Collaborative curriculum mapping: The development of a culture of collaboration among educators through team lesson mapping and syllabi construction

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ABSTRACT

Collaborative mapping of lessons helped create a culture of collaboration among educators at an educational institution in the Philippines. This qualitative study investigated the reactions of teachers that performed individual lesson mapping as their regular approach to curriculum development. A series of workshops facilitated by the author and participated in by respondent educators were held to observe the effects of team lesson mapping and syllabus building. The highly consultative nature of lesson mapping and syllabi-building among the respondent educators during the workshops created a firm culture of collaboration. Curriculum quality was included in the efforts to build a collaborative culture of lesson mapping. The maps were integrated and coordinated. Active conversations and team writing on concept coverage among the grade levels effected coordination by the teachers during the lesson mapping.

Key words: Integration, competencies, curriculum, collaboration, lesson mapping.

INTRODUCTION

The advent of changes in school systems that swept the whole world's community of learning continues to show that the dynamics of school operations and management are not linear in nature. Nothing in the running of a school is a straight road. "We live both in a world of either/or but in the dawning of both/and" (Garmston and Wellman, 1999). Adaptivity is a major key to success of schools grounded on nonlinear relationships.

This article looks into the importance of the development of a collaborative culture, particularly in the creation of learning maps as the stepping stone into the building of an adaptive and "purposeful curriculum" (Garner 2007) for basic and college education. Curriculum building is a continuous process. A school that grows with and adapts to the constantly changing times looks into the improvement of its curriculum as one of its success habits. Teachers’ manuals with answers for textbooks in use neither constitute the totality of a school or college’s curriculum, nor do the lists of courses to a degree offered by an educational institution. When learning competencies are integrated, learning is firmer, and better self-directed among the students. Integrating the curriculum has three approaches and these are subject-focused integration, theme-focused integration and project-focused integration (Glatthorn and Jailall, 2009).

Background study

Richly talked about of 21st century education is the aspect of collaboration. Real world problems require interdisciplinary solutions. In real life, many problems cannot be blocked into separate sections. Many problems are interrelated. Likewise, problem solving needs collaboration among problem-solvers. In an educational institution, it would make sense that a culture of collaboration would allow interdisciplinary problem solving through shared lesson mapping and syllabus construction. From these efforts, students could benefit and also learn about the importance of collaborative problem solving.

The role of collaboration in creating quality lesson
planners is a rich pathway into curriculum quality. Collaborative planning "makes huge sense because they can better differentiate to meet the needs of the class" (Harvey and Harvey, 2009). Curriculum substance needs to be integrated but also coordinated. One of the dangers of integration is superficiality. If substance coverage is well structured and coordinated, quality learning is achievable besides being deeper. Learning objectives can be limited in number that allows for mastery of the essentials. Trying to cover too many could end up sacrificing learning. Students might not even recall what was learned because of the chaotic weaving of the essentials. In 21st century learning, real life applications are crucial. Sequencing of learning is another important consideration when planning a curriculum. The meanings learned in a semester of studies can serve as bridges or transitions into the next semester.

Integrating the curriculum has three major approaches according to Glatthorn and Jailall (2009) and these are; subject-focused integration, theme-focused integration, and project-focused integration. These approaches call for collaborative interdisciplinary actions. Curriculum development by interdisciplinary collaboration could be the key to successful mapping of learning. School heads play an important role in establishing a spirit of collaboration among its professional practitioners. To achieve consensus according to Wiles (2009), a team works on the curriculum that should lead into school improvement. A leader who knows about curriculum development facilitates the desired improvement. "The school curriculum team is a vehicle for reaching all members of the school community in curriculum development" (Wiles, 2009).

Collaboration is a community culture that needs to be modeled by school leaders. Garmston and Wellman (1999) emphasized how adaptive schools are a product of collaboration, that leaders in such schools show the importance of the values they believe in, that they can see the whole environment and avenues of learning. Comprehension and collaboration go hand in hand through small-group inquiry (Harvey and Daniels, 2009). As Wiles (2009) stated, "the school curriculum team is a vehicle for reaching all members of the school community in curriculum development." The team approach to curriculum planning meets the various learning styles of students. It is almost like saying heterogeneity meets heterogeneity. Teaming up for curriculum mapping is made possible by good communication among the members of the professional community.

Research focus

The focus of this research study states: It is possible to develop a culture of collaboration through shared lesson mapping and syllabus building in a textbook-based, Internet resource-based educational institution. This focus is borne on the background information that teaming is an important approach to curriculum development. In an environment where individual lesson planning is the standard and that most of the teaching strategy is textbook-based, a change could be geared into developing a culture of collaboration in lesson mapping and syllabus building.

MATERIALS AND METHODS

The three approaches to collecting data were the interviews, conversations and the more formal questionnaire. The interviews were conducted in less formal environments such as in the faculty room or during break times from work. Interviews of respondents were conducted using the questions in the interview sheet (see Appendix 1). Several of the questions were similar to the questionnaire proper but the interviews offered the element of personalization and a certain level of familiarity. The conversations were integrated mostly during the interviews. The more informal conversations were during lunch breaks and breaks from active teaching sessions.

Collaboration is a critical element in a learning environment (Murphy, 2002). It is the duty of the institution’s head to establish an environment where “working together in a cooperative manner” (Glatthorn and Jailall, 2009) is the key to every successful day at work. In this study, the author who also posed as the interviewer was able to establish a level of confidence that allowed more personalized responses. Although the responses came out similar to the responses in the questionnaire, still the face-to-face interaction offered more connectivity between the interviewer and the respondents. The validity of the responses was balanced through the interviews, the conversations, and the questionnaire. Harvey and Harvey (2009) and also Harvey and Daniels (2009) saw the importance of teamwork in reaching the whole community of learning platform designers.

The questionnaire created for this study included basic information about the respondents such as age and occupational position in the educational field. The intention built into the questions following the basic information queries intended to look into how the respondents would work as teams in contrast to singular or individual lesson planning. The responses toward collaboration in lesson mapping activities and syllabi building were gathered through the questionnaire. The transcript of responses is summarized in the next section.

Statement of hypothesis

Hypothesis: There is no significant difference on how the three (3) groups of respondents (elementary, high school and college teachers) perceive collaborative curriculum mapping and individual mapping.

RESULTS AND DISCUSSION

The results of this study are presented as transcripts of
responses. The discussion is divided into subsections to show the relationships of data gathered. A simple t-test of significance was employed to investigate any difference in the perception among the three groups of respondents of collaborative lesson mapping and syllabus building.

Respondents’ age

Respondents’ age range was from 22 to 61 years. The average age based on the information revealed by responses was 31. The median was 29. Only one respondent was a senior citizen with the age of 61. During the workshop, there was one other non-millennial in the late 50’s but there was no such age included in the written responses. Majority of respondents was millennial. The millennial age range was also confirmed during the interviews, conversations and especially during the workshops.

All respondents were teachers or instructors. Three specified being college instructors. The rest mentioned in the interviews and conversations revealed that they taught high school as well as college. Seven (7) teachers taught in the Kindergarten up to the elementary grade levels.

Occupational position or title

From positions revealed there were two jobs connected with administration and the rest of respondents were teachers of elementary school, junior high school, senior high school or college. Data from conversations revealed that those with administration also taught a few subjects.

Highest educational attainment

Three of the respondents were masters’ degree holders. This was about 17.6% of the whole population of respondents. One respondent was a masters’ degree candidate, and this was about six percent (6%) of the population of respondents. Based on the response given, the senior citizen held several degrees including a Doctor of Philosophy, a Masters in Divinity and a Human Resource Management degree. The rest of the respondents, about 70.8%, were college graduates. The population of college graduates was evident to the majority being millennial in the total number of respondents.

As to government eligibility, one respondent held a civil service card. This was percent (6%) of the total population of respondents. About 24% of respondents revealed having the government regulation identification card for teachers that passed the licensure examination for teachers. One respondent was still due to take the exam and revealed having no eligibility except for having finished a college degree.

Class textbook teaching

As regards question on the use of only the class textbook for teaching, 11.76% responded in the affirmative. Another six percent (6%) responded in the affirmative but limited only to the seventh up to tenth grade. In the negative was 52.9%, and another six percent (6%) in the negative only for the Senior High School.

Those that responded in the negative explained that they use other resources. These included the Internet, YouTube, e-books, journals, and commentaries. According to the responses, these were availed from the local libraries, and from the school Internet. Google Chrome was the popular search engine used. The respondents further stated that they acquired their other resources from the universities in the city, and from electronically generated materials.

Sticking to the class textbook

For the few respondents that answered in the negative, their reason was the clarity of the textbook lessons. Part of their reason was the ready-made objectives in the textbook that they used for their lessons. Another reason presented was the ease from teaching with one reference only. These responses were followed by the replies to the question on course loads per day.

Course loads per class day

The Table 1 shows the course loads per day of the week. The numbers of responses are not equal for each day because according to the follow up conversations on these data, the respondents who handled less than four (4) loads per day or with only one (1) load every other day did not teach on certain days of the week.

Table 1 shows that the loads were regularly distributed every other day. The numbers of loads were the same for Monday, Wednesday and Friday. Tuesday and Thursday also showed the same load distribution. The average load for Monday, Wednesday, and Friday was seven (7). For Tuesday and Thursday, the average load was five (5).

Among the nine (9) respondents on Monday, Wednesday, and Friday, three handled eight (8) course loads. When a load held a session for 45 minutes, the teacher concerned taught for six (6) hours during such day. When a load held a session for one (1) hour, the teacher with eight (8) course loads for the day taught for eight (8) hours.

In relation to lesson planning, the question was asked whether the respondent teacher planned lessons for classes. Twenty-four percent (24%) responded in the affirmative and 18% in the negative. Twenty-nine (29%) percent stated that they planned their lessons individually. Six percent (6%) of the respondents answered “Not applicable” which could mean that lesson planning was not
applicable in the teaching style. Another respondent answered in the negative specifically for senior high school and college. Respondents in the negative presented their reasons. Among these were the following:

1. ...handling classes in the college department.
2. I usually use syllabus and it is also not my area of specialization.
3. I use the Integrated Lesson Map now.
4. I use the syllabus from the Internet.

These responses showed that teachers availed of ready-made syllabi available from the web. One admitted that syllabus building was not the respondent’s specialization.

Collaborative mapping experience

Forty-seven percent (47%) of respondents made a statement about their experience with collaborative mapping during the workshops conducted by the author or at another workshop venue. Out of the forty-seven percent (47%), about twelve percent (12%) stated that their first collaborative mapping experience was with the author. These respondents revealed that they enjoyed the collaborative nature of the workshop and would like to repeat the experience. This feedback agrees with Fogarty (2002) who stated, “systematic collaboration is the other critical element in the school’s culture”. An organized professional learning community serves as the interdisciplinary collaborators. Six percent (6%) of the respondents revealed having had a similar experience in 2015 at another institution. Another six percent (6%) responded in the negative.

The following were the reasons presented by the respondents that liked their experience with collaborative lesson mapping:

1. Yes because I’ve learned from it and my knowledge and skills have been enhanced.
2. Yes, because it enhanced my critical thinking skills.
3. Yes, because I have solicited good ideas from them.
4. Yes, the experience was enhancing, as old and tested adage should tell us that “two heads are better than one”.
5. It was fun because we shared ideas and it’s my first time to make our own learning map and first time to make lesson plan with proper guidance.

The following were the reasons presented by the respondents as to why they would like to repeat the experience.

1. Yes, because the activity makes me more knowledgeable and more equipped to prepare lessons for my students.
2. If I will be given a chance to repeat the experience I will definitely say “Yes” because it was such a nice experience.
3. Yes, so that I would be given proper guidance in teaching and also, it’s a great help for me.
4. I like to repeat if there’s a chance because I could feel the collaborative learning from the other teachers.
5. Yes, because we must update our mapping time to time, in order our mapping accepted by accreditors.
6. To learn more, to gather more ideas on how to become an effective educator.
7. Amazing experience and you can learn a lot.

The two sets of responses above focused mainly on the enhancement of learning from the experience, the sharing of ideas, and the importance of improving skills as an educator. Six percent (6%) of the responses mentioned the need to update the lesson maps, and the syllabi. The response regarding these aspects also mentioned that these steps are needed for the documents to be accepted by the school and college accreditors. These positive responses revealed that the teachers in the institution under study were ready to work collaboratively. This readiness also revealed that the teachers had the capacity to develop their capabilities as a team. They needed guidance and facilitation. Organizational and professional capacity development in this college went hand in hand through the series of workshops. First, it started with the individual followed by team work that enhanced the developmental capacity of the institution.

Adaptive schools have twin goals, namely; the development of both organizational capacities and professional capacities (Garmston and Wellman, 1999). The resulting collaborative atmosphere from the team mapping workshops launched the adaptive goal of the institution under study.

Table 1: Course loads per work day of the week.

<table>
<thead>
<tr>
<th>Days of the week</th>
<th>Range of loads per teacher</th>
<th>Average load per teacher</th>
<th>Median</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>1 to 8</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Tuesday</td>
<td>2 to 7</td>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Wednesday</td>
<td>1 to 8</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Thursday</td>
<td>2 to 7</td>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Friday</td>
<td>1 to 8</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

6. Yes, because there is unity, [happen], and the teachers be guided that (making) mapping must [be] in line with the vision and mission of the school.
7. I learned so much from that experience.
8. Very helpful and works for us teachers.

The following were the reasons presented by the respondents as to why they would like to repeat the experience.

1. Yes, because the activity makes me more knowledgeable and more equipped to prepare lessons for my students.
2. If I will be given a chance to repeat the experience I will definitely say “Yes” because it was such a nice experience.
3. Yes, so that I would be given proper guidance in teaching and also, it’s a great help for me.
4. I like to repeat if there’s a chance because I could feel the collaborative learning from the other teachers.
5. Yes, because we must update our mapping time to time, in order our mapping accepted by accreditors.
6. To learn more, to gather more ideas on how to become an effective educator.
7. Amazing experience and you can learn a lot.
To follow up on how the respondents would follow through on collaborative lesson mapping and syllabus building sessions, the question was asked as to how they would go about organizing the sessions at their work place. The following were the responses given:

1. Connect the different topics and relate to each other.
2. Arrange in line with the vision and mission of the institution where I work.
3. Arrange in line with the vision and mission of the college.
4. By selection of topics and choose according to the needs of the students.
5. My style is always based on outcome-based education [OBE],
6. Gather the concerned bodies and conduct a seminar.
7. Lesson mapping in line with the vision and mission
8. It's also my question to myself because it's hard to do the lesson mapping and teaching and studying at the same time. I have time during the night but sometimes, it is not enough. I have to sleep early because I have to go to school early.
9. By facilitating collaborative lesson mapping and encourage everyone to join. It must [be] in line with the vision and mission.

The above responses were for face-to-face follow-through sessions. The responses above show the common emphasis of the importance to focus on the vision and mission of the institution. This response reveals the same emphasis that the author explained, that the vision and mission of the Institution is the first guide to look into when building lesson plans and syllabi.

A question was also asked how the respondents might arrange for an online collaborative lesson mapping and syllabus building. Responses included the following:

1. Select the topics from online related to one’s lesson and add in the syllabus, I will arrange it for the benefit of the viewers.
2. I will encourage everyone online.
3. By coordinating, asking, and giving good suggestions.
4. I haven’t experienced this yet. I wish I could do it here ...with other teachers.
5. I have no idea. It's hard. It takes time to think.
6. Through email, communication.

The responses above mention similar essentials to consider during face-to-face collaboration. To establish online collaborative work, according to the responses enumerated above, needs pre-planning steps. The statement of Fogarty (2009) about systematic collaboration holds true from pre-planning to implementation, then to gathering feedback, even for online collaboration. The first response in the list above clearly states the importance of selecting the topics for consideration in the online collaboration. The third response emphasizes the need to coordinate first before going online. Email and communication are two essentials mentioned by the sixth response.

Respondents were asked to list down the benefits they have gained from their face-to-face collaborative lesson mapping and syllabus building experience. Listed are the following 17 responses, showing that all the respondents answered this question:

1. I’ll be guided by the objectives
2. I’ll be able to cover lessons with time duration,
3. You will be guided.
4. You will master your lesson.
5. To have excellent and perfect job
6. To have intimacy and close knit relationship
7. It’s enhancing for the participants.
8. Ideas are enriched.
9. Cooperation between teachers is developed.
10. Unity
11. Everyone understands each concept that is being incorporated.
12. Lesson is made fast and easy.
13. There’s a transfer of knowledge.
14. It can be guided by the making of syllabus, it can show your difficulties in making your lesson mapping
15. To be guided on everyday lesson, to make teaching easier.
16. You can achieve or do something together or with the help of other person.
17. You will have someone to assist you willingly and to build strong foundation of your friendship.

To verify further the responses in relation to individual lesson mapping and syllabus building, the question was asked as to what the benefits of these would be. The following 14 responses were given, another high response of about 82% out of the total population of respondents:

1. I learned many ideas and my objectives got corrected.
2. You can work independently.
3. Your work will be guided.
4. Challenging
5. To be more independent
6. It enhances your talent and capacities
7. It would teach us to work independently.
8. Your creativity world is tested to the fullest.
9. It would broaden your academic horizon.
10. Dependency to other people would be diminished.
11. You get to focus and not be dependent on anyone
12. I can’t think for some benefits...
13. Creating your own format, evaluate your work is being done
14. No collaboration, no proofreading from someone

During the collaborative mapping session, the lone senior citizen respondent worked individually on gadget at hand. A number of millennial attendees would visit and see this respondent's work progress. One of the later questions in the questionnaire asked how one might work with non-millennial or millennial professionals as the case would or might be. The question focused on the aspect of rapport
Building about 59% responded to this question and the responses are listed as:

1. I can share the ideas and new knowledge I’ve gained to make lesson planning easier.
2. I can build rapport with them by building respect and asking for their guidance knowing they have more experience.
3. It is a matter of exposing ourselves and being cheerful in dealing with them.
4. Well of course you will better understand the person because your age level is [could be] similar.
5. By engaging them in real life scenario to help /assist and challenge their understanding of the real life situation
6. I’ll let them give ideas so I’ll listen to their ideas
7. Need time for bonding, sharing
8. I will help them to catch up [with] the new trends/strategize as a millennial teacher and I will also take their advice as non-millennial
9. Be professional and polite, just be yourself, no need to pretend that you know even if you don’t know something

All the responses above emphasize the importance of respect, sharing of ideas and knowledge, and fellowship as members of the same team or working in the same workplace. Age disparity did not seem to pose any problem based on the responses as listed above. Collaboration is not hindered by gender- or age-related factors.

The next question asked about possible hindrances at the workplace, to practice collaborative lesson mapping. Ninety-four percent (94%) of the total respondents answered this question. The following were the responses:

1. Work load, school activities, holidays, time, resources
2. I prefer to work alone. I think I could accomplish more if I’m alone. Some people don’t come on appointed time, it bothers me a lot.
3. Different working styles
4. Time, work ethics
5. No experience
6. Insufficient knowledge
7. No cooperation
8. Time management
9. Each to his/her own
10. Lack of time due to workload
11. Illness, none,
12. Lack of awareness,
13. Inexperience
14. Not enough time to collaborate with co-teachers
15. Lack of references
16. …so much work...makes teachers exhausted.

Among the reasons with related data in the survey of responses was workload. The lack of time to team up was also mentioned which is related to workload. Ninety-four percent (94%) responded to the question on hindrance to collaboration, to explain briefly why it is challenged. Six percent (6%) responded preferring to work alone. One respondent commented that colleagues would come late, and that this behavior caused waste of time.

The author wanted to gather questions that the respondents might have wanted to be asked in the questionnaire. Only six percent (6%) responded with the following questions that were also answered:

Q: What is standard syllabi making as mandated by government accreditors?
A: I think there is but I haven’t seen it yet.

Q: What would be the sanction of instructors having no syllabus?
A: They should be encouraged to make one.

Q: If there are no textbooks, what could be our main source?
A: It’s up to the one making the syllabi to look for materials

The additional questions with answers provided are in line with the goal of collaborative work with colleagues. The last question in the questionnaire wanted to gather feedback on whether there were questions to address the workshops. The response declared that the workshops were well facilitated and that the objectives were clear.

Qualitative narrative analysis

At the Presbyterian Theological College (PTC) in Cantil-e, Dumaguete City, the author facilitated the creation of a template unique to the needs of the early childhood department, the elementary school, and the high school. Educators in these levels worked together and consulted each other as to how their templates might look like. These educators wanted their templates to be connected. Samples of templates from the author were adapted into collaborative products unique to each PTC basic education department up to junior or middle high school. The PTC templates have been named “Integrated Learning Maps” called ILM in short. The author consolidated all the proposed templates to standardize the ILM for Early Childhood, Elementary and Junior High School.

In another workshop, the author facilitated the construction of syllabi for senior high school and college. The proposed templates showed many similarities and the author consolidated into a template unique for the institution’s use in the senior high school and college departments.

The resulting templates are believed to render lesson mapping and implementation easier. The templates designed for the college were readily accepted by the respondents, and by the college administration. The templates are dynamic in nature and may change according to the evolving needs in the learning atmosphere of the college.
The Institution’s vision and mission as grounding factor

Any program, events or changes pursued by any section of the educational institution is grounded upon its vision and mission. Working with a community of professionals of any age and gender require that a common ground of agreement be first established. At the very start of a curriculum study session, the first few slides in the presentation need to display the vision and mission. These could also be posted on the walls of the conference room. The curriculum leader serves as a guide, a facilitator that can gel good relationships with the working committee (Wiles, 2009). Similarly, the curriculum facilitator helps the committee members to establish good rapport with each other. Rapport is a major key to help break down complex tasks into smaller tasks the expectations of which are put together into the desired results. Good coordination leads to productive collaboration.

Elements in the construction of the integrated learning map

The elements that constituted the integrated learning maps (ILM) as adapted by the workshop participants were similar. These elements included subject matter, objectives, learning activities, materials, values integration, references and resources, motivation, discussion, application, evaluation and assignment for the elementary school. The early childhood department came out with a simpler map that emphasized the learning activities and the application. In the high school group of designers, assessment was used instead of evaluation. Generalization and closure blocks were added. The high school group rubric included an open-ended section for topics that would require follow-up sessions. Figures 1 to 5 show the various ILM templates and the syllabus template.

Adaptive lesson maps

Charting learning makes it easier to navigate a teacher’s day. In a learner-centered institution, self-motivated teachers strive for quality learning. The efforts and outcomes are balanced through the adaptive characteristic of lesson maps. The ILMs are helpful at one glance and are user friendly. Innovative modifications and changes can easily be fed into the map. The various aspects of the
Learning session have interlinked blocks. These maps are adaptive in the sense that both the teacher and the students can input enrichment. The ILMs are integrated and interactive.
Subject matter was sometimes referred to as concept or topic, depending on the level of specificity. The templates are readily modifiable by placing a slash and adding the specific level desired. Learning objectives are also referred to as “desired outcomes” or “expected outcomes”. Learning objectives are built to mean action founded on the students’ understanding of the subject matter. The block labeled “materials” is open-ended. The teacher starts a list of items but students are free to add to the list according to their application theory. The teacher designs learning activities as suggestions. Students come up with their own activity designs according to their level of understanding and their learning styles. Some students come up with project ideas. The teacher’s list of references and resources would be a good starter list. Students that are technologically advanced usually find more resources and references besides the class textbook. Motivation items are hinged upon technology and the ability to access the appropriate images and reliable information from the web. Creative millennials teachers that sometimes use classical hand-printed materials still access the Internet for information.

Values integration can be enriched to become the learning-provocation factor in the exploration of a subject matter, concept or topic. Science and sociology areas explore current events that are usually rich with graphics. For a Christian school or college, certain aspects in the life of the Biblical King David, for example, could easily delve into the values of honesty, safety, and trustworthiness. Science experiments involving dangerous chemicals, for example, require students to go over the safety rules. In a sociological study on trash disposal and health measures that involve interviews of families in a certain community, students go over the values of good civic character. All these can go into the adaptive ILM.

In the actual usage of an ILM, whether in a classroom or the field, flexibility proves of good value. Teachers and students continue to access the web during field studies using their mobile Wi-Fi. Teachers can continue to enrich the ILMs as learning progresses. There would be opportunities for role reversal when the roles of teachers and students interchange. This is the amazing dynamic of a community of teachers and students that work together in the enrichment of knowledge, and perhaps at certain opportune times create new knowledge. The templates aid in the learning process, serve as guide, and can be adjusted as learning progresses. Adaptive ILMs are expected to gain many additional notes. At next use of the same ILM, there would be more adaptations and enrichment.

The syllabus template has blocks assigned for general information about the instructor, and the course description. The schedules of sessions and assignments are in rubric format. These could also be modified as simple lists depending on what the class and the instructor prefer. What is an easier way of viewing may differ from student to student or for instructors.

The template provides a standard narrative on course policies, evaluation, grading and other general items such as the marking system. The marking system being standard to the institution may not be adaptive but the assignments could be enhanced or varied according to the learning styles of the students.

**Statistical analysis**

The Tables 2 and 3 show the simple statistical analysis of data gathered. While all respondents agree, the stronger agreement came from the basic education teachers. The difference in the μ value between the high school and the elementary levels is .589285714. Between the elementary and the college levels, the μ value difference is 2.250 in favor of the former level. The difference between the college and the high school level μ value is 1.660714286 in favor of the high school level. The highest μ value was from the elementary. The population of respondents was also the highest from the elementary level.

Tables 2 and 3 show the respondents responses each with a column for interpretation. Data were subjected to a T-Test calculation of two (2) independent means.

Data were rounded to two (2) significant figures, as can be seen in Table 4. No rounding was employed during the calculation of the t and p values.

**Difference scores calculations:**

Treatment 1

N1: 3  
M1: 3.93  
SS1: 2.72  
$s^2_1 = SS_1/(N - 1) = 2.72/(3-1) = 1.36$

Treatment 2

N2: 3  
M2: 3.21  
SS2: 7.42  
$s^2_2 = SS_2/(N - 1) = 7.42/(3-1) = 3.71$

**T-value calculation:**

$s^2_p = ((df_1/(df_1 + df_2)) * s^2_1) + ((df_2/(df_1 + df_2)) * s^2_2) = ((2/4) * 1.36) + ((2/4) * 3.71) = 2.53$

$s^2_{M1} = s^2_p/N_1 = 2.53/3 = 0.84$  
$s^2_{M2} = s^2_p/N_2 = 2.53/3 = 0.84$

$t = (M_1 - M_2)/\sqrt{(s^2_{M1} + s^2_{M2})} = 0.71/\sqrt{1.69} = 0.55$

Significance Level: .05
Table 2: Collaborative curriculum mapping responses.

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Rating</th>
<th>Total f</th>
<th>Total fx</th>
<th>Mean</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>5</td>
<td>7</td>
<td>39</td>
<td>4.875</td>
<td>Totally agree</td>
</tr>
<tr>
<td>High School</td>
<td>4</td>
<td>6</td>
<td>30</td>
<td>4.2857</td>
<td>Totally agree</td>
</tr>
<tr>
<td>College</td>
<td>3</td>
<td>3</td>
<td>21</td>
<td>2.625</td>
<td>Agree</td>
</tr>
</tbody>
</table>

Legend:
1.79-1 totally disagree,
1.8-2.59 disagree,
2.6-3.39 agree,
3.4-4.19 agree,
4.2-5 totally agree.

Table 3: Individual curriculum mapping.

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Rating</th>
<th>Total f</th>
<th>Total fx</th>
<th>Mean</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Totally disagree</td>
</tr>
<tr>
<td>High School</td>
<td>4</td>
<td>5</td>
<td>29</td>
<td>4.142857143</td>
<td>Agree</td>
</tr>
<tr>
<td>College</td>
<td>3</td>
<td>7</td>
<td>36</td>
<td>4.5</td>
<td>Totally agree</td>
</tr>
</tbody>
</table>

Legend:
1.79-1 totally disagree,
1.8-2.59 disagree,
2.6-3.39 agree,
3.4-4.19 agree,
4.2-5 totally agree.

Table 4: Data rounded to two significant figures.

<table>
<thead>
<tr>
<th>Treatment 1 (x)</th>
<th>Diff (X-M)</th>
<th>Sq Diff (X-M)²</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.875</td>
<td>0.95</td>
<td>0.9</td>
</tr>
<tr>
<td>4.283</td>
<td>0.36</td>
<td>0.13</td>
</tr>
<tr>
<td>2.625</td>
<td>-1.30</td>
<td>1.70</td>
</tr>
<tr>
<td>M = 3.93</td>
<td></td>
<td>Ss = 2.72</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment 2 (x)</th>
<th>Diff (X-M)</th>
<th>Sq Diff (X-M)²</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5</td>
<td>1.29</td>
<td>1.65</td>
</tr>
<tr>
<td>4.142</td>
<td>0.93</td>
<td>0.86</td>
</tr>
<tr>
<td>1</td>
<td>-2.21</td>
<td>4.90</td>
</tr>
<tr>
<td>M = 3.21</td>
<td></td>
<td>Ss = 7.42</td>
</tr>
</tbody>
</table>

Two-tailed hypothesis.

Conclusion: The t-value is 0.54904. The p-value is .612184.

The result is not significant at p < .05.

The Null Hypothesis is accepted.

There is no significant difference in how the three (3) groups of respondents (elementary, high school and college teachers) perceive collaborative curriculum mapping and individual mapping.

RECOMMENDATIONS

1. More studies similar or improved from this one need to be conducted on a larger scale.
2. Collaborative curriculum mapping should be a creative and innovative practice in 21st century learning and beyond.
3. More systematic uses of internet-based resources should be made available to schools and colleges situated in off-
city grid locations.

Some final thoughts

Millennial professionals teaching millennial students constitute an amazing community of teachers and learners. Both learning community members are usually technologically advanced. They may not look rushed but they are capable of quick outputs. Both groups show similar habits in running discussions. With gadgets open in front of them, their preferred search engines constantly aid their interactions. Research is immediate and seems to be a constant in any class session. Instructors, facilitators and professors alike that are non-millennials but believe in the uniqueness of this group of learners succeed in learning with them.

Born after 1982, millennial professionals have been characterized as “the most watched over generation in memory” (Garner, 2007). Millennial professionals engaged as basic education teachers are a rich mine of collaboration.

REFERENCES


APPENDIX

Interview questions for conversations:

Q: Who selects the textbooks for your classes?
A:

Q: Do you recommend titles to your administration for acquisition?
A:

Q: Do you use the teachers’ manuals?
A: Yes: No:

Q: Is lecture your main approach to your teaching? If not, then what is/are your approach(es)? Please describe.
A:

Q: Do you do integration of lessons? How do you integrate your lessons? What subject areas do you integrate?
A:

Q: What type of lessons do you think need individualized planning only? Would you still do integration of subject areas?
A:

Q: How would you compare and contrast individualized lesson mapping for K to 10 to collaborative mapping?
A:

Q: Which do you prefer: individualized lesson mapping or collaborative mapping?
A:

Q: Why do you favor ___ individualized lesson mapping ____ collaborative mapping?
A:

Q: What factors usually hinder you from realizing your preference?

The development of a culture of collaboration among educators through team mapping of learning maps and syllabi construction

Alice Fe D. Laviña
Researcher

Respondents: Millennial professional practitioners in education and other fields of study

Dear Respondent:

Kindly respond to the following questions to the very best of your ability and beliefs. Respondents’ names will remain confidential. Responses will be analyzed for the sake of the study that this questionnaire is intended for.

Thank you for your kind cooperation.

THE QUESTIONNAIRE

The main objective of this questionnaire is to gather information on how team-based curriculum planning and development help create a culture of collaboration in a community of millennial educators.
Thank you for the information and perspective that you share freely towards the above objective.

Respondent’s name (optional): ____________________________________________

Age in years:
Occupation(s):
Position(s)/Title(s):
Highest educational attainment:
Check eligibility as applicable: Civil Service: PRC:

Do you only use the class textbook for teaching? Yes: No:

If No, please describe what other resources you use:
and where you acquire these other resources:

If Yes, please explain why you stick only to the textbook.

How many course loads do you handle each day?
Monday:
Tuesday:
Wednesday:
Thursday:
Friday:
Do you lesson plan for your classes? Yes: No:

If Yes: do you lesson plan by yourself individually? Yes: No:
If No: Please explain why not:

Have you experienced collaborative lesson mapping?

Yes:
No:

When did you experience this and with whom?

Did you like the experience? Yes: No: Please explain why if Yes or if No.

Would you repeat the experience, if you could? Yes: No. Please explain why if Yes or if No.

How will you arrange for a collaborative lesson mapping and/or syllabus building at your place of work?

How will you arrange for an online collaborative lesson mapping and/or syllabus building?

Name two (2) benefits from collaborative lesson mapping and syllabus building: Feel free to list more.

Name two (2) benefits from individual lesson mapping and syllabus building: Feel free to list more.

If you need or have to work with millennial professionals or non-millennial professionals, as the case may be, how can you help build rapport with these professionals?

Name actual hindrances that you experience at work that hinder collaborative curriculum work.

Do you have other questions that you may have wanted to be asked? Please list down with your answers.

Thank you for the valuable time and information you have shared.

Rest assured that your responses remain confidential. While results will be presented as summarized, your identity will remain confidential.

Thank you again and God bless.

Alice Fe D. Laviña, Ed.D., Ph.D.
Researcher