Sharing the passion for learning around the world: An international collaborative online pilot of the Independent Learning Centre Program.

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This paper reports the positive impact of international collaboration, utilization of technology and the Independent Learning Centre Program (ILCP) on student confidence and personal achievement. During 2008-2009, Concordia Lutheran College (CLC), an Australian K-12 school and Patrick County High School (PCHS), an American secondary school worked together to deliver the Independent Learning Centre Program (ILCP) as developed by Carmichael (2008). This project utilized the Learning Activity Management System (LAMS) as a support system for delivery. The purpose of the online delivery was to make available to Patrick County High School, the teaching and learning strategies enhancing independent learning skills for information literacy and differentiated instruction (Tomlinson, 2003) via the Internet. The program gave students in both schools the opportunity to collaborate internationally and engage in a research topic of personal interest. It was anticipated this program would foster a sense of learner autonomy (Confessore & Confessore, 1994) enhancing students' faith in their ability to accomplish an individual project contributing to cognitive development and furthering their journey in learning for the duration of their formal schooling.

International collaboration, differentiated instruction, self-regulated learning

"Students realize how a Global Community can exist
and students can interact, even from Patrick County Virginia"
(Bill Clement - Teacher)

Background

To place the following quote in some kind of context concerning the whole collaborative project, needs an understanding of how independent learning skills, differentiated instruction and the Independent Learning Centre Program (ILCP) work

together to enhance student learning. A teacher from PCHS states at the completion of the project,

> I believe all the teachers have seen a rebirth of students who finally discovered how they learn best. And I have observed the teacher/student relationships as positive, where the teacher is not the only 'carrier of **all** information'. Students have been given the right to own their own knowledge. They have taken control and bloomed into life-long learners because now they know how, and why, they should take charge of their own learning. (Debra Quesenberry – Teacher)

The following explanation of the theoretical framework outlines how these constructs work together to do this.

Theoretical framework

Differentiated Instruction. Current educational practices in the K-12 setting tend to replace the child's natural desire to learn with dependency on being told what, when and how to learn (Grow, 1991). In the United States, this orientation towards learning is complicated by Federal mandates to micromanage education through complex regulations and testing programs (Jerald, Curran, & Boser, 1999). These facts and funding aimed specifically to document progress through lock step objectives, serves to reinforce an obscure agenda hidden in curriculum fostering dependency (Gatto, 2002). Little time is available in the curriculum to address value added competencies which make the instruction/learning whole greater than the sum of each part. Differentiated instruction (Tomlinson, 2003), an approach to prescribed curriculum, focuses on student variance. Students receive instruction but with a lens toward readiness, interest and learning style. Teachers vary activities and methods of instruction according to the differences within the group to master curriculum. Wang (1983) asserts that students need effective basic skills (reading, computation) and self-management skills such as time management, problem solving and information retrieval. It is specifically the area of self- management that proves to be fertile ground in theory and application (Meyer, 2001).

Self-directed learning. While differentiated instruction is embraced in the United States, self-directed learning (SDL) seems to be the next step in the path towards autonomy and has found its way into K-12 instructional methodology (Borich, 2000). K-12 educators now recognize the need for young learners to move toward self-directed learning, and are investigating ways to facilitate growth and value of young learners in self-identified learning goals (Lee-Pearce, Plowman, & Touchstone, 1998; Plowman, 2000). Beginning with a student's interest and allowing broad freedom of expression and input into the direction of student's learning is not a new idea (Rogers, 1969). However, broad implementation of these ideas has seldom occurred within the K-12 school system, rather confining itself to gifted education and honours program (Renzulli, 2000).

In the past, self-directed learning and learner autonomy have been used interchangeably. However, in recent years the subscales associated with learner autonomy have defined the psychological underpinnings of self-direction. Confessore and Confessore (1994) postulate that learner autonomy is predicated upon one's desire (Meyer, 2001), resourcefulness (Carr, 1999) initiative (Ponton, 1999), and persistence (Derrick, 2001). The skills associated with each subscale such as honesty, verbal/written expression, planning, anticipating consequences, goal-setting, delaying gratification, self-regulation to name a few, have been developed and taught by guidance counsellors, intuitive teachers, clergy, and

parents throughout the world as competencies. However, little recognition has been given to the importance of these activities on the capacity to impact lifelong active learning. Nor have self-management skills been emphasized within any curriculum with an eye towards their impact on capacity to learn. The skills associated with learner autonomy subscales speak directly to connecting the dots between the parts of curriculum to an integrated whole.

The Independent Learning Centre Program. The ILCP provides a rich environment to "connect the dots" and is grounded on the philosophy of research concerning independent learning, motivation and personal interest (Ainley, 2006; Alexander, 2003; Hidi & Harackiewicz, 2000; Krapp, 2007; Paris & Paris, 2001; Pintrich & De Groot, 1990 and Schiefele, 1991). Each relates the importance and necessity of the interrelatedness of interest and motivation in the learning process. Deci et al (1991) state that the intrinsic motivation for learning is supported by

> Offering choice, minimizing controls, acknowledging feelings and making available information that is needed for decision-making and for performing the target task… then…it has become more apparent that self-determination, in the forms of intrinsic motivation and autonomous internalization, leads to the types of outcomes that are beneficial to both individuals and to society (p.342).

Hunter & Csikszentmihalyi (2003) opine that motivating and managing student interest are a vital factor for cognitive growth.

The pursuit of personal interest. Students must be placed at the centre of the teaching and learning process. There is no curriculum in terms of fact and information, only skills and processes are taught to allow the student and the teacher to be free from the constraints of the curriculum. As stated by Principal Bradshaw, PCHS,

> Students are the focus of the school. The work, direction, and encouragement of the teacher are paramount to school/student success and encourage student ownership. The teacher equips students with the necessary tools to be successful with all future activities, project assignments and learning opportunities.

The ILCP design accounts for individual differences by allowing students to understand their personal learning preferences, tap into their area of interest and provides guided inquiry experiences and access to any instruction available on the planet through the internet and local resources. The students' desire to learn, their resourcefulness, initiative and persistence have been triggered into play throughout the international collaboration. Students are learned to make presentations, think critically, going deep instead of just surface learning and using technology creatively.

Students were totally immersed in their own learning, as observed by teacher Ann Taylor, "I have had very little problems with students in this class. All in all, the students are so engaged with their projects, they don't 'think' about starting problems."
Through their projects, students intuitively organize their own scaffolded curriculum, creating the circumstance for teachable moments. Faculty provide timely instruction along this journey of discovery. A Buddhist proverb says it best, "When the student is ready the teacher appears." Young learners are creating this circumstance.

Methodology

The focus, on the re-evaluation of action and further development of the ILCP, in a cyclical progression, leans towards an action research study (Kemmis & Mctaggart, 1988). This qualitative study sought to make meaning of the teaching and learning that occurred through primarily text based methods. Questionnaires were used to generate data and collected from both students and faculty. Short paragraph response items were also used to generate data. Data was collected and grouped as either student or faculty. (See Appendix A – Student and Appendix B - Faculty).

When analyzing the data, it must be realized that all written responses (questionnaires and responsive paragraphs), were framed and evaluated, in terms of the purpose of the whole project. In this case the impact of international collaboration, utilization of technology and the Independent Learning Centre Program (ILCP) on student confidence and personal achievement.

Participants, time scale and procedure

In the United States, the ILCP began in 2008 with a 6-week pilot program for fifteen, eighth grade students in one exploratory class and subsequently expanded, in 2009, to six other groups. A total of 57 students with varying unit lengths and in various subject areas participated in the pilot study.

Online collaboration. This collaborative project began as a pilot program utilizing LAMS, to deliver the ILCP. Preparations included faculty and administrative meetings to understand the focus of the project, changes in role for faculty, theoretical understandings of learner autonomy, the course scope and sequence, how these ideas play into differentiated instruction and get "buy in" from those associated with the project. Faculty collaborated with the program developer on SKYPE, email and LAMS site. IT staff at both locations communicated to provide service and remained available throughout the year. A video welcome was provided by Carmichael to open each session while support staff in the US provided guidance to faculty and expertise when needed. Requirements for the final presentation were given at particular intervals throughout the program when students were ready for the next step. Each student was provided with a workbook which coincided with audio files and web-based activities to be completed online. The LAMS site provided the generic format for these activities and a forum for students to listen to audio files, make comments, ask questions and discuss pertinent ideas. Appropriate documents could be downloaded at any time. Flexible learning pathways could be generated and students and teachers could make constructive comments and suggestions on ideas in the forum. Faculty monitored the site and could track student progress through the project.

Students created their final presentation in video format using Power Point or Movie-maker. They were encouraged to include audio (voice/music/sounds) to enhance their presentation. A visual interpretation of their project was also required in addition to a paper for those in the nine week format. A rubric was provided for each artefact.

Student presentations were delivered to an outside panel of faculty and the student's classmates and panel members were given a list of possible discussion questions regarding the presentation. Students were required to discuss their presentation extemporaneously. Panel members also read each paper and provided comments to students. Students were

provided a questionnaire (see Appendix A) and required to return it with their insights. Faculty, administration and support staff also provided feedback on another questionnaire (see Appendix B).

Students were expected to:

- access the LAMS website, engage with the ILCP;
- research their selected topics;
- exchange and discuss ideas concerning their learning process;
- exchange and discuss ideas concerning their learning process; and
- produce a power point presentation/movie and a visual.

Those students in the 9-week format also presented a paper at the end of course.

The skills, strategies and processes of information literacy and independent learning were taught and students were expected to:

- set own learning aims;
- make choices over learning modes;
- plan and organise work;
- decide when best to work alone, collaboratively and when to seek advice;
- learn through experience;
- identify and solve problems;
- think creatively;
- effective communication both orally and in writing; and,
- assess their own progress in respect of their aims.

Teaching and learning activities included learning styles identification; brainstorming ideas using concept mapping methods; time management activities; organizational activities; information location activities; as well as note taking and bibliographic methods to support the teaching of independent learning skills and information literacy skills.

Data Collection

Students, faculty and administration involved with the project were asked to complete questionnaires and write responsive paragraphs concerning their observations and participation in the learning process. This occurred after the first group of 8th grade students had completed their projects. And this occurred also after the second larger group of students completed their further expanded projects, (see Appendix A).

Faculty evaluation of the teaching and learning process was also undertaken in separate collaborative faculty meetings with teachers and administration brainstorming ideas, discussing findings and planning future measures (see Appendix B).

Results

Results were primarily collated from the following: student questionnaires, written paragraph responses, faculty questionnaires and written responses.

Student responses, questionnaires and paragraphs

A total of 35 students offered responses to the pilot study. This represents 61% of the total number of students who were involved in the study. From this group, the following results are collated and evaluated.

Most students (97%) felt positive about their learning progress, stating comments such as,
"I feel I have learned a lot about my subject and I think my project went very well"
"Really good because I learned things."
These students were able to pinpoint actual achievements, things they had learnt, stating things like,
"How to make moviemaker." (Actual technical skills)
"How to find stuff on my own." (Independence for research)
"I've learned a lot more about my subject." (Content and facts)
"That it is not hard to achieve your dream." (Confidence to take on a challenge)
"That I am good with my hands." (Positive personal qualities, self perception)

The majority of the students felt they had a better understanding of their learning preferences and could apply this knowledge in other areas of the curriculum. All but one student felt their research skills had improved. Ranked in order of skill improvement, the students felt they had improved most in the area of locating and searching for information, followed by improvement in time management skills and then organizational skills. Most students (77%) felt that involvement in the project had given them motivation to complete work on time and generally study. One student felt he or she already had the motivation and another specified it had helped in History. Interestingly students ranked the following as important factors for their progress of their independent learning projects:

- Freedom to manage my own learning
- Freedom to make mistakes and learn from this
- Structured time management
- Access to computer and printer
- Freedom to access the library resources
- Structured accountability

Self pride. A majority of students (86%) felt proud of their efforts and enjoyed personal achievements, however small, stating they felt proud because…
"That I got it done."
"I feel super proud of my effort mainly because I learned new things."
"It was so cool to understand my topic better."
"Because I know I did a good job."
"Getting to do a little better on home work."
"Doing better in algebra class."
Those students who did not feel proud declined to elaborate. One stated, "I did not have enough time to do a good job."
In terms of the whole project, the sense freedom and self management, students made the following statements,
"It has taught me to be more independent."
"It made me feel more independent."
"I learned more on my own."
"It makes me feel good about myself."
"It allows you to take your time to make a good presentation."
"Yes because you don't have to depend on others."

“If you’re not organized how can you find your stuff?”

The majority felt they would change various things the next time they undertook an independent learning unit and 86% felt their parents were happy with their progress and their learning. One student stated, “They are very surprised that I actually got something done myself.” One student demonstrated disinterest and a nonplussed attitude to the project for each question, stating that his parents didn’t think anything about his progress because, “They don’t really know much about it. I don’t really tell my parents about this stuff”. Yet all 15 students in the first group stated they would like to undertake another independent learning unit. As well as this, 14 out of the 15 were ready with another topic such as, “Egyptian mythology”, “animals or something about history, because these two things interest me” and “another singer, I love music so that’s why”. Of the second group, 19 out of the 20 students who responded also indicated a desire to undertake another ILCP.

Faculty questionnaires and faculty written responses (n= 7)

Faculty was also asked for feedback concerning a number of areas. Some examples follow:

- What were your impressions about the learning projects given your knowledge of the participants?

“The product the students delivered was above the level that I would have expected. The students definitely seemed to go the extra step with the projects-being able to choose the subject seems to have made the difference.”

- What value does the "Learning Project" hold given the directives issued from the Virginia State Board of Education?

“Knowledge without meaning is just trivia….Meaningful learning is the crux of all a teacher tries to do - this is a perfect example of students learning presentation skills in a very enjoyable format.”

> The value of the Learning project and its connection to the Virginia State Board of Education Standards assures that we will follow good curriculum. The students will be covering the essential knowledge and be prepared for the test and the rest of their time in high school and beyond.

“Today’s learner must learn to research, collaborate and present ideas and this project allows the students to engage in all these areas.”

- What potential do you envision given the feedback from students and their experience and could the program be expanded given the parameters of our structure/grade level?

> The potential of the program is limitless. The students shared that they did not interact with Australia very often. This could become a bigger piece of the project where both countries compared and contrasted a component of daily life. A paper could be co-authored by a student from the USA and one from Australia.

"The program has potential to become an integral component of student learning – allowing autonomy within student learning is a sure way of 'hooking' a student."

> I think the students will share their desire to learn in this way with other students and others will also want this opportunity. I also believe that the students enrolled in this class would like to continue a project if given the chance.

- Would you like to offer the program again? If so, what change would you make?

> Absolutely! I would love for the program to be offered each year in some form or fashion. Becoming an expert in something at a young age can develop many strong qualities in our youth. If time permitted, job shadowing, outside trips, and classroom speakers would be beneficial additions.
> I think the program should definitely be offered again. It is a great example of differentiation - adults have opportunities to scaffold the learning for students who need that and provide opportunities for the ones who need less help to move on. On presentation day, I saw students who had great difficulty last year giving attention to anything academic, proudly stand before the group and share PowerPoints and demonstrations. What a powerful process for all the students to experience!

Discussion

Self-Efficacy

Goleman (1997) says, Self-efficacy is the belief that one has mastery over the events of one's life and can meet challenges as they come up. Developing a competency of any kind strengthens the sense of self-efficacy, making a person more willing to take risks and seek out more demanding challenges (pgs. 89-90).
Interestingly students ranked the following as the most important factors for their progress of their independent learning projects:

- Freedom to manage my own learning
- Freedom to make mistakes and learn from this

As one teacher observed,

> Once students find out that they can make their own decisions, it is almost like a sigh of relief. I've seen them begin to sort decisions. For example, in one project, a student had picked out some hard rock music, very upbeat, and optimistic, however, he realized that the music would overshadow his project and what he wanted to really say.
> I know this wasn't a major decision – but he was processing information and deciding for himself. He made the right decision, for that situation, but more importantly he found out that he could make right decisions on his own.

Students want to rise to the challenge of learning and realize that they can achieve and they want to achieve. When asked, "How do you feel about your progress this semester in the ILC?" One student replied, "It made me feel like I can control my destiny." Another said, "I feel good about my progress. I got to work at my own pace and I got everything done."

Students expressed the feeling of enjoyment: (Wlodkowski, 1986) posited that the strongest motivation for learning occurs when adults successfully learned what they value, and wanted to learn in an enjoyable manner. Each student gave a successful presentation that demonstrated knowledge and understanding of their subject. One child wrote, "Learning is fun!" It would seem that children are strongly motivated similarly as adults. Many students enjoyed the entire process. Some expressed their desire for a little more teacher direction with the freedom associated with this method of presentation. "I sort of enjoyed the freedom, but I'm one of those people who likes structure." Another wrote, "My subject was easy but it took a little time to get used to it." This supports the notion that students are not used to making their own learning decisions in school and some find it difficult to learn in this way. This was difficult for teachers too, as one teacher stated,

> As a teacher, it takes a lot of patience and skill to step back. The instructors that were chosen for this project have been very willing to allow the students to explore and discover. What a fantastic way to teach!

The pressure to remain in control of the class and curriculum was replaced with a collegial approach to student learning. Faculty serves as facilitator and mentor; no longer expert. As a student need arose, teachers provided instruction or scheduled time with another instructor to fill the need. For example, all students learned how to use Power Point, Word, Movie-maker and Snag-it. Students were allowed to schedule time to meet with instructors privately to get specific instruction like adding music or voice to their presentation and get any additional help that the student felt was necessary. The concept of the teacher being the primary bearer of all knowledge changed to that of motivator, inspiring and suggesting ideas to students as they explored their topic of interest. As stated by teachers,

> We were all learning to use new software …(I) allow my students to 'teach me' sometimes" and "ILC projects enable teachers and students to work side by side and put the teacher in a position of facilitator with the students creating their own ideas and research techniques.

Relationships between the teacher and student realized new potentials, as did relationships between students. As observed by a teacher, "Students are teaching other students when there is a need. I saw real collaboration. In the presentation portion of the class, classmates are really listening to the presentations and asking thoughtful questions of the presenters."

Students need a supportive framework of curriculum structure and human resources to enable them to achieve their goals in life. This is a factor supporting the inclusion of parents in the learning process and other faculty specialists in a school. This engenders concept of the school as a 'learning community', a holistic nurturing environment that has the student at the centre of the teaching and learning. The ILCP places the student at the centre of the learning and so shifts the focus from the constraints of the curriculum to the teaching of the child.
As one teacher stated,

> Each project focused on the student's interest, therefore curriculum is not a limit, as it sometimes becomes in other classes. For example, in the ILC classes the students have presented projects on Greek gods, Oceanography, Classic Cars and Bible History. (What a span of ideas!) Also, students have designed technology for the future (some of which I wish was in place now) and they have designed art caricatures based on their interests. (Some students

became aware that they loved art – others found out that art wasn't for them…but at least they were allowed the experience!).

Another teacher found, "I have realized how individual these kids really are. They have researched some very interesting topics and have truly blown away with their projects."
Students were expected to present their completed projects to a panel of educators to enable discussion and a further evaluation of their learning journey.
Each day, students worked through guided activities to help them along the path.

"Students are being allowed to follow their calling and having it valued. They feel like partners in their education not recipients."

Learning styles

Absorbing information presented in class quickly is a premium in K-12 classrooms. However, not all students learn the same way. Students spent time learning about their own style and how to capitalize on this information. Students wrote, "I learned how to study" and that knowing how to study using their learning style helped,
"Raise my Algebra grades 10 points."
"It has helped me with history. History is hard anyway."
"I have learned how to take notes."
"I am using my learning styles in my other classes."

Technology

Differences in systems created opportunities to change paradigms and methodology. The LAMS platform may work very well in some schools, however in this instance, strict filters on school networks for student protection hamper the smooth running of the LAMS technology which necessitated an FTP site to send data quickly and share projects. Additionally, PCHS purchased Blackboard, a more robust version of LAMS. Collaborative endeavours utilizing Blackboard and LAMS are being explored. It should be noted that the LAMS system works very well in other locations and systems and may continue to provide adequate service with technical adjustments.

Time considerations

Time proved another area of concern. Australia is 14 to15 hours ahead of the Eastern Standard/Daylight Time zone. Additionally, school calendar holidays are very different. CLC calendar year runs February through November while PCHS begins in August and ends in May. Students learned the implications of dealing with time differences and different holiday/breaks to develop patience. As a sidebar, students learned about different national holidays, seasons, and implications with the 24 hour day. Each provided a learning opportunity and the necessity to wait for responses. Faculty found natural opportunity to discuss cultural differences, implications of earth science and emotional necessities to reassure students that their messages would be answered.

Implications

The implications are obvious for world wide collaboration providing password protected secure connections to allow students to collaborate on projects of interest. Whether the ILCP was delivered from LAMS or Blackboard or any other platform makes no

difference. The main point of the international collaboration was to engender confidence and personal achievement for our students. The majority of students gained confidence and had some personal achievement no matter how small or grand. Small steps lead to longer journeys, lifelong journeys. As one teacher stated,

> Many of the students have concentrated on topics that they naturally have an interest in and have discovered careers that apply. By researching what it would take to get those types of jobs, they have learned what they need to do to make it happen.

Students rarely have the opportunity to develop personal relationships with people in other countries. The collaboration gave a name, face and personal resource to Australia, not just for the students but also for the teachers and IT staff. Collaboration between Australian and American teaching staff and IT specialists also took place, developing a supporting, reflective, international network of educators. This led to a sharing of learning resources: intellectual, video (students in action, teachers in action) resources, web-based resources, human resources and ICT resources, during a period of approximately one year.

Imagine if this same kind of collaboration could take place with people in Iran, Pakistan, China, India, Saudi Arabia and Russia. How would this impact world relations, peacemaking and military interaction? Would it facilitate all countries to move along from "me first" to what is in the best interest of all? When people develop friendships, they want the best for their friends and themselves. People also are generally willing to give to their friends, think the best and act accordingly. Teachers have the opportunity to create goodwill where governments have failed through programs like this one. What a world it could be!

Conclusions

As stated on SKYPE late one evening in Australia and early one morning USA (Meyer, personal communication, August 29, 2008), "We are all singing from the same choir book." This conjured a delightful visual.

The purpose of this project was to explore the impact of international collaboration, utilization of technology and the Independent Learning Centre Program on student confidence and personal achievement. There is absolutely no doubt that this program was embraced by faculty on both sides of the Pacific. It has been an exciting and positive learning journey for both teachers and students. The faculty are passionate about improving the teaching and learning for students to enable them to meet the needs of the 21st Century is clearly a high priority.

The majority of students enjoyed their learning and felt a degree of confidence in self for a variety of reasons. The majority also felt they had personally achieved a skill, a new way of approaching research, a new way of understanding themselves as a learner or an improvement in their knowledge of a particular topic of interest. Some just learnt new facts about a subject area. Some felt they had transferred skills and knowledge into another subject area. But by far the most important responses ranked first and second by students, were 'the freedom to manage my own learning', followed by 'the freedom to make mistakes and learn from this'. Students felt that these were the most important factors for their progress of their independent learning projects. This response was a surprise because it indicates that students need to be trusted to think for themselves and feel more responsible and involved in

structuring their own learning path in life. These statements indicate the need for faculty to provide more independent learning experiences for students.

At PCHS the program has been expanded this year. Students participate in the project with teachers in different areas of expertise: careers, innovations and invention and art. The concept remains the same but students received varying instruction depending on the teacher's expertise. Next year, the program will move to non-core area health classes in Grade 8 and 9. Students will be required to present research, create a visual and a paper. Further developments and integration of ICT developments and with the LAMS program and Blackboard will take place enabling a less frustrating delivery and communication method so that academic collaboration between students is supported fully by the technology. Ideas have been presented for further student international collaboration. These could be developed with the knowledge we have all gained from this project.

Appreciation of Collaboration

I would like to thank the administration, teaching and IT staff of Patrick County High School for being brave enough to trust their students and embark on this project with us at Concordia Lutheran College in such an enthusiastic way. This is shown below by the extensive list of all Patrick County High School faculty members who were willing to be involved in this project to make it work:
Ann Taylor
Bill Clement
Susan Service
Paula Reynolds
Debra Quesenberry
Dr. Roger Morris
Dr. Karen Wood
E.G. Bradshaw
Tammy Waldron
Pepper Martin (former employee)
Anita Bailey
Joshua Lilley
Michael Marshall
Linda Maxie
Donna Meyer
(Peter Kellett, Lutheran Education Queensland and Patricia Carmichael, Concordia Lutheran College)

APPENDIX A

Student responses and questionnaire (these questionnaires were also utilised in other studies at Concordia Lutheran College regarding the ILCP (Carmichael 2008).

Student progress in the Independent Learning Centre.

1. How do you feel about your progress this semester in the ILC?
.....
.....
.....

2. What have you achieved/ learnt in the sense of your own known learning?
.....
.....
.....

3. Did you gain a better understanding of what kind of a learner you are through your time spent in the ILC? ..... Yes/No

4. Have you used your knowledge of your Personal Learning Style to frame your independent Learning Unit? Yes/No

5. Have you used this knowledge to help your study practice? Yes/No

6. Have you enjoyed learning about how you learn? Yes/No

7. Did you find this knowledge of any advantage at all in the ILC? Yes/No

8. Which of the following programs/equipment have you learnt to use?

❒	Word	❒	Citation 4	❒	Moviemaker
❒	PowerPoint	❒	Publisher	❒	Inspiration
❒	Excel				
❒	Scanner				
❒	Other				
	.....				

9. Do you feel your research skills are now better?

❒ Yes
❒ No

10. If you have answered Yes to question 9, please indicate which skills you think have improved (you may select more than 1 option).

- ❒ school library resources, books, magazines, videos
- ❒ use of school library catalogue,
- ❒ use of databases I can access at school and from home
- ❒ how to set out a bibliography
- ❒ improvement of organizational skills
- ❒ improvement of time management skills

❒ other .....
.....

11. Have you been able to undertake a study/research subject that you could not undertake through the curriculum?

❒ Yes
❒ No
Explain .....
.....
.....

12. Do you feel that you have learnt information and facts about your research area that you didn't know before?

❒ Yes
❒ No
Explain .....
.....
.....

13. Has time spent in the ILC provided motivation to study, complete work on time, complete assignments and homework?

❒ Yes
❒ No
Explain .....
.....
.....

14. Which of the following that are available in the ILC, would you rate as important factors for the progress of your research and study unit? Rate them 1-8.
1 = most important, 9 = least important.

____ access to computers and printer
____ access to scanner
____ space to research and use computers
____ view DVD's Videos, access to books, library computers
____ structured time management
____ structured accountability (recording of work completed log books)
____ freedom to manage my own learning
____ freedom to make mistakes and learn from this
____ freedom to access the Library and all its resources, e.g., AV room to

15. Do you feel proud of your efforts in the ILC?

❒ Yes
❒ No
Explain .....

.....
.....
16. What personal achievements have you enjoyed from this learning experience?

.....
.....
17. How has the freedom to manage your own learning affected you?

.....
.....
18. Do you think the power to organize and manage your own learning is important? Why and explain.

.....
.....
.....

19. What do your parents think about your progress on this research project?

.....
.....
.....

20. Would you like to work in the ILC again if you had the chance?

❒ Yes
❒ No

Explain .....
.....
.....
21. Has your work in the ILC assisted you in any of your other subjects?

❒ Yes
❒ No

Explain .....
.....
.....

APPENDIX A

Student responses

Students were also asked to respond to the following questions:

1. Looking back on your presentation, if you could do it again what would you change?
2. If so, what would you change?
3. What would you like to learn next?

APPENDIX B

Faculty questionnaire

Independent Learning Centre (ILC): Teacher questionnaire.

1. In your usual teaching area, do you need to plan student research tasks that account for different learning styles? Yes/No

2. If you have answered 'yes' for question 1, which of the following strategies have you used that account for different learning styles?

   - ❒ Freedom for students to choose the topic.
   - ❒ Freedom for students to choose their mode of presentation.
   - ❒ Freedom for students to work in groups.
   - ❒ other .....
     .....

3. When embarking on student research tasks, which of the following strategies do you follow?

   - ❒ Check the library catalogue for available resources before setting the task.
   - ❒ Bring students to the library.
   - ❒ Teach cooperatively with the Teacher librarian.
   - ❒ Teach and encourage students to use the catalogue to find resources.
   - ❒ Teach and encourage students to use online databases to find information.
   - ❒ Teach and encourage students to use encyclopaedias
   - ❒ Teach and encourage the use of Citation 4 for bibliographies.
   - ❒ Encourage students to access SCHOOL Library Resources site from home.
   - ❒ Encourage students to use the City library.
   - ❒ other .....
     .....

4. Do you use any of the following strategies either in classroom practice or research tasks to help your students learn? (Please tick the box if you use that strategy).

   - ❒ Mind maps and/or concept maps.
   - ❒ 'Inspiration', the concept mapping program.
   - ❒ Knowledge tables (where students list in tables 'what they know' and 'what they need to know').
   - ❒ Comparative tables (Venn diagrams)
   - ❒ Time management strategies.
   - ❒ Note taking strategies.
   - ❒ Organizational strategies.
   - ❒ Self evaluation strategies.
   - ❒ Strategies to improve their skills in analysis and synthesis.

5. If you teach students strategies for improving their skills in analysis and synthesis, could you please provide a recent example?

.....
.....

6. How do you take into account different learning styles in your usual classroom practice? Can you provide an example of how you do this?

.....
.....
.....
.....

7. Have you been an ILC coach? Yes/No

8. What do you believe are the advantages for students when they study an Independent Learning Unit (ILU)?

.....
.....
.....

9. What do you believe are the disadvantages for students when they study an Independent Learning Unit (ILU)?

.....
.....
.....

10. What have you gained from this experience?

.....
.....
.....

11. Have you transferred any of the knowledge taught in the ILC to your own curriculum area? Yes/No

Please elaborate:.....
.....
.....
.....

12. What advice would you give to teachers who plan to teach in the ILC?

.....
.....

Student transfer of skills (continued)

13. Do you believe/ perceive that the students who have undertaken an ILU have shown improvement in other areas of their studies? Yes/No
14. If you have answered 'Yes' above, please indicate those areas where you believe this transfer of skills has occurred.

- ❒ Students are now using mind maps automatically to organize their research headings.
- ❒ Students are using Citation 4 for their bibliographies.
- ❒ Students appear to be more aware of time management practices.
- ❒ Students are organizing information in more appropriate ways, e.g. under headings in research journals.
- ❒ Students appear to be more knowledgeable or confident in their ability to use library resources.
- ❒ Students appear to be more aware of their learning style.
- ❒ Students try to apply this knowledge in class when undertaking research activities.
- ❒ Other…….

15. Do you believe the teaching and learning that happens in the ILC has had any impact on the teaching and learning that happens in the rest of the curriculum?

Yes/No

16. If you have answered 'Yes' above please explain where and how?

.....
.....
.....

17. Do you think the ILC has made any difference in regard to student learning?

Yes/No

18. If you have answered 'Yes' above please explain what exactly?

.....
.....

APPENDIX B

Faculty responses

Faculty were asked to write responsive paragraphs on the following headings after the first group (N=15) grade 8 students completed an independent learning project:

1. What were your impressions about the learning projects given your knowledge of the participants?
2. What value does the "Learning project" hold given the directives issued from the Virginia State board of Education?
3. What potential do you envision given the feedback from students and their experience?
4. Would you like to offer the program again? If so what change would you make?
5. How can we increase international collaboration among high school students?
6. Could the program be expanded given the parameters of our structure and grade level? How?

Faculty second level responses

Faculty were asked to write written responsive paragraphs under the following headings on the completion of the independent learning project by the second group of students (N=57).
How has the ILC project and the pedagogical program supported the focus of promoting positive learning outcomes for students?

- Across the curriculum
- Teacher student relationships
- Lifelong learning
- Future employment prospects
- The learner being central to the school and the work of the teacher

How have you contributed to the IL project development?
Have you enjoyed this teaching experience?
Other positive outcomes.

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Statement of Originality

This statement certifies that the paper above is based upon original research undertaken by the author and that the paper was conceived and written by the author(s) alone and has not been published elsewhere. All information and ideas from others is referenced.