2024). This demonstrates the extensive character of competency in drafting and is consistent with the indicators employed in the current data.

Competency is the ability of a student/worker to accomplish tasks adequately, find solutions, and implement them in work situations. This fits the need for describing competencies and assessing them. It consists of trainable components (knowledge and skills) and components that are more difficult to alter

(attitudes and beliefs) (Sira, as cited by Hossain, 2025). Furthermore, the findings of Dizon's study, as cited by Darling-Hammond et al. as cited by Regan (2021) indicated that the technical average during high school was significantly related to workshop and drafting achievement. Magno concluded in the study that the high school technical program confers on its high school graduates the skills in drafting that enable them to achieve better grades after graduation in other technical courses. 140

The result clearly demonstrates a strong relationship between critical thinking abilities and learning objectives, supporting the assertion made in the literature study. According to Malquisto (2025) in his study, students exhibit comparable and satisfactory competence levels in drafting technology courses. The core finding is that inadequate facilities are a primary barrier to students' competence in Drafting. This lends support to the idea that developing these abilities is crucial for academic success.

Level of Motivation of Senior High School Students

The data in Table 2 presents the level of motivation among senior high school students across three indicators: relationship with other students, relationship with teachers, and commitment to education. Each indicator has an associated standard deviation (SD), mean, and descriptive level, with two of these rated as Very High and one rated as High. The overall result ($\bar{X}$ = 4.28, SD = 1.47) indicates that, on average, senior high school students exhibit a very high level of motivation. Among the five indicators, relationship with teachers ($\bar{X}$ = 4.51, SD = 1.40) ranked the highest and was rated very high, showcasing consistently very strong motivation among the students. Additionally, one specific indicator – Commitment to Education ($\bar{X}$ = 4.05, SD = 1.51) ranked the lowest and falls within the High descriptive level category, indicating consistently strong motivation among the students.

Table 2
Level of Motivation of Senior High School Students

Indicator	SD	Mean	Descriptive Level
Relationship with other students	1.48	4.22	Very High
Relationship with teachers	1.40	4.51	Very High
Commitment to education	1.51	4.05	High
Overall	1.47	4.28	Very High

The very high level of relationship with teachers observed in the students suggests that they recognize their teachers' hard work, which in turn fosters students' initiative, creativity, and motivation —essential for achieving successful outcomes. This is supported by Siacor and Ng (2024), who stated learner motivation—rather than instructional effectiveness alone—significantly impacts learners' engagement. This implied that even the best teaching needs to motivate students to be truly effective.

The students' capacity to help teachers maintain high standards of performance is demonstrated by their mean score on the relationship to the teacher scale. Salazar and Gumanoy (2025) emphasized that educators can explore strategies to make learning more engaging and relevant to students. Differentiated instruction, which leads to instructional effectiveness, has a positive and significant impact on student motivation and involvement. Educators should actively seek ways to implement differentiated instruction strategies to create a more motivating and inclusive learning environment for all students. Differentiated learning activities, which involve tailoring instructional methods and materials to meet the diverse needs, strengths, and preferences of individual learners, are the focus of their study. Thus, supporting the claim of its positive impact on instructional effectiveness.

According to Xiong (2025), learning motivation directly affects students' attitudes, academic performance, and learning experiences, so enhancing learning motivation has been a focus of educational research and learning practice. The adaptability of teachers' instructional effectiveness is closely related to students' motivation. Teachers can meet students' psychological needs at different levels through flexible and diverse teaching styles, thus enhancing students' motivation. Therefore, raising students' motivation is critical to raising their academic achievement and learning competence, and teachers can accomplish this through their instructional effectiveness. 141

Level of Social Intelligence of Senior High School Students

Table 3 presents the levels of social intelligence among senior high school students, measured through various items. The items have corresponding standard deviations (SD), means, and descriptive levels. The overall mean score for social intelligence ($\bar{X} = 4.05$, $SD = 1.06$), indicating a High level of social intelligence on average. The descriptive levels for individual items range from High to Very High, with the highest mean score in tolerance ($\bar{X} = 4.38$, $SD = 0.83$) and demonstrative empathy ($\bar{X} = 3.75$, $SD = 1.20$) got the lowest result. The overall result indicates that students are generally socially intelligent in their learning behaviors. This high level of social intelligence implies that students display demonstrative empathy, energy, social skills, tolerance, persuasiveness, and the ability to lead others during the learning process.

Table 3

Level of Social Intelligence of Senior High School Students

Items	SD	Mean	Descriptive Level
Demonstrative Empathy	1.20	3.75	High
Energy	1.03	4.09	High
Social Skills	1.06	4.11	High
Tolerance	0.83	4.38	Very High
Persuasiveness	1.09	3.95	High
Ability to Lead	0.97	4.10	High
Overall	1.06	4.05	High

Social intelligence is a broad term that involves multiple components, including personal attitude, social performance skills, empathetic ability, emotional expressiveness, and emotional confidence. Socially intelligent people are creative and friendly people who can solve problems and tackle various tasks in social life, thus developing healthy co-existence with other people. Social intelligence is culture-dependent, and different aims and objectives of the behaviors may be assumed as socially intelligent by various cultures (Handa, 2021)

In addition, social intelligence was also described as a process of understanding other people's behaviours and coping well with them, reflecting a depth of knowledge about the social world. SI enables individuals to organize, find solutions through discussion, establish personal connections, and make social analyses. This includes comprehending people and events, anticipating future occurrences, and steering events in the desired direction. Given these views, SI can be said to involve communication, empathy, and conflict

resolution, making it an important factor for successful living, especially for students. It helps them become more confident in their abilities, more resilient, and they develop a positive self-concept that enables them to pursue and achieve their goals and behave in a socially acceptable way (Zbihlejova & Birknerova, 2022). 142

Relationship between Competence in Drafting and Social Intelligence of Senior High School Students

The data in Table 4 illustrates the significant relationship between Competence in Drafting and Social Intelligence among Senior High School Students, with all correlations showing statistical significance ($p < .001$). The overall correlation value of 0.410^{**} indicates a moderate positive relationship between these two variables, suggesting that students who demonstrate higher levels of competency in drafting also tend to exhibit greater social intelligence in their learning behaviors.

Table 4

Significance of the Relationship between Competency in Drafting and Social Intelligence of Senior High School Students

Variables	Correlation Coefficient	<i>p-value</i>	Decision
Competence in drafting and social intelligence	.410**	.000	Reject

This comprehensive relationship between Competence in drafting and Social Intelligence is supported by existing literature. The concept of social intelligence indicates that it is the ability to communicate with others, and to build relationships of love and moral commitment with them. Where it is formed as a result of a person's understanding of himself first, through his ability to control his emotions. Additionally, the role of social intelligence begins with the individual's ability to master the processes of communication and communication with others within his environment and surrounding society. As a person needs to employ social intelligence skills; Such as the ability to express, constructive dialogue, good listening, reconciliation with oneself and others. Social intelligence is one of the acquired skills that the individual acquires and develops with the passage of time, and the change of places and environments in which he lives and coexists with its members (Al Khazalla & Al Omari, 2021).

Meanwhile, the concept of professional competence in the educational field refers to a set of knowledge, concepts, skills and attitudes that guide administrative and educational behavior in educational work in general. It helps the educational cadres, especially the administration, to perform its work inside and outside the school with distinction and a certain and good level of mastery in choosing the appropriate administrative method that keeps pace with recent developments in its dealings with the teacher, the student, and the rest of the employees in the educational institution. Each adequacy can be measured according to its own criteria agreed upon in cooperation and partnership with the bodies regulating administrative (Omran, 2022).

Relationship between Social Intelligence and Motivation of Senior High School Students

The data in Table 5 reveal significant correlations between social intelligence and motivation among Senior High School Students. The overall correlation value of 0.556^{**} underscores a moderate positive relationship, indicating that students who exhibit higher levels of social intelligence are likely to demonstrate higher levels of motivation in learning.

Table 5

Significance of the Relationship between Social Intelligence and Motivation of Senior High School Students

Variables	Correlation Coefficient	<i>p-value</i>	Decision
Social intelligence and motivation	.556**	.000	Reject

This finding is supported by Kant, as cited by Kasperuniene (2021), who noted that hard work alone cannot guarantee career success. He further explains that social intelligence is equivalent to interpersonal intelligence, which is one of the intelligences identified in Gardner's Theory of Multiple Intelligences. Hence, social intelligence skills are not only relevant to culture but are also important in achieving organizational excellence through motivation in the field of interest. He noted that another important observation is the correlation between social intelligence and self-motivation, which was illustrated in a discussion on emotional intelligence. It was stated that emotional intelligence is a subset of social intelligence that involves not only recognizing but also monitoring the feelings and emotions of oneself and others. It also involves an ability to discriminate among them and, more importantly, to use this information to guide one's thinking and actions.

The literature also supports Sternberg's (as cited by Yip et al., 2021) findings. Motivation enables them to think outside the box; it gives them a new horizon for learning and exploring the uncertainties of this fast-changing, socially and globally evolving society. Motivation is, therefore, a new source of energy.

Relationship between Competency in Drafting and Motivation of Senior High School Students

Table 6 displays the significance of the relationship between competency in drafting and motivation among senior high school students. The table presents correlation coefficients between competency in drafting (Knowledge, Skills, and Attitude) and motivation (Relationship with other Students, Relationship with Teachers, and Commitment to Education). The correlation coefficient is significant at the $p < .05$ level.

Table 6

Significance of the Relationship between Competency in Drafting and Motivation of Senior High School Students

Variables	Correlation Coefficient	<i>p-value</i>	Decision
Competence in drafting and motivation	.431**	.000	Reject

The correlation coefficients in Table 4 indicate moderate positive relationships between competency in drafting and motivation dimensions across all categories. This indicates that as competency in drafting increases, learning behaviors related to competence motivation also tend to improve significantly among senior high school students. These findings collectively underscore the importance of fostering competency in drafting across educational contexts to cultivate motivation of learners who find their educational experience engaging and fulfilling, ultimately enhancing their overall learning outcomes and academic success.

The data shows a moderate positive correlation between competency in drafting and motivation. This suggests that students who are highly motivated in terms of their competence also tend to exhibit strong competence in drafting education. Supporting this, Competence motivation theory, as proposed by Robert

White, aims to explain individuals' motivation to participate, persist, and work hard in any achievement context (Wigfield et al., as cited by Sakaki et al., 2026). The theory explains that individuals are attracted to participate in activities at which they feel competent. Later, Susan Harter extended White's theory to develop a more comprehensive framework. She introduced the idea that individuals' effecting or competence motivation can vary across achievement domains, including cognitive, physical, and social aspects. She also noted that within each domain, individuals are motivated to engage in mastery attempts to develop or demonstrate competence (Collins, as cited by Pashke et al., 2025). 144

Self-determination theory posits that understanding motivation necessitates considering three fundamental human needs: autonomy, competence, and relatedness (Ryan & Deci, as cited by Lucas-Molina et al., 2025). This suggests that students need to be free from external constraints on their behavior; they require a sense of capability or skill, as well as a feeling of connection or involvement with others.

Schunk's (as cited by Asadullah, 2021) findings support this correlation regarding competence. Since understanding learners' motivation is key to competencies, we know that within traditional settings, students' ability to sustain or increase their willingness to engage in and complete academic activities has been viewed as important for understanding learning and performance. Schippers and Djadjang, as cited by Bakar (2014), said in their study that activities to learn the skills to train the hand to apply the theory through the process of controlling your thoughts and feelings in the form of using basic skills, sketching, drawing, and counting, operating and controlling, caring for, maintaining, and repairing are best learned when the students are self-motivated.

Mediation Analysis of the Variables

Table 7

Regression analysis showing the influence of competency in drafting on motivation as mediated by social intelligence

Step	Path	B	S.E.	β
1	c	.345	.042	.431**
2	a	.409	.053	.410**
3	b	.366	.041	.457**
4	c'	.195	.041	.244**

* $p < 0.05$

Table 8

Results of statistical analysis on presence (or absence) of mediating effect

Combination of Variables	z	Sobel value	p-	Mediation
<i>Competency in drafting → motivation → social intelligence</i>		5.838	<0.05	Partial mediation

* $p < 0.05$

The objective of this data analysis is to determine whether social intelligence mediates the relationship between drafting competency and motivation among senior high school students. Table 7 presents the results of a regression analysis that shows the influence of competency in drafting on motivation, with social intelligence serving as a mediator. The path coefficients (B, S.E., and β) are provided for each step of the

mediation analysis. Table 8 summarizes the results of the statistical analysis, including the Sobel test for 145 mediation effect and effect size measures.

As shown in Figure 2, in Step 1, the direct effect (path c) of critical thinking on learning behavior is significant ($B = 0.431$, $\beta = 0.345$, $p < 0.05$). In Step 2, competence in drafting significantly predicts social intelligence (path a), with $B = 0.410$ and $\beta = 0.409$ ($p < 0.05$). In Step 3, social intelligence significantly predicts motivation (path b), with a coefficient of 0.457 and a standardized coefficient of 0.366 ($p < 0.05$). When social intelligence is included as a mediator in the model, the direct effect of competency in Drafting on motivation (path c') decreases but remains significant ($B = 0.244$, $\beta = 0.195$, $p < 0.05$). The Sobel test result ($z = 5.838$, $p < 0.05$) indicates a significant partial mediation effect. The mediation analysis shows that 43.45% of the total effect of competency in drafting on motivation is mediated by social intelligence, with an indirect effect ratio of 76.84.

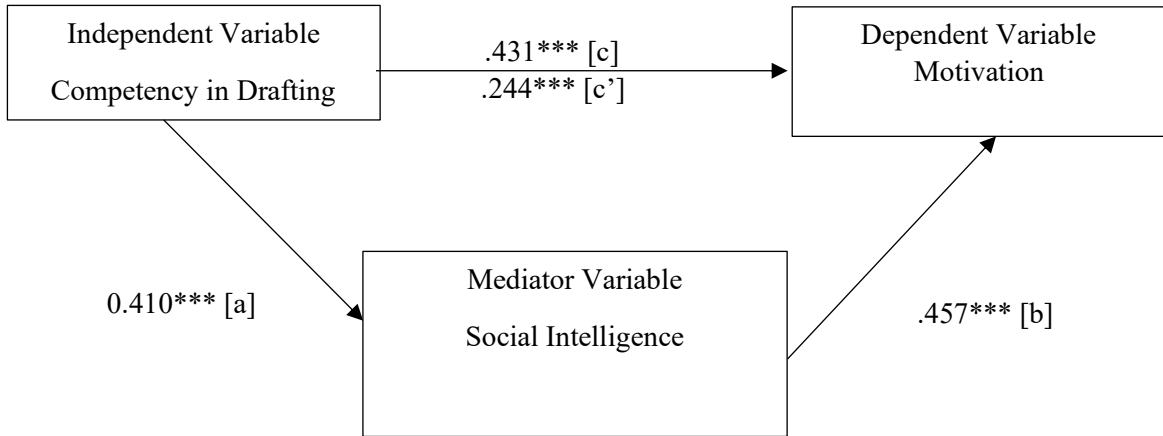


Figure 2. Medgraph showing the variables of the study

Mediation Analysis

Sobel z	5.838, $p < 0.05$
Percentage of the total effect that is mediated	43.4498323%
Ratio of the indirect to direct effect	76.8341353

Effect Size Measures

Unstandardized Coefficients	
Total:	0.345
Direct:	0.195
Indirect:	0.150
Ratio Index:	0.434

The analysis demonstrates that social intelligence partially mediates the relationship between drafting competency and motivation. The significant direct effect in Step 1 confirms that competency in drafting independently has a direct influence on motivation. The significant path a in Step 2 indicates that competency in Drafting enhances social intelligence, which in turn, as shown in Step 3, positively affects motivation. The reduction in the direct effect (c') when the mediator is included confirms partial mediation. The Sobel test supports this finding, highlighting the importance of social intelligence in this relationship. The mediation analysis suggests that social intelligence accounts for a substantial portion (43.45%) of the effect of competency in drafting on motivation, emphasizing its role in translating competency in drafting into effective motivation strategies.

The findings are consistent with existing literature, which emphasizes the interconnection between competency in drafting and social intelligence. Sampson and Fytros (as cited by Hadullo, 2021) assert that competency also embodies the capacity to transfer skills and abilities from one area to another. Another widely accepted definition among human resources specialists is that it is the underlying characteristic of a person that

results in either ineffective or superior job performance. According to Lachance, as cited by Sampson & Fytros (as cited by Hadulloh, 2021), competency is an underlying characteristic of a person (i.e., a motive, trait, skill, aspects of one's self-image, social role, or a body of knowledge) that results in effective and/or superior performance. These studies collectively underscore the necessity of fostering both drafting competency and social intelligence in educational settings to promote effective motivation strategies. 146

The results of the study strongly support the leading theory, competence motivation theory, as proposed by Robert White (1959). The significant mediation effect of social intelligence in the relationship between competency in Drafting and motivation aligns with competence motivation theory's emphasis on the importance of individuals' motivation to participate, persist, and work hard in any achievement context (Wigfield et.al., as cited by Sakaki et al., 2026).). The theory explains that individuals are attracted to participate in activities at which they feel competent. By demonstrating that social intelligence partially mediates this relationship, the study confirms that social intelligence is a critical component in translating competency in drafting skills into effective learning behaviors, thus supporting the theoretical assumptions of the competence motivation theory.

Also, this result can be drawn upon Harter's (as cited by Chong, 2024) competence motivation theory, which is a theory of achievement motivation based on a person's feelings of personal competence. Accordingly, competence motivation increases when a person successfully masters a task. This encourages the person to master more tasks; the motive, or the impetus for action in a specific direction, is to develop, to attain, or to demonstrate competence. Although the fundamental objective of education is to create competence, several efforts to enhance student motivation in classrooms have not focused on competence motivation per se (Urdu & Turner, 2005). This theoretical framework supports the findings of mediation analysis, demonstrating the significant role of social intelligence in enhancing the effects of competency in Drafting on motivation.

4. Conclusions

This study examined the mediating role of student social intelligence in the relationship between competency in drafting and motivation. Results showed high levels of all three variables and significant relationships between competency in drafting and both motivation and social intelligence, as well as between social intelligence and motivation. Crucially, the study found partial mediation, meaning competency in drafting influence motivation both directly and indirectly through social intelligence. Therefore, all null hypotheses were rejected. These findings highlight the importance of further developing social intelligence to empower students in their educational journey, as it directly boosts motivation and acts as a key pathway for competency in drafting to influence motivation. This emphasizes Self-determination theory which posits that understanding motivation necessitates considering three fundamental human needs: autonomy, competence, and relatedness (Ryan & Deci, as cited by Lucas-Molina et al., 2025). This suggests that students need to be free from external constraints on their behavior; they require a sense of capability or skill, as well as a feeling of connection or involvement with others.

5. Recommendations

Based on the findings of the study, the researcher proposed a series of recommendations aimed at enhancing motivation, competency in drafting, and social intelligence. Given the high level of competency in drafting identified in senior high school students, it is recommended that these skills be further cultivated and enhanced through targeted educational strategies. Schools should incorporate structured competency in drafting activities across the curriculum, such as learning the fundamentals of projection, isometric drawing, and other drafting techniques. Teachers can integrate techniques that encourage students to grasp the importance of accuracy, clarity, and standardization in technical drawings through developed drafting enhancement programs. Professional development programs for teachers, such as Monthly School and District Learning Action Cell Sessions and teachers' focus group discussions, need to be strengthened. This will focus on methodologies to foster competencies in Drafting skills, and monitoring the developed methodologies should

also be encouraged to ensure consistent implementation in classrooms. These developed sessions will equip 147 teachers with practical strategies and techniques for fostering competencies in drafting in the classroom.

Acknowledging the significant relationship between competency in drafting and motivation, schools should continue to encourage competency in drafting and boost student motivation by creating a supportive, engaging, and relevant learning environment. This involves strengthening and implementing schools' best practices. This includes connecting drafting skills to real-world applications by demonstrating how drafting is utilized in various fields, such as architecture, engineering, and manufacturing. Implementing student-centered approaches and collaborative learning activities during the teaching and learning process can enhance motivation and participation. Regular feedback mechanisms and assessments aligned with learning objectives can also guide students towards practical competencies in Drafting. Teachers should be supported in adopting innovative teaching practices that encourage students to apply competencies in drafting during their learning activities.

With a high level of social intelligence observed among senior high school students, efforts should focus on further developing this intelligence to empower students in their educational journey. Schools can introduce programs that promote and utilize social intelligence in learning, such as project-based learning, research initiatives, and personalized learning plans. Providing opportunities for students to incorporate group projects and peer review activities ensures that students have access to the necessary tools, materials, and software, and utilize CAD software and other digital tools to enhance drafting instruction. Providing students with challenging yet achievable tasks by gradually increasing the complexity of drafting projects as they progress, and allowing students to advance at their own pace, can also be beneficial.

Considering social intelligence partially mediates the relationship between competency in Drafting and motivation, it is recommended to enhance support structures that bolster the use of social intelligence in learning environments. Schools should provide opportunities to integrate Social-Emotional Learning into the curriculum, focusing on self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. Continuous evaluation and adjustment of educational practices to align with the mediating role of social intelligence will facilitate a more robust educational framework.

Future research endeavors should expand the scope of this study to include a larger and more diverse student population. Qualitative research methods can provide deeper insights into the factors influencing competency in Drafting, motivation, and social intelligence in educational settings. Additionally, exploring longitudinal studies to track the development of these skills over time and their impact on academic achievement would contribute valuable knowledge. Furthermore, investigating the role of socio-economic factors and cultural contexts in shaping these educational outcomes can offer a more comprehensive understanding for educational practitioners and policymakers. Moreover, future researchers should explore other variables besides social intelligence to determine their mediating effect on the correlation between motivation and competency in drafting. Investigating additional factors could provide a more comprehensive understanding of how various elements influence motivation and competency in drafting.

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"Rejoice in hope, endure in affliction, persevere in prayer."

— Romans 12:12

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Appendix A

Survey Questionnaire

Competency in Drafting, Motivation of Students, and Social Intelligence

Dear Respondents:

Greetings!

This study is intended to determine the **Mediating Effect of Social Intelligence on the relationship between Competency in Drafting and Motivation among Senior High School Students**. With this I would like to ask for your full cooperation for this research.

Kindly answer the question carefully, note that there are no correct or wrong answers. Please answer all the 153 questionnaires without leaving any items unanswered. Rest assured that the information provided will be treated as confidential and will be used for research purposes only.

Thank you and God bless!

LEA M. LARITA

Researcher

Name (Optional): _____ School: _____

Direction: Kindly answer the following items by putting a check (/) on the column that corresponds to your answer using the following scale.

Rating	Descriptive	Interpretation
5	Always	This means that the items relating to competency in drafting practices are evident at all times.
4	Oftentimes	This means that the items relating to competency in drafting practices are evident most of the time
3	Sometimes	This means that the items relating to competency in drafting practices are evident occasionally.
2	Seldom	This means that the items relating to competency in drafting practices are evident in few instances
1	Never	This means that the items relating to competency in drafting practices are evident at all times.

Part I: Competency in Drafting

Level of Competency in Drafting in Terms of Knowledge <i>In our School, as a learner I can...</i>	5	4	3	2	1
1. Explain the difference between drawing instrument and drawing equipment					
2. Explain the uses and proper care of drafting tool, instrument, and equipment					
3. Explain the elements of guidelines and give their importance in lettering					
4. Discuss the different lettering styles					
5. Discuss alphabet of lines and their uses					
6. Discuss the different types of measurement scale in sketching drawing plan					
7. Explain the procedure of making free hand drawing					
8. Discuss kinds of line in making a drawing plan					
9. Discuss the procedures by using paint brush.					
10. Explain the different shapes of geometric figures.					
Level of Competency in Drafting in Terms of Skills <i>In our School, as a learner I can...</i>	5	4	3	2	1
1. Classify and identify the drawing instruments used in a tracing drawing paper					
2. Identify the common drafting tools and their uses					
3. Sketch the guidelines in observing the proper weight of line					
4. Perform the proper spacing and proportion of different lettering styles					
5. Practice to sketch and draw the alphabet of lines					

6. Draw appropriate measurements of the drawing plan, using Metric and English measurement scale.					154
7. Draw a figure of car using freehand drawing					
8. Draw a visible boarder line of human structure					
9. Use paint brush in posters and streamers					
10. Draw and sketch a figure of a circle and ellipse					
Level of Competency in Drafting in Terms of Attitude <i>In our School, as a learner I can...</i>	5	4	3	2	1
1. Keep adequate clearance around drafting tables according to fire and safety regulations.					
2. Keep and place stools and chairs under the tables and desk when not in use.					
3. Pick pencils, erasers and other articles from the floor in order to prevent them from becoming the cause of serious fall.					
4. Keep away chemicals from eyes, nose, and throat and use it in area with adequate ventilation					
5. Always keep hands and fingers clear of the paper-cutter blade					
6. Keep blade of the paper cutter "down" position when not in use.					
7. Keep hands clear from the light tube and belt feeding mechanism of Diazo white printer to avoid crushed fingers.					

Part II: Motivation of Senior High School Students

Direction: Kindly answer the following items by putting a check (/) on the column that corresponds to your answer using the following scale.

Rating	Descriptive	Interpretation
5	Always	This means that the items relating to motivation are manifested at all times.
4	Oftentimes	This means that the items relating to motivation are oftentimes manifested.
3	Sometimes	This means that the items relating to motivation are sometimes manifested occasionally.
2	Seldom	This means that the items relating to motivation are seldom manifested
1	Never	This means that the items relating to motivation are not manifested at all.

Relationship with other students <i>In our School, as a learner I/I am...</i>	5	4	3	2	1
1. Enjoy working collectively					
2. Receive feedback from colleagues concerning the outcomes of my work					
3. Sure, that my colleagues consider me a good student.					

4. Shows harmonious relationship among colleagues.					155
5. Have positive influence on my motivation to be successful.					
6. Cooperate with one another to fulfil common, personal professional objectives.					
7. Adopt strong ethical standards towards other students					
Relationship with teachers <i>In our School, the teacher/s...</i>	5	4	3	2	1
1. Sets a good example by working hard					
2. Recognizes students' good work					
3. Uses constructive criticism					
4. Allows students to participate in important decisions					
5. Helps students to maintain high standards of performance					
6. Respects students' voice when they raised their concerns about school's plans and policies					
7. Shows fairness in relations with students' schoolwork.					
8. Develops a good communication environment at the school					
9. Handles the school's solution effectively					
10. Encourages students to discuss school matters with him/her					
11. Evaluate my work fairly.					
12. Fosters students' initiative and creativity					
13. Treats students with dignity and respect					
14. Offers students some freedom to plan their classroom procedures					
Commitment to Education <i>In our School, as a learner I/I am...</i>	5	4	3	2	1
1. Willing to put in a great deal of effort beyond what is expected of me to succeed in my career path					
2. Proud to tell others that I am a Drafting Technology student					
3. Would recommend my specialization to other learners					
4. Would prefer to be studying at another school					
5. Pursuing education primarily to secure future income.					
6. If I could pursue a more rewarding career, I would leave my current specialization.					
7. Plan to continue my education because it is accessible and convenient for me.					
8. Consider my academic performance and success as part of my personal responsibility.					
9. Find my educational experience engaging and fulfilling.					
10. Have contemplated leaving my educational path.					
11. Think that my specialization, more than any other, is essential to society.					
12. Find that my values and those of my school are very similar					

Part III: Social Intelligence

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Direction: Kindly answer the following items by putting a check (/) on the column that corresponds to your answer using the following scale.

5	Always	This means that the items relating to social intelligence are manifested at all times.
4	Oftentimes	This means that the items relating to social intelligence are often manifested.
3	Sometimes	This means that the items relating to social intelligence are sometimes manifested.
2	Seldom	This means that the items relating to social intelligence are seldom manifested.
1	Never	This means that the items relating to social intelligence are not manifested at all.

Demonstrative Empathy <i>In our School, as a learner I/I am...</i>	5	4	3	2	1
1. Can anticipate and cope with the emotional reaction of others					
2. Display awareness to the needs of others in the way I express things					
3. Comfortable with people showing personal feelings					
4. Can fit in and feel at home in most social situations					
Energy <i>In our School, as a learner I/I am...</i>	5	4	3	2	1
1. Generally, show commitment towards other					
2. Regularly seek and share feedback on the performance of others to support them					
3. Active and open in asserting my views and feelings when working with others					
Social Skills <i>In our School, as a learner I/I am...</i>	5	4	3	2	1
1. Good at building and sustaining relationships					
2. At ease socially, in work and non-work situations					
3. Self-assured in group and networking situations					
4. Enjoy communicating with others					
5. Listen well and am responsive to the needs of others					
6. Trusted by the people I work with					
Tolerance <i>In our School, as a learner I/I am...</i>	5	4	3	2	1
1. Demonstrate understanding and patience with others' beliefs and values					
2. Known to be fair-minded					

3. Able to communicate respect for others in any situations.					157
Persuasiveness <i>In our School, as a learner I/I am...</i>	5	4	3	2	1
1. Able to make a good impression on others					
2. Regularly and readily solicit others' points of view					
3. Offer ideas and suggestions openly and nondefensively					
4. Known as someone who is dependable.					
Ability to lead <i>In our School, as a learner I/I am...</i>	5	4	3	2	1
5. Able to be appropriately dominant and assertive when needed					
6. Provide direction and make things happen once decisions are made					
7. Foster collaboration in my team(s) by ensuring there are clear individual and team goals and roles					
8. Seek open engagement and common understanding across group members					