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First-Year Medical Students and Their Motivation to Study English

ABSTRACT

This research originated from challenges in teaching medical students in Japan. Expecting motivated students, I found similarities with other non-English majoring Japanese students: absenteeism and cases of low motivation. I administered a questionnaire to better understand whether these issues resulted from teaching practices or other factors, exploring the gap between my expectations and classroom reality. This research indicates a clear justification for incorporating English classes into the curriculum for first-year medical students at university level. The perceived needs of the students support this inclusion, and with suitable adjustments to the syllabus, a conducive and favorable learning environment can be established.

Keywords: motivation, medical students, questionnaire

INTRODUCTION

I have been teaching English to first-year medical students in Japan for fifteen years, and it has been a positive experience characterized by a range of student attitudes and enthusiasm towards English conversation classes. This corresponds with Winke's (2005, p. 2) observation. Rubin (1975, p. 42) stated, 'The good language learner is said to depend on at least three variables: aptitude, motivation and opportunity'. Some students enter the classroom with a palpable eagerness, approaching language acquisition as an exciting bridge to global medical interaction and an important tool for their career path. Conversely, in most classes, there may be a small number of students who lack motivation even though they have a higher English ability compared to other university students and are aware of the obvious benefits that it provides in a medical career.

Prior to having taught these medical students, I had my own preconceived notions about what awaited me in the classroom, namely extremely motivated and conscientious students. The medical students at any tertiary institution are of great importance, for status as well as the economic impact they have on the school, be it through tuition fees (tuition for public medical schools is about 500,000 yen (ca. US \$3,800) annually, whereas for private medical schools it is about 3–7 million yen (US \$23,000-\$54,000) annually, see Suzuki et al., 2023, p. 2) and/or family donations. This is certainly the case at the institution in which I have conducted this research. Medical students are extremely important, but in some cases, learning English is not a priority for them. A consensus emerged among English teachers at the university that, even though the medical majors are considered the brightest and best of the student cohort, paradoxically they also seem to be some of the least motivated. I soon discovered that some of these medical students had much in common with some other classes that did not major in English. That is, there were cases of absenteeism combined with insufficient motivation towards homework or classwork. This was surprising because failing a class in the first year of medical school resulted in re-taking the first-year again at obvious great expense. How could this apathy among some students be explained?

Over the years, I have tried various methods to understand the medical students' motivation regarding English and have adapted the classes for a more positive experience. First, I often used surveys or questionnaires to gather information about their background, interests, and attitude to studying English. These tools helped identify individual preferences and intrinsic motivations.

Second, observing the students in the classroom setting provided valuable insights into their engagement levels, participation, and reactions to different teaching activities. For example, using Kahoot! for quizzes was more popular than traditional handwritten quizzes, and enrolling students in Quizlet provided study cards for necessary vocabulary topics (hospital departments, medical equipment, speaking to patients, etc.) and gave easy access to weekly vocabulary. Also, finding which class topics were particularly popular for the students because of interest and the perceived benefit to themselves created better motivation in class.

Additionally, analyzing the academic performance and progress offered clues about the effectiveness of instructional methods and helped tailor approaches to meeting learners' needs. Pairwork, projects and group work also played a role in understanding motivation, as learners often drew inspiration and enthusiasm from their peers.

Finally, regular communication with the students created a supportive environment, allowing me to address concerns and adapt teaching strategies accordingly. For example, listening to concerns about their deadlines for important medical classes, homework and tests and then trying to set my class quizzes to a time when there wasn't a major medical exam, helped to create a more positive classroom atmosphere.

However, even with new adaptations to lessons every year to create a better student learning experience for the students, I wanted to try and get a deeper understanding of the reasons for different attitudes among the medical students in class and to appreciate why my preconceptions were so out of step with the classroom reality.

I set out to discover how to improve both the classroom atmosphere for the participants as a whole and learning outcomes for individual students. For the less enthusiastic students, I gave a more active role in class, sympathized with their high workload as medical students, so was flexible on deadlines and kept the classes active with various activities. The medical students appeared to be motivated to learn English for their career, but in reality, didn't put in as much effort when they were required to do so. Also, their general English ability was higher than other students in different departments. I speculated whether the medical students needed more or less class content tailored towards their major. Or perhaps they simply did not want to study medical English. The research detailed below is an effort to answer this conundrum.

METHODS

The survey consisted of multiple-choice questions regarding the students' motivation and enthusiasm towards English as a subject for medical students.

PARTICIPANTS

The sample included 50 students aged between 18 and 28. The majority were men (64%), and all the students had completed at least 12 years of education. The students were allocated for my classes by the university.

PROCEDURE

Two classes were involved (one in the first semester and one in the second semester). The students were invited to participate in a questionnaire at the beginning of the semester to assess their attitude towards English classes.

1. The Students

During their first year, the students take eight compulsory English classes, four in the first semester, and four in the second. After the first year, they are no longer required to take English classes. From a total of approximately 100 students in the first year of the medical program, the two classes surveyed

in this study consisted of 26 and 24 students each. Both classes were conversation classes, but the content was decided by myself. I focused on improving conversation ability and medical vocabulary that young doctors may encounter if treating an English speaker in Japan.

2. The Teacher

In total, I have worked at my current university for 8 years. During this time, I have taught medical students at least once a year at this institution, along with students from a wide range of other disciplines such as economics, sports and foreign languages. I tend to believe that student motivation is class-specific. Each class is different and the classroom atmosphere often depends on a few highly-motivated or highly-unmotivated students to set the tone for the whole class of 25-40 students.

3. The Questionnaire

I created a 13-question survey (labelled alphabetically from A to M) for the students to fill out on their first day of English classes, prior to having attended any English classes at the university at all. I hoped to tease out the students' feelings and perceptions before the influence of the teachers and their peers took hold.

The thirteen questions, listed in the Appendix along with the student's responses, were provided in English, along with a Japanese translation. Most of the questions required a rating. Generally, the questions were rated from 1 to 5, 1 being the lowest, or least favorable rating, and 5 being the highest, or most favorable rating for each particular question.

RESULTS AND ANALYSIS

Questions A, B, C, D, I and J in the survey all relate to the students' basic predisposition towards studying English and to the conversation class in particular. 34% of 50 students indicated that they did not like English, while 66% found it enjoyable. However, 45 out of 50 students deemed the class highly important, and 46 believed English was necessary for their future careers. These findings align with research from Tokyo Medical University emphasizing the recognition of the importance of medical English education. Kanazawa et al. (2006, p. 107) stated that students regarded medical English education as important and they want to study in university classes. The responses suggest a gap between the apparent importance students place on English and their actual attendance behavior. Out of 50 students, 68% expressed enthusiasm for speaking activities with high ratings, while 32% showed indifference or reluctance. Regarding making positive contributions in class, 82% responded affirmatively, but 18% indicated a likelihood of being less active contributors.

Question E focuses on the motivation for this particular class. In response to the question, about 80% of the students expressed positive sentiments, indicating a strong drive. However, a notable 20% gave a 3-rating or lower, suggesting uncertainty or potential lack of motivation.

Regarding studying, this was covered in Question F. While 54% of students expressed a strong commitment to regular study, evidenced by ratings of 4 or 5, 46% appeared non-committal, providing a rating of 3 or lower. This split indicates a potential divergence in students' dedication to consistent study habits, highlighting a need for strategies to foster widespread engagement and enthusiasm with those students who are less motivated in the class.

Regarding the question on aspiring to study medicine in an English-speaking country (Question G), 42% of students, specifically 21 out of 50, expressed a desire to pursue medical education abroad. This inclination suggests a substantial motivation among students to enhance their English proficiency, likely driven by aspirations to broaden their medical training, experience diverse medical practices, and immerse themselves in an English-speaking academic environment, showcasing a strong link between language proficiency and career goals in the medical field.

Question H looks into students' score expectations, revealing that 32% are content with a C or D grade (pass), showcasing varied academic goals. However, potential language nuances in the translation may

contribute to this result. In contrast, Question K gauges motivation, with 76% expressing high motivation for a good score.

While 74% of students initially expressed a preference for studying medical English (Question L), the subsequent query (Question M) revealed a contradiction, with 94% leaning towards daily conversational English. This inconsistency suggests a potential misunderstanding in the survey design or language nuances. A clearer formulation, such as directly asking students to choose between medical and conversational English, might have mitigated ambiguity.

CONCLUSION

Motivation is a problem for students in the classes detailed here. Despite positive intentions, class attendance was inconsistent, with 13.4% absenteeism and frequent lateness, notably higher than non-medical classes. There could be many reasons for this, ranging from a heavy class schedule in their first year, pressure from medical courses, and possibly too many other English courses in their first year (Ryan, 2009, p. 39). It is also possible that students were not getting enough conversational English in their classes, or not enough of what they had expected. Also, this divergence might be attributed to cultural differences in the perception of university education in Japan. In Japanese universities, the emphasis often extends beyond academic pursuits to encompass social development. Engaging in club activities is highly valued, viewed as essential for acquiring and practicing skills crucial for both university life and future careers. In this context, regular classes may not be perceived as the primary focus. The apparent lack of enthusiasm might be a cultural nuance, possibly misunderstood by myself who might interpret it as a disinterest in studying. Recognizing and bridging this cultural gap could be essential for a more accurate understanding of student motivation and engagement in the academic setting.

Although there were issues with motivation in some aspects, students clearly stated in the questionnaire that they had a positive attitude towards contributing in class and towards speaking activities (Questions I and J) and these attitudes were borne out by performance in class. Pair work and group work were very popular among the students in class. It provided them with active roles in their language development, allowed students to practice language skills in a supportive and interactive setting, fostered communication, critical thinking, and problem-solving abilities. Students appreciated the social aspect of working together that not only enhanced language proficiency but also created a positive and enjoyable learning experience for students. To build on this could be to use near-peer teaching. Two recent publications (Pinter et al., 2021, Hoshina et al., 2023, pp. 276–277) found that near-peer teaching in medical classes led to higher levels of “motivation, curiosity, initiative, self-efficacy and student development.” However, actions over the term, such as inconsistent completion of assigned homework by 30% of students, indicate a misalignment between professed motivation and actual behavior. External factors like exams in other classes or medical priorities may explain this, underscoring the need to explore the complexities of student motivation and performance beyond questionnaire responses. The discrepancy between stated goals and observed behaviors highlights the importance of nuanced assessment strategies and consideration of external factors influencing academic engagement.

Despite the mixed responses, it is evident that the majority of students favour incorporating some common medical themes into conversational English lessons. Aligning the curriculum with this preference could enhance student engagement, emphasizing the importance of adapting language education to students’ desires and expectations for a more effective and targeted learning experience. Also, I recommend that teachers who have medical students provide English courses that prioritize conversational English, especially in classes conducted by native speakers of the language. This supports Kanazawa et al. (2006, p. 83). However, the syllabus should include some medical aspects such as medical vocabulary (e.g., hospital departments, various

illnesses and their symptoms, etc.) and various questions that a doctor may ask a patient in certain scenarios.

In terms of future research, it is now necessary to ascertain whether students in the medical program have altered their expectations or motivation by the beginning of the second semester. The students may be over-taxed with so many English classes, especially so many in their first year of studies, and therefore might be even more disinclined to be as studious or motivated then. I will conduct a similar questionnaire at the commencement of the second semester to see if there are any differences or changes. I will look at the differences that the first and second semester results may imply and if there is any apparent increase or decrease in motivation by semester. Personally, my preconceptions about student motivation in English classes for medical students have changed. Initially attributing attendance issues solely to disinterest, I now recognize cultural nuances, especially heavy student schedules, and varied expectations as contributing factors. Furthermore, the distinct preference expressed by students for collaborative learning and the development of a syllabus tailored to their needs has significantly influenced my approach to teaching medical students.

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APPENDIX

Medical Questionnaire – Total Results for 1st and 2nd Semester

1 = lowest 5 = highest

A. Do you enjoy studying English? (英語の勉強を楽しんでいますか。)

1 (1) 2 (3) 3 (13) 4 (13) 5 (20)

B. Do you aim to attend every week for this class? (毎週このクラスに出席しようと考えていますか。)

1 (0) 2 (0) 3 (1) 4 (9) 5 (40)

C. How do you rate the importance of this class? (このクラスはどれくらい重要だと思いますか。)

1 (0) 2 (1) 3 (4) 4 (17) 5 (28)

D. Do you believe English is necessary for your future job? (あなたが将来就く仕事に英語は必要だと思いますか。)

1 (0) 2 (1) 3 (3) 4 (18) 5 (28)

E. How much motivation do you have for this class? (このクラスに対してどれくらいのモチベーションを持っていますか。)

1 (0) 2 (3) 3 (7) 4 (20) 5 (20)

F. Do you plan to study regularly for this class? (このクラスのために定期的に勉強するつもりですか。)

1 (2) 2 (5) 3 (16) 4 (13) 5 (14)

G. Do you hope to study medicine in an English speaking country in the future? (将来、英語圏の国で医学について学びたいと思いますか。)

1 (6) 2 (9) 3 (14) 4 (11) 5 (10)

H. If to get a good score you need to make equivalent effort, what score are you aiming for? (いい成績を得るにはそれに見合った努力が必要です。あなたの目指す成績はどのくらいですか?)

an A pass (25) / a B pass (9) / a C pass (8) / just enough to pass (8) / don't care (0)

I. Are you looking forward to participating in speaking activities? (英会話のアクティビティの参加を楽しみにしていますか?)

1 (1) 2 (7) 3 (8) 4 (13) 5 (21)

J. Do you plan to make a positive contribution in class? (積極的に授業に参加するつもりですか。)

1 (0) 2 (1) 3 (8) 4 (16) 5 (25)

K. Are you motivated to get a good score in this class? (このクラスで良い点数を取ることに向けてやる気になっていますか。)

1 (0) 2 (2) 3 (10) 4 (17) 5 (21)

L. Would you most prefer to study medical English? (医学英語を勉強することを最も望んでいますか。)

Yes (37) / No (13)

M. Would you most prefer to study daily conversation English? (日常的な英会話を勉強することを最も望んでいますか。)

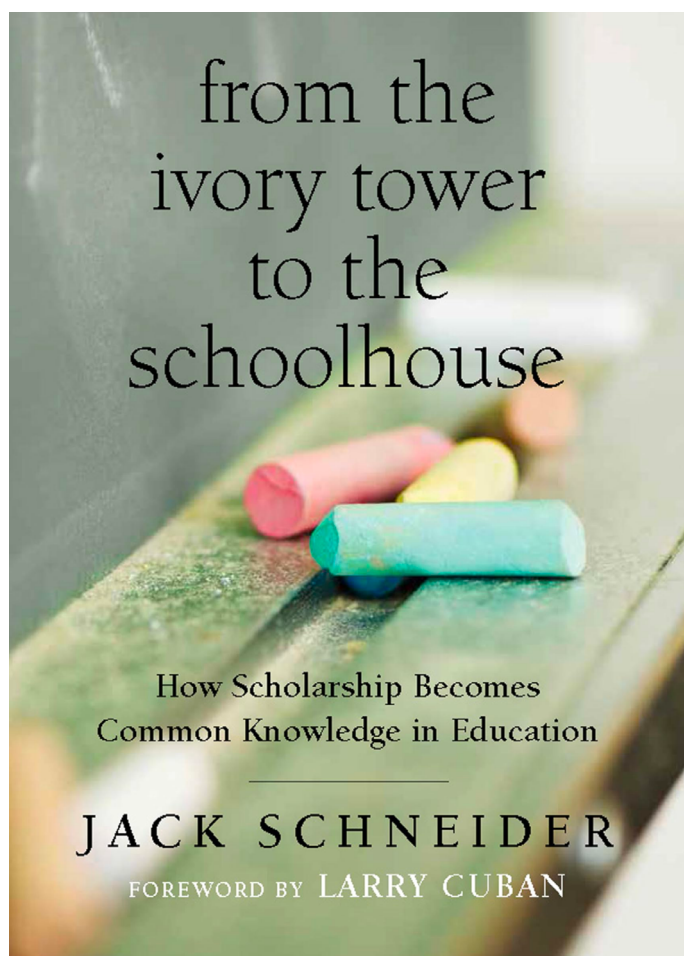
Yes (47) / No (3)

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**Book Review: *From the Ivory Tower to the Schoolhouse: How Scholarship Becomes Common Knowledge in Education*
 Schneider, J. (2014). Harvard Education Press.**



It's ten years since the publication of Jack Schneider's thought-provoking study of four influential theories in the USA education system, namely, Bloom's taxonomy, multiple intelligences theory, project-based learning and direct instruction. His central question, "What characterizes the scholarly ideas that actually become classroom practice?" seems to me more relevant than ever right now. It is a reminder that every theory that becomes common classroom practice in some part of the world, is the result of a particular story. Schneider teases out the threads of those stories in extraordinary detail and makes a good argument that understanding the backstory is important. He calls himself "the education historian." I was attracted to his book because he tackles the question of the research-practice divide in a head-on way, contrasting four ideas which have become part of teachers' common knowledge, and four "ideas without a foothold" (p. 141), theories which are just as valid in terms of research, but had only a fraction of the impact at classroom level.

I read the book in 2022 while looking for works that would shed light on the theme of "challenging the conventions of research into learner development",

to build my understanding of the theme of the *Learner Development Journal* 7, for which I was one of the editors. In this short reflection, I'll offer an outline of the book and hopefully the reader will get some idea of why it might be important. Actually, the events of the intervening years in the USA have been dramatic. In 2015, the "No Child Left Behind" act, which mandated state-run achievement testing in national secondary schools, was adjusted by a new law which handed back some of the power to institutions at district level (Hess, 2022). Moreover, struggles over school-related issues between progressive and traditionalist factions across the states have been in the news in relation to issues such as race and gender equality, the banning of books from school libraries, and teaching on evolution among others. Schneider's latest book, co-written with Jennifer Berkshire in 2023, was entitled "A Wolf at the School House Door: The Dismantling of Public Education and the Future of School", and "The Education Wars: A Citizens' Guide and Defense Manual" is coming out in July. When I picked up Schneider's 2014 book, I had no idea that he was such a well-established figure

in American educational scholarship nor that the conflict between progressive and traditionalist factions would become so heated. “From the Ivory Tower to the Schoolhouse” just seemed to encapsulate something I wanted to know about.

In the introduction, Schneider describes four aspects of research which he believes need to be present in order for it to transmit to the classroom. The first aspect is that the new idea has to have “perceived significance” for teachers, that it seems to deal with what Schneider calls “research that matters” (p. 7), “offering a big-picture understanding rather than merely a small piece of a larger puzzle.” (p. 8). His second criterion is “philosophical compatibility”. In other words the research or theory needs to fit in with what a majority of teachers believe to be true. He paints a picture of the school system in which teachers have a “common core of interests, anxieties, and values, distinct to them as a group,” qualitatively different from those of university-based researchers, not least due to working a 52-hour week in the US. (p. 8). Schneider’s third point is that to gain traction in the minds of teachers, an idea has to be able to be implemented easily, which he calls occupational realism. Thus, ideas which encourage teacher innovation within or alongside the existing curriculum tend to flourish more than ideas which need a completely new set up at prefectural level (p. 9). The fourth criterion he claims to have identified is transportability, meaning simplicity and accessibility: “A concept made up of five simple elements... is far more likely to move across settings than one made up of fifty, or even fifteen, richly described parts.” (p. 9). There is no rocket science in his account, but as he demonstrates in the subsequent chapters, the process of applying these criteria allows the discussion to move beyond the idea that certain methods become widespread because they are simply better or based on more valid research.

Perhaps this is the right place to admit that I was interested in the book not least because it takes the multiple intelligences theory of Howard Gardner as an example of an idea that took hold in American classrooms. A few years into my teaching career, I was having problems with a learner in an exam focused class, who often fiddled with his belt or took off his shoes and sat cross-legged during class, staring down at his lap instead of at the teaching material or other members of the class. I happened to attend a workshop on learning styles at which I heard that there were learners who were kinesthetic types and who might be experiencing the lesson differently from others, without intending to be disrespectful or lazy. This idea helped me to understand and find more options about how to teach the student. After I stopped trying to make him behave in a more conventional way, he wrote me a long letter explaining that he wanted to study sports science at university and become a professional footballer or coach. This experience seemed to me evidence that there are indeed different kinds of intelligence. So when multiple intelligences theory was said to have been discredited, (e.g., Rousseau, 2021) I felt there must still be some truth in the idea that not everyone has the same kind of intelligence.

Schneider explains that multiple intelligences theory was propounded by Gardner as a result of research into cognitive processing which was reacting against the use of “one size fits all” intelligence testing. As the chair of a foundation investigating brain research from 1972, Gardner was in a good position to research and develop his ideas. Moreover, teachers in independent schools, who felt their role and professionalism was undermined by standardized testing, gained a new sense of mission from the idea that it was up to them to help their students to find their particular kind of intelligence and make connections between various kinds of intelligence and how they could be realized and developed.

This kind of idea was enthusiastically taken up by private teacher training companies and textbook authors as well as teachers. However, some of these authors pushed the implications farther than Gardner ever intended. Gardner was against the learning styles movement, meaning the use of a particular sensory system to engage a particular learner, which was what I had heard about in the workshop. Gardner’s point was to help learners find their strengths, rather than that teachers should try to re-orientate the curriculum by, for example, creating chants to memorize verb forms. Schneider shows how multiple intelligences as an idea had vast appeal and Gardner’s attitude at least initially of not controlling or policing its implementation, allowed it to be spread by other people and become an

influential movement. At the same time this meant that the idea was sometimes misused or distorted and so there was no simple answer to whether a teacher claiming to use multiple intelligences theory would have better outcomes in their class.

This theme, that the success of a theory cannot actually predict educational outcomes, comes out even more clearly in Schneider's chapter on project work. According to Schneider, the widespread use of projects as a learning activity took off with the publication of an article by William Heard Kilpatrick, a professor at Columbia University Teachers College, in 1918. Kilpatrick was quite consciously seeking to make his mark as "an original thinker", as he wrote in his diary (p. 81). Originally used to describe a task requiring the application of integrated skills in vocational education, the project was re-branded by Kilpatrick as a task in general education, which was to be adapted to the interests and abilities of the individual student, and connected to real life in some way (p. 89). Drawing on the theories of John Dewey, Kilpatrick was able to bridge the gap between progressive educational theory and practical implementation, by appealing to teachers whose students seemed to need something other than a conventional curriculum of memorized facts and drills. The debate of project work versus exam style work was linked to lively political controversy through the middle of the twentieth century. However, project work could be done alongside the existing curriculum. It was a flexible and adaptable concept and it was intuitive to teachers, to encourage students to develop their own interests. Interestingly, Japan made project work part of the school curricular guidelines in 2017-2018 (Mikouchi et al., 2018), in a bid to increase relevance to local issues as well as learner autonomy. Schneider is quite non-committal as to the effectiveness of project work (p. 105). In contrast with the standardized achievement testing which was mandated by the US government's "No Child Left Behind" act from 2002 to 2014 (Hess, 2022), the holistic skills and qualities such as autonomy are harder to measure.

In relation to Japan, we might want to think about the tension between prioritizing progressive education, with its focus on autonomy, and traditional education, focused more on standardized tests. The pendulum has swung in a somewhat different direction from the US and a comparison of how university researchers influence schools in the US and in Japan is beyond the compass of this article. Kuramoto & Koizumi (2015) offer a good summary of the issues in large-scale educational assessment in Japan until about ten years ago. My experience of talking with high school teachers in Japan has generally been that they are strongly connected to the world of research. However this is based only on conversations with teachers I have met at conferences and professional development events, so they may not be wholly typical. But in fact, three of the papers in the *Learner Development Journal 7* were based on research done in high schools. Takagi, Tanaka, and Minami worked with a high school teacher to analyze the benefits of doing practitioner research, while Kawasaki implemented action research in her own classroom, and Morioka reflected on a completed research project to re-interpret data about his class. I feel their papers provide evidence of vibrant links between the Ivory Tower and the Schoolhouse in Japan.

Although Schneider's chapters on Bloom's taxonomy and the Direct Instruction method are very thought-provoking, perhaps the most original aspect of "From the Ivory Tower to the Schoolhouse" is the contrast which he draws between ideas which became "common knowledge" and "ideas without a foothold." In chapter 5, Schneider makes direct comparisons, between Bloom's taxonomy for the cognitive domain and Krathwohl's taxonomy for the affective domain, between multiple intelligences theory and Sternberg's "Triarchic Mind" theory, between project methodology and Wittrock's Generative Intelligence theory, and the method of Direct Instruction versus Applied Behavior Analysis. The discussion makes it clear that the theories which catch on need to be expressed in simple language, (so "Triarchic Mind" was at a disadvantage), have clearly defined components (Krathwohl's taxonomy's elements were at a disadvantage there) and be easy to implement alongside the existing curriculum. They also need to have a positive role for teachers. Direct Instruction methodology, which forced teachers to follow a rigidly scripted routine with students, was unappealing to most teachers

but they followed it as a method of last resort for the benefit of students who needed remedial work on basic skills. Direct Instruction is the “odd man out” of the successful theories, since it depended more on the will of prefectural government, and was strongly associated with the political developments following the “No Child Left Behind” act of 2002. Applied Behavior Analysis was still more mechanical, in that teachers were required to praise students and give out tokens for good behavior. Schneider’s point seems to be that “occupational realism” was a deciding factor. Teachers were persuaded to get on board with Direct Instruction because it would help students, while Applied Behavior Analysis not only undermined teacher autonomy but was also tricky to implement because it required detailed observation of each child and the actual physical provision of tokens.

Schneider’s conclusion is that “We must develop systems and structures that make it easier for high quality scholarship to possess those characteristics [of perceived significance, philosophical compatibility, occupational realism and transportability].” (p. 190). He suggests there is a choice at policy level, between a system which depends more on centrally-organized research establishments to disseminate good practice, or a more locally-based model which emphasizes practitioner-leadership and teacher self-development. He points out that even if not all researchers are teachers, having strong links between those who are doing research and those who are teaching is the only way of ensuring that innovations in practice are sufficiently context-sensitive. (p. 193). The translation of theory into curricula and lesson plans is the crucial step. If we are interested in learner autonomy and curriculum development for learner autonomy, this brings us back to the idea of reflective teaching and sharing in our own grassroots networks. If we are interested in influencing others, it may be quite handy to bear in mind his four criteria as we go about the business of planning, teaching, reflecting and tweaking our courses and research projects for the new academic year. By paraphrasing his criteria, I have come up with the following questions, which I think could apply to teaching as well as research.

Questions for reflection, based on Schneider’s criteria:

- Is this important? (=significance)
- Does this further my aims and the values which I believe in as a teacher? (=philosophical compatibility)
- Can I actually do this? What resources do I need? (=occupational realism)
- Can I explain the underlying ideas in simple terms?
- Is it going to work in my context? Would it work for other people too? (=transportability)

Schneider’s work is interesting because it offers insights into why we do what we do. One of his conclusions is that reform tends not to work without discussion and a degree of consensus. There are powerful lessons in his book for anyone who is involved in curriculum development, research or teaching. I hope that this review will stimulate further discussion about these issues of consistency between beliefs and practices, connections between personal history and teaching methods/research.

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