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ARTICLE

Peer-to-Peer mentoring and its potential benefits for International Baccalaureate Grade 11 and Pre-IB Grade 10 students working on project-based assignments in an international school in China

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Abstract
This hypothetical case study proposes a peer-to-peer mentoring scheme that could be introduced in an international school in China. The main research question asks whether this form of peer mentoring intervention could support students who are new to the International Baccalaureate and its use of project-based assignments. This is of interest because the targeted students would have come from a Chinese education background and have limited exposure to project-based assignments thus far. By aligning the proposed intervention with the literature on peer mentoring, it seems likely that a peer-mentoring intervention could have positive benefits for both mentee and mentor and it is recommended as a way to support transition.

Introduction
This is a hypothetical case study of the benefits of peer-peer mentoring on project-based assignments. This study was proposed two years ago and due to the unforeseeable effects of the pandemic, the study could not be carried out practically at an international school in Beijing, China.

When students enter the International Baccalaureate (IB) diploma program they are first enrolled on pre-IB grade 10 courses. The students are exposed to all the subjects within the IB program, and they are taught introductory concepts for each subject. Based on their understanding of the subject knowledge, students then finalise their subject choices for their IB diploma programs.

Although the students are exposed to these topics during their pre-IB course, they are still new to approaches to teaching and learning in the IB program. These students come from a Chinese education background and have limited exposure to project-based assignments. Therefore the school wants to introduce an intervention plan to help these students get accustomed to project-based assignments. A potential solution to this problem was identified in the form of peer-to-peer mentoring initiatives. The idea is that an IB Grade 11 (G11) student will guide the pre-IB Grade 10 (G10) student on a project-based assignment. Here the G11 student will play the role of a mentor and the G10 students will be their mentees.

When students enter high school, they have a lot of independence to make their own choices. This is great but they may not be well supported or guided to achieve success. Research has shown that students who transition from middle school to high school experience varied changes in approaches to learning and teaching (Roderick, 2006). They could experience changes in the increased number of classes and subjects in high school, the increase in teachers teaching them, and also their peer interaction might increase as they are exposed to more students. These changes are not dealt with similarly by all the students, there are usually a few students who struggle with these transitions. This makes it difficult for these specific students. So, peer-peer mentoring could benefit these students and provide them with more support to achieve success.

There are several mentoring initiatives to help students transition. One such program is the Link Crew program serving over 2000 schools clearly indicating a need for mentorship in transition (Boomerang

Project, n.d.). The sole focus of this program is to help juniors transition into high school smoothly. The seniors conduct a one-day orientation program to brief about the school, and its policies and then carry out some activities for the juniors. The Link Crew program also implements cross-age peer mentoring which provides juniors with self-confidence and builds their interpersonal skills. This might help them not only in their high school life but could benefit them later on in life (Garringer & MacRae, 2008).
Peer-peer mentoring in high schools is a great way to utilise G11 students with experience guiding the less experienced G10 students through project-based assignments. The G11 students provide information and support needed to navigate life in high school. Also, these mentoring initiatives benefit the G11 students as they develop leadership skills and improve their rapport with students in high school. They also gain respect from their peers and they are looked up to for inspiration (Garringer & MacRae, 2008; Karcher, 2007). Karnes and Bean (2010) suggest that more serious attention should be given to developing young leaders—influential people who are critical thinkers, creative problems solver, and strong communicators.
This case study will focus on how peer-peer mentoring benefits both seniors and juniors on project-based assignments. The study will be conducted over a period of one week and data will be collected and analysed to see if this intervention plan has any positive outcomes.

Literature review

Mentoring is found in almost every type of organization. Mentoring is a form of help and support offered by a more experienced individual to a less experienced individual. There are several pieces of evidence of mentoring throughout history. There are several examples and one such example is that of Haydn and Beethoven. Haydn mentored Beethoven in his early years and guided him through music. Haydn was a renowned artist and Beethoven benefited from the mentorship provided by him (Muscarella, 2019). As we know that Beethoven went on to become one of the most famous composers. Mentoring is a form of relationship that connects humans, where the mentor provides time, energy and guidance in benefitting the development of another. “Mentoring requires dedication to the process, which includes substantial investments of time, energy, and resources—physical, emotional and intellectual” (Holmes, Hodgson, Simari, & Nishimura, 2010, p. 336).

Mentors do not have to be stereotypical. Mentors could be seen from any walk of life. There are several different types of mentors. Mentors could be ordinary people that help individuals on a daily basis. A theatre manager guides his employees by providing opportunities and expertise in running the theatre. The PGCE course uses a similar approach where a PGCE-certified teacher becomes a mentor to newly enrolled students to guide them in the process. Merriam, Caffarella, and Baumgartner (2007) stated that “The mentor serves as a guide, cheerleader, challenger, and supporter during the learning process” (p. 138).

Studies have shown that the need for peer mentoring programs is on the rise (Goodrich, 2017). These initiatives boost critical thinking, problem-solving and interpersonal skills (Gensemer, 2000). Many studies have also shown a positive impact on cross-age mentoring and peer mentoring (Hall & Jaugietis, 2010). These programs help students transition from one schooling year to the next smoothly. Evidence suggests that peer mentoring can decrease the rate of absenteeism and students discontinuing their studies (Dopp & Block, 2004). The completion of these programs must lead to the development of successful mentors. These mentors must be trained and facilitated by teachers to improve their knowledge. This eventually leads to independent learning.

One of the most important theories the social learning theory proposed by (Vygotsky, 1978) states that through social interaction people are able to derive meanings and construct understandings through these interactions. Mentoring enhances the scope for learning through social interaction and these theories are based on the idea that learning happens through observation and trying to mimic the mentor (Bandura, 1977). Active learning occurs when these juniors interact and emulate their mentors “Social activities allow students to express and develop their understandings with peers as they pursue projects through conversations that stimulate examining and expanding their understandings” (Sherman & Kurshan, 2005, p. 12). Peer-peer mentoring boosts confidence and skills through the social learning theory. This creates room for these adolescents to participate in tasks autonomously with achievement.

According to the social learning theory of Erik Erikson, the gaining of social skills and mentor-mentee relationship plays a key role in learning. The psychosocial learning theory depends on the formation of an ego identity experienced through several interactions in one's life. This ego identity development gives one the assurance of self and is established through social interaction and keeps frequently evolving through new experiences and acquisition of knowledge (Erikson, 1968). Ego identity is vital for adolescents as this provides the tools for progress and leads to the successful development of that individual. Reaffirmation and nurturing of the ego enhance the adaption process in the psychosocial learning outcomes (Erikson, 1968).

The role of the mentor reassures and guides the mentee in the right direction and this boosts the social functionality of the individual. The development of specific skills could be improved with constant encouragement and support from peer-peer mentoring. Erikson's theory was based on the longevity of the interaction between the mentor and mentee. The ideal duration for observing positive outcomes was a minimum of one year. This was backed by the studies that showed peer-peer mentoring impacted youth in an increasingly positive manner. This correlated to the duration of mentorship offered the longer the interaction the more positive the outcomes (Grossman, Chan, Schwarts, & Rhodes, 2012; Grossman & Rhodes, 2002; Rhodes, 2001; Sparks, 2010). The longer exposure with the mentor benefits the mentee to develop their ego identity through different stages of this mentoring process. This leads to the improvement of social skills and applications of knowledge acquired.

Several studies have shown that freshmen benefit tremendously from having a mentor that they can look up to for guidance and support. There could be a wide range of senior students that can fulfil this role. On the contrary, it is also true that not all of them actually have any individual interaction with an adult constantly at school. In these situations, mentoring programs could play a critical role in bridging the gap. Mentoring programs don't just facilitate the mentees with support but also enhance the safe and beneficial development of the school as a whole (Adelman & Taylor, 2010; Willis, et.al., 2012; Pascarella & Terenzini, 2005).

The advantages of having a peer mentor are several. Some of these are that peer mentors can connect with their mentees easily and they have the opportunity to spend more time with their mentees. Parents are more comfortable having a peer as a mentor rather than an adult, as this creates an opportunity for developing social skills (Jennifer & Dianne, 2014 Bruce & Bridgeland, 2014). What is more important is that these peer-peer mentoring programs have mutual benefits for both the mentor and mentee. The research for these claims is partial but there are several probable gains for the mentees such as feeling associated closely with school and developing their aptitude, improved results at school, and greater social behaviours. It also develops a positive attitude, and self-worth (Adelman & Taylor, 2010; Bruce & Bridgeland, 2014).

The benefits are not limited to the mentees, there are several benefits to the mentor as well. A few of these benefits are: feeling closely associated with school, improved problem-solving abilities, confidence, leadership qualities, self-worth, ability to reason rationally, good communication, empathy and enhanced relationship with their parents (Adelman & Taylor, 2010; Bruce & Bridgeland, 2014). Facilitators that prepare the mentors for the program train them and guide them. These learnings benefit the mentors as it becomes a part of their education. These activities that they participate in during their mentorship program could facilitate them to be well equipped for college and work applications.

It is essential to choose these mentors carefully and train them in handling their mentees. Teacher supervision of these programs is fundamental for the development of the mentor and mentee (Hall & Jaugietis, 2010). Although this isn't a strategy that is new or has never been tried before it has a number of benefits in developing positive reinforcement habits (Tenenbaum, et al., 2014). The ability to solve problems and resolve conflicts with each other improved, tasks were time-effective and there was substantial academic growth seen (Sonntag, 2015). Older students paired with younger ones showed

tremendous improvement with regard to positive behavioural attributes and were motivated to work independently (Rodger & Tremblay, 2003).

Several studies indicate that training is essential for the success of the program (Bruce & Bridgeland, 2014 Willis, et.al., 2012). The programs should be well developed and training must be detailed and brief the mentors about their roles and responsibilities, expectations on their performance and communication with their peers should all be taken into consideration. These pieces of training must be a continuous process where mentors are constantly updated on issues such as how to maintain distance with the mentees, new problem-solving techniques, approaches to resolving conflicts effectively and being aware of cultural and diversity differences (Baginsky, 2004; Bruce & Bridgeland, 2014; Tabbron et al.,1997).

The objective is to learn how we can make positive attributes of good students inheritable by the next generations of students through interaction and group work and to see how mentorship affects both the mentor and mentee.

Intervention design

The main objective of this study is to see the effects of peer-peer mentoring on both the mentor and mentee mainly in a project-based setting. Since this study mainly focused on project-based collaboration the program was restricted to 10 mentors and 10 groups of mentees (each group consisting of 2). The study will be conducted over one semester (5 months). The time frame was chosen based on previous studies, although, most studies indicate that it is better if the mentor-mentee relationships last longer for better interaction and learning as stated in the literature review (Grossman, Chan, Schwarts, & Rhodes, 2012). Due to several constraints within the school setting, I would only opt for a semester to conduct this program. The mentors and mentees will be supervised by teacher facilitators during the program.

This research will focus on the qualitative aspects of the data obtained. This is a single case study where the main aim of this study is to determine the benefits of both mentor and mentee taking part in this program. This research will examine the viewpoints and understandings of both peer mentors and mentees by incorporating the feedback given by facilitators, students and through observations. This case study will allow for several methods of data collection and analysis. This case study method can be defined “as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (Onatu, 2012, p. 3496).

The intervention design comprises several levels of hierarchy in the program. The first on the list would be the choice of facilitators and their roles. The facilitators involved in this program will all be teachers with vast experience in their fields. The facilitators are all volunteers and they will be selected based on interviews, their schedules and their prior knowledge of mentoring. Volunteers will show more interest and dedication to the program than assigned facilitators. Facilitators are a key part of the program as they are the ones helping in the successful progress of the program (Hall & Jaugietis, 2010).

Their key roles are monitoring the mentor’s progress and also keeping an eye on the mentor-mentee relationship. Facilitators must keep an eye on all mentee and mentor interactions to create a safe and sound environment, they could also provide real-time feedback if and when needed. They become our first source of data through observation. The feedback given by the facilitators is important for the functioning and progress of the program. These observations also help us determine if there are any discrepancies in the mentoring outcomes, as they could be both positive and negative. The mentor must meet with the facilitator at least twice a month in the early stages and once a month after that.

The second level to consider is the choice of mentor and their roles. The mentors cannot be chosen by the facilitators and they must be selected through a rigorous process. The first step is to send out emails to all G11 students stating the roles, benefits and time involved in mentoring. Then interested students can apply for the role and they will be invited to an interview. The interested students that apply will be screened

before the interview based on academics, behaviour, communication and their roles in community services (Berger, 2016). The screened students will then be interviewed and selected as mentors (Karcher, et al., 2006). The selected mentor's parents will be informed that their child will be taking part in a peer mentoring program to obtain consent. This is done to avoid any ethical issues.

The key to a successful mentoring program is the training given to the mentors. We should keep in mind that these peer mentors are just teenagers. Mentoring is generally associated with people of an older age group that have gained a lot of experience. Whilst, here the peers take up this role and it will not be easy for these students. The role of a mentor is guiding, leading and supporting their mentees for peer mentors to exhibit these naturally a lot of training and scaffolding must be offered by the facilitators (Karcher & Berger, 2017). Studies have shown that the more mentor training provided to them, the better equipped they are to perform their tasks. It is interesting to note, however, that "the amount of training received [by high school age mentors] was more consistently associated with match success than it was for adults." (Herrera, et al., 2008, p. 21).

The training conducted for the mentors must cover the importance of carrying out activities with the mentees such as the relationships between the activities and program goals, guidance on how to conduct a successful activity, building a positive relationship with the mentee, plus ethical and safety considerations to be considered. Maintaining the confidentiality of the mentee's background and any learning disabilities must be imparted to the mentors during training. All these must be implemented during the training of mentors for better progress of the program (Tenenbaum, et al., 2014).

The third level is the grouping of the mentees. The mentees are all given out a simple survey to identify their knowledge of project-based assessment. After obtaining this data the mentees are grouped into groups of 2 based on the survey and their performance in school in terms of academic and prosocial attributes. The aim of the study is to observe the benefits for both mentor and mentee. Therefore, all the G10 students will be involved as mentees for the program. This also provides more information due to a large number of sampling. The mentees will be briefed on their roles and mentors in an orientation program held before the start of the program.

After the selection of the facilitator, mentor and mentee, the next step is pairing the mentor with the appropriate mentee groups, which will be done during orientation. This is critical because any mis-pairing could lead to negative effects on the program. There are several criteria to consider before pairing them. It would be best to pair them based on similar interests in extra-curricular activities or sports or academic competency (Karcher, et al., 2006). It is also important to know if these students that are being paired have any history in the past as this could be dangerous. In this program, the age difference between the mentor and mentee is more or less 2 years. The mentors and mentees are scheduled to meet regularly at least twice a week. These meetings will be held in a fixed location and will be supervised by the facilitators.

The intervention is designed to benefit both the mentor and mentee; this is closely overseen by the facilitator assigned. The selection process of the facilitator should be completed well ahead of the program's beginning date. This is to ensure we have the right people on board to carry out this plan. The next step is recruiting or selecting the mentor: this process needs to be completed within the first week of the semester. The selected candidates will undergo a 2-hour training session with facilitators from 4 to 6pm each day over the course of a week. During these first two weeks of mentor selection, another team of facilitators will be carrying out the process of mentee selection concurrently. Once training and selection of mentor and mentee have been completed then they will have an orientation day, where the mentee and mentors meet and have a few team-building activities to get to know each other. During the orientation, the students will be made aware of their meeting schedules and location during the week (Karcher, 2005b). The mentees along with their mentors chose the project they would like to work on and update the facilitators.

The mentees need to come up with a proposal and meet with the mentor for further advice during their weekly meetings. The project needs to be completed by the end of the semester and students need to

make a poster and present their findings on project day. The last part of this program is observation and data collection. The facilitators will be present during all the meetings to help the peers but they will not interfere in the process unless needed. The facilitators are the main source of observation data. The mentors need to note down the meeting minutes and submit these notes for data collection. Lastly, both the mentor and mentee will have interviews with the program facilitators and share their opinions of this peer-peer mentoring program on how it benefitted them.

The data collected will then be analysed and conclusions will be made to see if this intervention design was successful or not.

The plan of the intervention design can be found in the table below:

Table 1: Intervention Design layout

Time (Date/Month)	Tasks	Remarks
27th Aug – 3rd Sept	Recruitment of the facilitators	Voluntary and based on interview.
5th Sept – 9th Sept	Announcement of mentor recruitment	Emails and posters to be put out to encourage the submission of applications.
12th Sept – 16th Sept	Recruitment of mentors and mentees	Mentor - Voluntary and based on interviews and other academic and extracurricular factors. Mentee – all G10 students will be involved and screened for pairing.
19th Sept – 23rd Sept	Training of mentors	This training is run by facilitators every day between 4-6 pm on weekdays.
26th Sept	Orientation	Mentors and mentees are paired and activities are conducted. Projects are selected for completion.
27th Sept – 30th Sept	Project proposal	The mentees work with their mentors and finalize the project for the semester.
3rd Oct – 30th Dec	The program commences	Mentors and mentees meet twice week and discuss their progress and facilitators are present during these meetings.
9th Jan – 13th Jan	Final submissions and data collection week	The students present their final project work. Interviews are conducted with both the mentors and mentees. Facilitators submit their observation data throughout the semester.

Intervention justification

As stated in previous studies, mentor training and selection are vital for the success of peer-peer mentoring programs (Karcher & Berger, 2017). The most important aspect is that facilitators are key to the successful progress of the program. As mentors are teenagers themselves, an adult assisting them helps in guidance and support when they are not prepared to face certain unforeseen situations (Hall & Jaugietis, 2010). The pairing of mentors and mentees also plays an important role, as pairing wrongly could have negative effects, so choosing the right pairs is key to success (Karcher, et al., 2006). The selection process of all the above-mentioned staff and students is of utmost importance for the program to become a hit. Making room for mentors and mentees to meet regularly is key for the functioning of the program. Lastly, observation and support must be rendered at all times to favour data collection and analysis.

These are some of the key reasons for choosing this intervention method. There were several themes that were similar in nature to my intervention design. Although there is a lot of research carried out in mentoring, most often it is carried out in settings very different to the one I have chosen. Most research in mentoring focuses on cross-age mentoring where the age difference is wide. These programs have high

school students training either primary or middle school students and they are focused mainly on social behaviour and progression in high school (Joselowsky, 2005, 2007).

Another instance that provides evidence of teenagers peer-mentoring students, who are only a couple of years younger demonstrates a higher level of connectedness and develop their prosocial skills. Furthermore, there are certain rules to adhere to in a high school setting that both the mentor and mentee need to stand by. This type of peer-mentoring study is necessary as most students spend the majority of their time in school so these initiatives could be tools to set them up for higher educational institutions for them to succeed in the future (Karcher, 2005a).

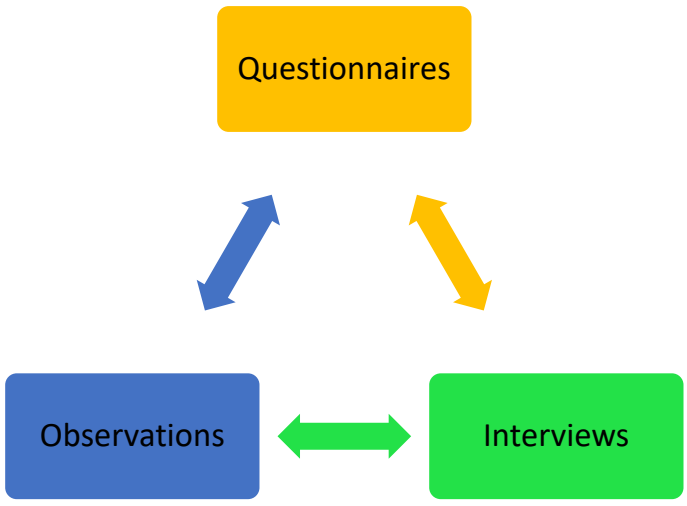
This intervention design also provides evidence-based data for triangulation and analysis. There are several sources of data obtained such as interviews, observation data and surveys that make this design sound and easily interpretable. Triangulation is described as a method of observing "convergence among multiple and different sources of information to form themes or categories in a study" (Creswell and Miller, 2000, p. 126). Overall this intervention design will provide an insight into how peer-peer mentoring will benefit students on project-based assessments.

Methodology

INTERVIEWS & QUESTIONNAIRES

This process is done at the beginning of the program. The facilitators, mentors and mentees are all selected based on interviews and questionnaires. Cohen states in his book that "interview can do what surveys cannot, which is to explore issues in-depth, to see how and why people frame their ideas in the ways that they do, how and why they make connections between ideas, values, events, opinions, behaviours, etc" (Cohen et al., 2018, p. 506)**.** The interviews are generally structured and the facilitator is responsible for interviewing the mentor. The questionnaire given to the mentors was adapted from materials provided by Mentoring Partnership of Long Island and Philadelphia in The ABCs of Mentoring (Bland et al, 2012) and also through a research article (Rhodes, et al., 2005). This survey is attached in **Appendix A**. Then the mentees are provided with a survey based on project-based learning. The responses obtained through this process help in pairing the mentees together into teams. The survey is attached in **Appendix B.** The surveys and interviews would provide evidence and serve as data. Questionnaires would provide insights and evidence for the research, and are a wonderful tool for evaluation of an individual's understanding of a concept. These questionnaires were prepared following the instructions provided in the book "Research methods in education" (Cohen et al., 2018)**.**

Figure 1: Evidence for triangulation by Method



OBSERVATIONS

Observations give us detailed insights into behaviour. Observation is not just looking but it is looking with a specific focus in mind. Observations generally have a structure and are done to identify the true nature of an individual in different settings (Marshall and Rossman, 2016). One of the major benefits of observation is that it gives the observer the chance to collect direct 'live' data in a natural environment rather than relying on published data (Wellington, 2015, p. 247) and secondary data (Creswell, 2013, p. 213). If observation is used as the primary mode of investigation then it can produce accurate or reliable data when compared to other modes of facilitated or inferential methods (Cohen et al., 2018)**.** The students will be observed during their meetings by the facilitators and this will be recorded on an observation form. The observation forms will be attached in **Appendix C1 & C2.** There will be two observation forms: one for the mentor and one for the mentee. The facilitator also will submit field notes and will be interviewed at the end to gather more information.

SURVEYS AND INTERVIEWS

Once the process of peer mentoring is completed, the students will submit their final project for evaluation and facilitators will grade these submissions and provide feedback on these projects. This feedback will be taken into the data analysis. Surveys are a good way of getting data using open-ended and structured questions to gain inference in research. "Typically, surveys gather data at a particular point in time with the intention of describing the nature of existing conditions or identifying standards against which existing conditions can be compared or determining the relationships that exist between specific events" (Cohen et al., 2018, p. 334)**.** Surveys help gather data that represent large populations efficiently and cost-effectively. It provides very descriptive, inferential and explanatory data which is standardized. The mentors and mentees are provided with a survey form to fill in their responses. These responses will be evaluated and mentors and mentees will be interviewed respectively to further gather information. The survey form will be attached in **Appendix D**.

The data obtained from the above three processes will help in triangulation and will provide substantial insights into the success of this peer-peer mentoring program.

Conclusion

This hypothetical research design for peer-peer mentoring is designed for helping G10 students easily transition to G11 while dealing with project-based assessments. The research mainly aims to research how students will perform in mentoring programs both mentors and mentees. Also, what are the benefits of being part of this program? The study uses several intervention methods to evaluate the outcomes of this program. The use of triangulation by method helps achieve an accurate interpretation. There are three important tools used in the methodology that help in data collection. These methods have been used in several studies to evaluate subjects within research successfully (Marshall and Rossman, 2016; Cohen et al., 2018).

These forms of peer-peer mentoring programs help students gain confidence, communication and collaboration (Garringer & MacRae, 2008). Students do well under the guidance of a mentor to whom they can relate, so teenagers slightly older than them are the perfect fit for mentoring. This also eliminates the barrier and helps them form friendships and relationships that are beneficial in enhancing their prosocial skills (Roderick, 2006). These initiatives could open doors for many students and they all could benefit from these programs.

To conclude, it is important that schools consider these kinds of interventions from time to time. These interventions could make schooling a better place and help build a better community. The future of these students is shaped by the programs and support offered in schools. Therefore, every child needs to be given the chance to contribute to the school community.

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APPENDICES

APPENDIX A: MENTOR APPLICATION QUESTIONNAIRE

Name: Gender:

1. What do you feel are the strengths that you can bring to this program? How do you feel you can best support a student coming into our school?

2. Write a brief statement on why you have chosen to participate in the mentor program. Why do you want to become a mentor?

3. Have you been a volunteer before? Yes ☐ No ☐

If yes, where? _____

4. Do you prefer working with a - Girl ☐ Boy ☐ No Preference ☐

5. Do you prefer working with a quiet, reserved peer? Yes ☐ No ☐ No Preference ☐

6. Do you prefer working with an outgoing peer? Yes ☐ No ☐ No Preference ☐

7. Please list any hobbies or interests you may have:

8. What would you like to do with a mentee?

9. What clubs or groups, if any, do you belong to?

10. My favorite subject in school is:

11. My least favorite subject in school is:

12. Please put an X by the activities you enjoy the most:

X	Activities	Such as
	Playing sports	
	Watching sports	
	Listening to music	
	Writing	
	Reading	
	Photography	
	Attending plays	
	Going to the movies	
	Arts and crafts	
	Visiting zoos and parks	
	Visiting museums	
	Using computers	
	Playing games	
	Cooking	
	Exploring possible careers	
	Hiking and seeing nature	
Other:		

13. What qualities would you like in a mentee?

14. What individual has served as a role model for you? Why?

15. If you could recommend one book for your mentee to read, what would it be?

_____

16. Initial the two statements below:

_____ I understand that the mentor program involves registering and attending the scheduled peer mentoring class for which I will receive an elective credit.

_____ I understand that I will be required to complete the mentor program orientation and at least two training sessions during the year.

Signature: _____

Date:

****Adapted from -** materials provided by Mentoring Partnership of Long Island and Philadelphia, *The ABCs of Mentoring.*

APPENDIX B: MENTEE QUESTIONNAIRE ON PROJECT-BASED ASSESSMENTS

Name: **Class:**

1. What do you like most about Project-Based Learning? (Project Based Learning is a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an engaging and complex question, problem, or challenge.)

2. Overall, are you satisfied with your experience using Project-Based Learning, dissatisfied with it, or neither satisfied nor dissatisfied with it?

Extremely satisfied	
Very satisfied	
Somewhat satisfied	
Neither satisfied nor dissatisfied	
Somewhat dissatisfied	
Very dissatisfied	
Extremely dissatisfied	

3. What did you like about working on a project? Select all that apply.

Working in Groups	
Creating the product	
Presenting Ideas	
Researching ideas	
Exhibition	
Other (please specify) -	

4. What did you like least about working on a project? Select all that apply.

Working in Groups	
Creating the product	
Presenting Ideas	
Researching ideas	
Exhibition	
Other (please specify) -	

5. What suggestions do you have for improving project-based assessments?

6. On a scale of 1 to 10 where would you rank project-based assessments?

1	2	3	4	5	6	7	8	9	10

****1- 2 – bad, 3-4 – not bad, 5-6 – manageable 7-8 – good and 9-10 – very good.**

****Survey source -** (Momentive, 2002)

APPENDIX C1: FACILITATOR OBSERVATION FORM FOR MENTOR

Name: Group:

Please tick the appropriate box from the options below.

(Ratings: Beginning - 1 Progressing - 2 Competent - 3 Advanced - 4)

I. Contribution

1	Rarely offers useful ideas. Is disruptive.	
2	Sometimes offers useful ideas. Rarely displays a positive attitude.	
3	Usually offers useful ideas. Generally, displays a positive attitude.	
4	Routinely offers useful ideas. Always displays a positive attitude.	

II. Cooperation with Others

1	Does not contribute. Does not work well with others.	
2	Sometimes cooperative. Requires structure, directions, and leadership.	
3	Usually cooperative. Works well with others.	
4	Always cooperative. Works extremely well with others.	

III. Focus and Commitments

1	Often is not a good team member. Does not focus on the task.	
2	Not always a good team member. Must be prodded and reminded to keep on task.	
3	Does not cause problems in the group. Can count on this person.	
4	Tries to keep people working together. Almost always focused on the task. Is very self-directed.	

IV. Team Role Fulfillment

1	Participates in a few or no group meetings. Provides no leadership.	
2	Participates in some group meetings. Provides some leadership.	
3	Participates in most group meetings. Provides leadership when asked.	
4	Participates in all group meetings. Assumes leadership role.	

Ability to Communicate

1	Rarely listens to, shares with, or supports the efforts of others. Never initiate communication with group members or adviser for clarifications Provides no feedback. Does not relay any information to teammates.	
2	Often listens to, shares with, and supports the efforts of others. Does not initiate communication with group members or adviser for clarifications. Rarely listens to others. Provides little feedback. Relays very little information that relates to the topic.	
3	Usually listens to, shares with, and supports the efforts of others. Sometimes initiate communication with group members or adviser for clarifications. Provides some effective feedback. Relays some basic information that relates to the topic.	
4	Always listens to, shares with, and supports the efforts of others. Initiate	

	communication with group members or adviser for clarifications and relays a lot of relevant information. Provides effective feedback.	

V. **Completion of meeting goals**

1	Work is generally sloppy and incomplete, contains excessive errors, and is mostly late.	
2	Work tends to be disorderly, incomplete, inaccurate, and is usually late.	
3	Work is generally complete, meets the requirements of the task, and is mostly done on time.	
4	Work is complete, well-organized, error-free, and done on time or early.	

Suggestions and Recommendations: *

Evaluated By: *

****Survey source -** (Tank, 2006)

APPENDIX C2: FACILITATOR OBSERVATION FORM FOR MENTEE

Name: Group:

Please tick the appropriate box from the options below.

(Ratings: Beginning - 1 Progressing - 2 Competent - 3 Advanced - 4)

VI. Contribution

1	Rarely offers useful ideas. Is disruptive.	
2	Sometimes offers useful ideas. Rarely displays a positive attitude.	
3	Usually offers useful ideas. Generally, displays a positive attitude.	
4	Routinely offers useful ideas. Always displays a positive attitude.	

VII. Cooperation with Others

1	Did not do any work. Does not contribute. Does not work well with others.	
2	Sometimes cooperative. Could have shared more of the workload. Requires structure, directions, and leadership.	
3	Usually cooperative. Did own part of the workload. Works well with others.	
4	Always cooperative. Did more than others. Highly productive. Works extremely well with others.	

VIII. Focus and Commitments

1	Often is not a good team member. Does not focus on the task. Let others do the work.	
2	Sometimes focuses on the task. Not always a good team member. Must be prodded and reminded to keep on task.	
3	Does not cause problems in the group. Focuses on the task most of the time. Can count on this person.	
4	Tries to keep people working together. Almost always focused on the task. Is very self-directed.	

IX. Team Role Fulfillment

1	Participates in a few or no group meetings. Provides no leadership. Does little or no work assigned by the group.	
2	Participates in some group meetings. Provides some leadership. Does some of the work assigned by the group.	
3	Participates in most group meetings. Provides leadership when asked. Does most of the work assigned by the group.	
4	Participates in all group meetings. Assumes leadership role. Does the work that is assigned by the group.	

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X. Ability to Communicate

1	Rarely listens to, shares with, or supports the efforts of others. Never initiate communication with group members or adviser for clarifications Provides no feedback. Does not relay any information to teammates.	
2	Often listens to, shares with, and supports the efforts of others. Does not initiate communication with group members or adviser for clarifications. Rarely listens to others. Provides little feedback. Relays very little information that relates to the topic.	
3	Usually listens to, shares with, and supports the efforts of others. Sometimes initiate communication with group members or adviser for clarifications. Provides some effective feedback. Relays some basic information that relates to the topic.	
4	Always listens to, shares with, and supports the efforts of others. Initiate communication with group members or adviser for clarifications and relays a lot of relevant information. Provides effective feedback.	

XI. Completion of Assigned Tasks

1	Work is generally sloppy and incomplete, contains excessive errors, and is mostly late.	
2	Work tends to be disorderly, incomplete, inaccurate, and is usually late.	
3	Work is generally complete, meets the requirements of the task, and is mostly done on time.	
4	Work is complete, well-organized, error-free, and done on time or early.	

Suggestions and Recommendations: *

Evaluated By: *

****Survey source -** (Tank, 2006)

APPENDIX D: MENTOR AND MENTEE SURVEY FORM FINAL FEEDBACK

Participant Name: **Date:**

Answer the following questions diligently.

1. Describe your relationship with your peer mentoring partner.

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2. Describe the activities that you have been involved in with your peer mentoring partner over the past four weeks.

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3. Do you feel connected to your school? Do you feel as if you belong?

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4. What are things that do or do not help you feel connected, or as if you belong?

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5. What activities are you involved in outside of regular academic classes? How did you become involved in these activities?

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6. Are there barriers present that prevent you from becoming involved in extracurricular activities at this time?

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7. Do you enjoy the peer mentoring program? Why or Why not?

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8. How has the peer mentoring program impacted you as of this point?

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9. What do you see as your greatest qualities and strengths?

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10. How do you see yourself using your skills and strengths in the future?

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****Survey source** - (Geddes, 2016)